# THE UNIVERSITY OF HULL

# Beneficiaries` Satisfaction with the Cooperative Health Insurance System (CHIS) in the Kingdom of Saudi Arabia: A Case Study of Riyadh City

**Being a Thesis submitted for the Degree of Doctor of Philosophy in the University of Hull**

**By**

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## ABSTRACT

In 2005, Saudi Arabia implemented the Cooperative Health Insurance System (CHIS) for the purpose of shifting the financial burden of running health care services from the Ministry of Health (MOH) to the private sector. The aim of this study was to investigate, for the year 2007, beneficiaries' satisfaction with the CHIS in Riyadh, the capital city of Saudi Arabia, since no study had, as yet, been conducted. The current study uses a sequential explanatory design, a mixed methods approach, consisting of both quantitative and qualitative data analysis. The Canadian Common Measurement Tool (CMT) was used. In addition to service delivery, access and availability of facilities, communication and the cost dimensions, two new dimensions were added to the original instrument, namely, the employer role and the insurance company role. The results obtained showed the instrument was reliable and valid to be used to measure satisfaction with the CHIS. Using a five point Likert scale, 462 participants completed the questionnaires. Following analysis, 21 interviews contextualised by participant observation were conducted to assist in interpreting the findings of the primarily quantitative study. NVivo was employed for qualitative data analysis.

Study findings revealed that 59% of respondents were moderately satisfied with the CHIS and that it has improved access to the health care system. However, beneficiaries were not satisfied with waiting times to receive the service under the CHIS. The comprehensiveness of covered health services was also a major concern. Beneficiaries were highly satisfied with their employer's role and moderately satisfied with the role of the insurance company in their coverage with health insurance. The most frequent problem reported by respondents was that some services were refused. The cost of health insurance and non-covered health care services was a common misconception. In addition, beneficiaries' awareness towards health insurance is still limited. The finding revealed that satisfaction with the insurance company role, service delivery, type of coverage and inclusion of family members were most important in explaining beneficiaries' satisfaction. Finally, the study provides insight into service improvement priorities which could inform future planning initiatives for health insurance development. The practical implications of the findings for health care providers, insurance companies and health care policymakers were highlighted, as were recommendations for improving the implementation of the CHIS in Riyadh city and suggestions for future research.

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# CHAPTER ONE

# 1. Introduction

The Council of Ministers in the Kingdom of Saudi Arabia (KSA) has officially approved the implementation of a national Cooperative Health Insurance System by its decision No.71 dated 27/4/1420 H (August 11, 1999), changing the way in which health services are provided. The aim of the scheme is to provide basic medical cover to expatriates and their families. According to the Council of Ministers decision on CHIS (Article 1): *"the system aims to improve healthcare services for the benefit of all non-Saudi residents and it will be applicable to Saudi citizens only by a decision of the Council of Ministers"* (CHISB, 1999). The compulsory health insurance scheme came into force in 2005.

According to Ron et al. (1990) compulsory health insurance holds a strong social purpose, unlike private or commercial health insurance where individual risk is the basis used by the insurance carrier for establishing the insurance premium. The mechanism to cover health risks creates a demand for health services and health care, a demand sustained by ability and capacity to pay. An acceptable supply of health care services should be available and beneficiaries of health insurance should be given the right to choose their health care providers.

Saudi culture does not appear to be supportive of insurance because of concerns about the process of implementation from an Islamic perspective. According to Shariah scholars, commercial insurance should be forbidden and replaced by cooperative insurance (Jamal, 1980). The CHIS is consistent with Shariah Law; it focuses on cooperation and integrity among the members of society, rather than profit. Consumers do not necessarily accept a programme just because it presents opportunities for equity in access to medical care. Social and cultural attitudes to possible controls imposed by "public" arrangements may clash with preferences regarding, for example, privacy or freedom of choice of doctor and other providers (Ron et al., 1990). Unbalanced implementation of such a programme could limit the access of poor Saudis to acceptable

health services, especially those living in remote areas, and the vulnerable and disadvantaged sectors in the population (WHO, 2006).

## 1.1 Background of the problem

The huge expansion of health care services in the Kingdom is designed to meet the increasing demands of the citizens and expatriates living in Saudi Arabia, and has resulted in major expenditure and investment in the health care field (Al-shahrani, 1999). Al-shahrani (1999:1) stated that:

> *"The rate of complaints, in spite of all expansion plans, and the level of dissatisfaction, has become more noticeable particularly as the physicians are overbooked and little time can be given to interact with patients during examinations. The waiting areas are overcrowded and the surgical waiting list is sufficiently long to the degree that certain urgent cases are delayed"*

The progress and development in various fields in Saudi Arabia has increased the demand for labour and increased the financial burden of running the health care services. This has prompted the kingdom to seek for an alternative system that will help to reduce the financial burden without affecting the current standard of service and benefits to residents and citizens.

Many developing countries are considering health insurance as an option for increasing available resources in the health sector in order to alleviate financial crises (Ensor and Thompson, 1993). But besides affecting revenues, insurance also affects how efficiently and equitably health services are delivered (Kutzin and Barnum, 1992). The perception was that the market is more efficient and responsive, and private sector involvement would lead to higher quality care and greater consumer satisfaction (Brown and Barnett, 2004:432). However, changes to the existing system must be carefully evaluated before making any changes, especially as most people have not previously had any type of insurance. The public is likely to oppose this policy if it is not implemented with extreme sensitivity (Altassan, 2003).

The government of Saudi Arabia has officially implemented the CHIS (www.cchi.gov.sa). However, the introduction of the CHIS in Saudi Arabia may be expected to affect the components of the health care system, such as its organisation, finance, manpower structure and the quality of health services. It is assumed that the implementation of the CHIS will lead to higher health care utilisation and expenditures for expatriates as a result of insurance coverage, establishment of a large Cooperative Health Insurance (CHI) industry, the need to regulate the health insurance sector, the need to develop standards for providers and insurers in order to enhance the quality of health care, the need to adopt standardised provider payment methods and medical coding and the need to modify the accounting system in public facilities to bill private insurers (Mufti, 2000; Alnaif, 2006). The hospitals' operation levels in various sectors are expected to reach the maximum capacity as a result of implementing the CHIS (Alomair, 2001).

Characteristics of the health care delivery system, which have been shown to play an important role in patient satisfaction with health care services are affordability, accessibility, availability and equity (Calnan et al., 1994). Consumers are all dramatically affected by the way in which insurance operates. The rationale behind the desire to introduce the health insurance approach stemmed from:

> *"the urgent need to satisfy people's aspirations to better and more accessible medical care combined with the unlikelihood that the State could in the foreseeable future meet such aspirations through the traditional public health services supported by general revenue financing"* (Ron et al., 1990:13)

Insurance does not prevent losses, nor does it reduce the cost of losses to the economy as a whole. As a matter of fact, it may very well have the opposite effect of causing losses and increasing the cost of losses for the economy as a whole. The existence of insurance facilitates some losses for the purpose of defrauding the insurer, and, in addition, people are less careful and may exert less effort to prevent losses than they

might if the insurance did not exist (Vaughan and Vaughan, 2003). Issues for debate have been raised over the implementation of health insurance. Health care cost containment, cost reduction, and alternative care delivery systems continue to preoccupy health care providers, payers, employers, consumers and policy makers throughout Saudi Arabia. Some of the beneficial effects of compulsory health insurance development in various parts of the Third World include a significant development of human resources (medical and paramedical staff), the creation of jobs in the health sector and the alleviation of a burden traditionally carried by the Health Ministries, enabling them to shift resources to rural areas and to preventive-oriented services and programmes, a positive demonstration effect which has triggered better standards all around (Ron et al., 1990).

## 1.2 Statement of the problem

There is an assumption by health care decision makers in Saudi Arabia that the CHIS will have a positive impact on the delivery of health services (www.cchi.gov.sa). Knowledge of consumers' perceptions of how they fare when covered by the CHIS is a missing link in the search for an answer as to whether CHIS will solve the problems of Saudi health care. There is a need to pay great attention to the way in which the service should be provided, not only from a professional perspective, to fit the medical needs of the beneficiaries, but also from an ethnic or cultural perspective, to suit the socioeconomic and cultural backgrounds of the beneficiaries. Responses to service attributes may vary widely, and there may be different interpretations of which attributes contribute - and in what way- to satisfaction with a service use experience.

Health care providers need to understand how beneficiaries evaluate health care services. Providers must understand what attributes beneficiaries use to judge health care services provided under the CHIS. Then, they should have action plans on how to monitor and enhance their performance on those attributes. Only by doing so can they

increase the level of beneficiaries' satisfaction with their services. Beneficiaries' satisfaction with services provided under the CHIS should be evaluated to determine the acceptability of the health services and the health insurance scheme in general.

To the best of the researcher's knowledge, through extensive literature review, no systematic study has been conducted so far to learn about the beneficiaries' satisfaction/dissatisfaction after the implementation of the CHIS in Saudi Arabia. Further, this is the first PhD study that has gained access to private Saudi organisations to learn about their employees' satisfaction with their health insurance. The study focuses on providing a better understanding of beneficiaries` perceptions/expectations and what they really want, need; and look for in a health insurance plan. Identifying beneficiaries' satisfaction with services provided under the CHIS becomes imperative for the purposes of successful implementation, long-term viability, quality management and for identifying areas for improvement. Previous research has rarely studied how the employers and insurance companies' roles impact beneficiaries' satisfaction with health insurance. In addition, the study examines how the service delivery system and beneficiary socio-demographic characteristics affect the beneficiary satisfaction with the CHIS, and the study seeks to determine which dimension is contributing more to beneficiary satisfaction/dissatisfaction with the CHIS. Beneficaries` personal experiences and perceptions, with regard to satisfaction with services provided under the CHIS, will be another focus of this study.

This study recognises the importance of the consumer in shaping the provision of quality health care and uses those views to make suggestions as to how the CHIS can be improved to meet the needs of beneficiaries. The problem on which this research is focused could primarily be identified as follows: **How satisfied/dissatisfied are beneficiaries with services provided under the CHIS in Riyadh city, the capital city of Saudi Arabia?**

## 1.3 Aim, objectives and research questions

The aim of this study is to measure beneficiaries' satisfaction or dissatisfaction with services provided under the CHIS in Riyadh city, since no study, as yet, been conducted. This has been identified as the key aim because there seems to be very limited understanding regarding beneficiaries' expectations, perceptions of experiences and satisfaction with services provided under the CHIS. The aim will be achieved through a set of theoretical objectives and questions to be answered empirically. This study will provide an in depth understanding of the subject matter through the use of a sequential explanatory design and mixed methods approach, consisting of both quantitative and qualitative data analysis.

### 1.3.1 Research Objectives

The research objectives of this study are as follows:

1. To identify how beneficiaries perceive the health care service under the CHIS and whether the CHIS meets their expectations.
2. To determine if there are differences in the levels of beneficiaries' satisfaction with the services provided under the CHIS based on their personal characteristics.
3. To measure beneficiaries' satisfaction/dissatisfaction with services provided under the CHIS, in relation to the customised CMT.
4. To identify the relationships between the beneficiaries' perceptions of the importance of the provided services and their level of satisfaction with the elements of these services.
5. To identify priorities for improvement and areas where improvements will produce the greatest gain in beneficiary satisfaction.
6. To develop an understanding of Saudi Arabia and the Saudi health care system, in relation to historical, demographic, cultural and other issues. Chapter Two

fulfils this objective, with a review of the history, population demographics and a description of the structure of the health care delivery system in Saudi Arabia.

7. To clarify the concept and the characteristics of the CHIS. This is achieved in Chapter Three, where the development of health insurance in Saudi Arabia is discussed, reflecting systematic, religious and cultural perspectives. The listing of the United States and United Kingdom experiences compares their health insurance systems with the CHIS.
8. To clarify the concept of customer satisfaction. This is achieved in Chapter Four, where conceptual and operational definitions in consumer satisfaction are discussed and satisfaction theories and their implications for this study are reviewed.
9. To develop a conceptual framework based on service delivery model for investigating beneficiaries' satisfaction with the CHIS (see Chapter Four). This framework is reflected in the research design and construction of instruments (see Chapter Six) and the discussion of the findings in Chapter Nine.
10. To clarify the interaction of service provider, insurance companies, employer and its impact on beneficiaries' satisfaction with services provide under the CHIS. This is achieved in Chapter Four where the dimensions of satisfaction with the CHIS are reviewed individually and conceptual linkages between them are analysed.
11. To develop an understanding of the most important and influential dimensions on beneficiaries' satisfaction with services provided under the CHIS in addition to understanding beneficiaries' experiences, perspectives and suggestions with regards to the improvement of the CHIS. This is achieved through the analysis of quantitative and qualitative data in Chapters Seven and Eight respectively.

### 1.3.2 Research questions

The research questions are derived in the light of the literature review (see Chapters Two to Five). Collis and Hussey's (2003:124) model (Figure 1.1) is used in the development of the research question.

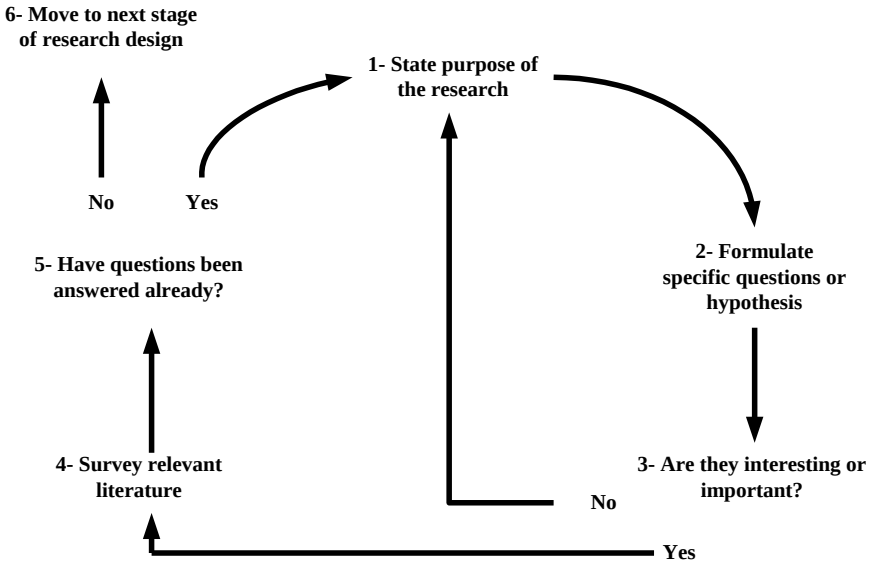



Figure 1.1: The development of research question(s)

The current study seeks to answer the following questions:

1. What are the levels of beneficiaries' satisfaction with different services provided under the CHIS?
2. Why are beneficiaries satisfied/dissatisfied with the services received under the CHIS?
3. Are there any statistically significant differences in the levels of beneficiaries' satisfaction with the services provided under the CHIS based on their personal characteristics?
4. What is the nature of the statistically significant differences (possible gaps) between beneficiaries' perceptions of the importance of the provided services under CHIS and their level of satisfaction with the elements of these services?

5. What are the beneficiaries' views about their employers and health insurance companies' roles in their coverage with the CHIS?
6. What are required service improvement priorities in the CHIS?
7. What are the current problems faced by beneficiaries when receiving health care services under the CHIS?
8. What are the most important factors which impact the beneficiaries' overall level of satisfaction with services provided under the CHIS?

## 1.4 Significance of the study

Beneficiaries' evaluations may help in identifying concerns and areas of service failure and may encourage concerned health insurance parties to be accountable for the quality of service delivered (Pradnya et al., 2009). This study is valuable for evaluating how the implemented policy corresponds with the beneficiaries' expectations. It is also an input for developing future health policy and establishing priorities in the health care system.

The outcomes of the research are expected to help health care system legislators and supervisory agencies to focus on areas that need further improvement. The results from this study can be utilised in quality improvement measures for the CHIS. Results can be utilised to change policies, revise contract language, and improve the delivery of health care services under the insurance policy. More importantly, results can be used to support the changes that are evolving. The providers and insurers may utilise the information to improve the processes and procedures when delivering health care. Health care providers need to know how beneficiaries define satisfaction and then interpret satisfaction scales to accurately target, report, and respond to satisfaction levels. Health care providers should realise that beneficiaries vary with respect to the components and related properties of satisfaction. Health care providers need to recognise that the satisfaction focus and timing can be customised for their needs.

Rather than looking at all aspects of service delivery experience, they can concentrate on those that are of direct interest or are directly controllable. As a result, they are able to obtain "true" beneficiary responses that are relevant to decision making. "Health delivery systems cannot be separated from the political machinery of a country and its economic resources" (Altassan, 2003:255) such as the health services re-structuring since 1945 in the U.K as a result of successive governments changes. The comparative review of health delivery in the United States and the United Kingdom and the discussion of implications of health policy change on consumer satisfaction allow criteria to be extracted hopefully for further reform of the CHIS.

In Saudi Arabia, as in many developing countries, social science research may not be a popular endeavour for political reasons (Albaz, 1992:5). As a result, health and social services are rendered to people without evaluating the successes or failures of services. Although it has been about three years since the launch of the CHIS, there is a scarcity of studies evaluating its effectiveness and performance. The very few existing studies represent the point of view of health care administrators and health care professionals who are usually the respondents of these studies. Evaluating social acceptability of health care services from the public's point of view is essential for providing quality health care services (Calnan, 1988).

Saudi Arabia is moving towards expanding the CHIS. This approach may be harmful to the national health system if it is created without careful planning. The implementation of the CHIS is posing a major challenge due to the lack of an effective insurance regulatory structure and a very limited cooperative insurance industry. Taking into consideration the beneficiaries' views is important for a more balanced assessment of the rendered health care services under the CHIS. This study is very significant with reference to Saudi Arabia. The study may lead to suggestions for correcting deficiencies in the CHIS. Beneficiaries' views of health services provided under the CHIS point to

the sources of deficiencies in the system and direct health professionals and administrators to take corrective actions. It is hoped that the findings of this study will help in improving the implementation of health insurance and in reforming health insurance policies, as the outcome of this study will reflect the current status of the health insurance coverage and applications with regard to its intended objectives. It is also hoped that this research may make health insurance policy makers rethink ways to improve the applications and will fill the gap due to the lack of data with regard to consumer satisfaction with the CHIS in Saudi Arabia.

## 1.5 Motivation for the research

All research has the story of its inception. The stimulus for this research arises out of my personal experiences. I have worked in the health sector for 17 years, three of them at the top management level in private hospitals. During this period I have taken a great interest in health insurance. I have attended many conferences related to health insurance inside the Kingdom and abroad and contributed to some of them. I have worked in the Health Services Sector at the Institute of Public Administration (IPA), whose main functions are training, consultancy and research.

My experience as patient services manager has shown that the rate of complaints has occupied a significant portion of daily management business. This experience provided me with a 'deep' understanding of the Saudi Health Care System. I witnessed the refusal of health care providers to treat sick patients because they were unable to pay and the refusal to release the body of dead patients until the relatives paid all medical bills. In practice when someone has to be taken to the accident and emergency department after an accident, he or she is not treated until someone has guaranteed to pay the bill or put the deposit down. This is very similar to the current USA situation, where the patient's wallet is the first thing examined. The experience of my father's illness when he

suffered a heart attack has opened my mind to the suffering of Saudi citizens with regards to access to medical services, especially in a rich country like Saudi Arabia. My father was very lucky because my presence in Saudi Arabia during his illness facilitated his admission to the hospital without paying any money because of my pre-existing relations with officials in the Health Care System but I kept thinking about other Saudis who do not know anyone to facilitate their admission to hospitals when needed. Despite the fact that health care services in my home country are free to all citizens, most Saudis cannot be admitted to hospitals because of the lack of available beds, which forces the family of the patient who lacks health insurance to pay hundreds of thousands of Saudi Riyals to private hospitals to receive the appropriate services in cases similar to that of my father's. Sometimes people are forced to borrow money or sell their cars and houses to be able to provide the money to save the life of a family member who becomes sick. In Saudi Arabia, despite the money put in the health field under the Development Plans, "it is impossible even to see a doctor in a government hospital unless you know someone in that hospital. Either you die at home or you go on the off chance of having the 'last' emergency bed, if it has not been already taken" (Altassan, 2003:22).

## 1.6 Contribution to knowledge

Most of the theoretical and empirical research on which the customer satisfaction literature is developed was conducted in U.S.A and European settings. In addition, most satisfaction research has used U.S. subjects to develop and test a satisfaction theory (Spreng and Chiou, 2002). Measures of satisfaction may be therefore less applicable and less meaningful in other countries, thereby leading to less-than-optimal results. Hence, this study enriches the literature as it draws evidence from the Saudi context, a quite different, and in many ways unique, cultural setting. This research, by measuring beneficiaries' satisfaction with the CHIS in Saudi Arabia, will fill a knowledge gap in an under-researched industry in an under-researched culture.

This research is designed to contribute towards closing the gaps in the literature on the interaction of service provider, insurance companies, employer and its impact on beneficiaries' satisfaction with the CHIS in a model of which the constituent variables are individual dimensions rather than aggregate constructs. As a result, it produces additional knowledge that contributes towards enhancing our understanding on how these variables are linked. This study will add important contributions to the existing scientific body of knowledge by exploring how satisfaction is impacted by: service delivery, utilisation of services, access and availability of facilities, communication, cost and individual differences in the Saudi context. It adds to the literature by reporting its findings from the application of a customised Canadian Common Measurement Tool (CMT) scale that was designed for measuring beneficiaries' satisfaction with the CHIS and tested for reliability, validity and dimensionality. This research offers support for the case that CMT is applicable across cultures and industries provided that it is appropriately customised to capture the service attributes of the industry in which it is applied. Further, the findings from applying and testing the CMT on evidence from the Saudi CHIS contribute to the existing knowledge on the dimensionality of the CMT. This research proves that some dimensions of customer satisfaction may contribute more than others. Numerous customer satisfaction and health care service quality studies have been developed, yet they are still unclear about factors influencing customer satisfaction and dissatisfaction such as quality of services, customer expectations, individual differences and consumer experiences with the services. Especially, most of these studies utilised quantitative methods. This study will combine quantitative methods with qualitative methods so that greater accuracy and more understanding of the problem being investigated could be gained.

## 1.7 Research Limitations

All research studies have limitations or constraints imposed or recognised at the outset and this study is no exception. The following limitations apply in this case:

- The study was limited to measuring the beneficiaries' level of satisfaction with CHIS services and their views on priorities for improvement. One major difficulty with this research is that there are no previous studies regarding customer satisfaction with health insurance in Saudi Arabia. Although this will add to the originality and value of this study, the research did not have the benefit of learning from the mistakes of others.
- The sample concentrates on employees working for large-size companies/ establishments (500 employees and above) such that generalising the results to other companies/establishments may be ill advised.
- This study took place in 28 private companies/establishments' operating in Riyadh city.
- The results were limited by the time period in which the study was conducted. The fieldwork was conducted from 1st February to 1st June, 2008.
- The population and sample of this study was limited to Riyadh city because of the limitation in resources and time. The data was collected from a limited sample size in a limited geographic location; therefore, there are limitations in the generalisability of the research results to the context of the entire country.
- Expatriates come from diverse nationalities and ethnic backgrounds and they speak different languages; therefore, the study was limited to Arabic and English speaking expatriates.
- Some beneficiaries clearly have differences in choice of providers. This may have played a role in their interpretation of such issues as quality and service.
- Another limitation is the difference of expectation between beneficiaries. Those

beneficiaries who have never used health services under the CHIS or beneficiaries coming from under-developed nations may have lower expectations when compared with other beneficiaries, who have used the health services under the CHIS.

## 1.8 Thesis Outline

**Chapter 1: Introduction**

The background of the problem, the research problem, aims, and significance of the study were introduced in the first chapter.

**Chapter 2: Background and introduction to Saudi Arabia and the Saudi health care system**

It is essential to give the reader sufficient information about Saudi Arabia. This chapter provides background information such as the location, historical development including the discovery of oil and the general economy of the government, geography, population, finance, cultural values and a description of the structure of the health care delivery system are presented as development planning.

**Chapter 3: Health insurance**

This chapter presents a brief discussion of insurance in general and health insurance in particular. Specifically, the development of health insurance in Saudi Arabia and patient satisfaction is summarised. Insurance in Islam and Saudi culture is reviewed. The experiences of the United States and the United Kingdom are reviewed and lessons to be leaned are presented.

**Chapter 4: Customer satisfaction**

The concepts of consumers/patient satisfaction are presented. This chapter presents a brief discussion of customer satisfaction and the quality of health care in general. In addition, satisfaction theories and models are reviewed.

**Chapter 5: Literature review and conceptual framework**

This chapter is devoted to a review of the literature on customer satisfaction in general and satisfaction with health insurance in particular. An effort has been made to include cross-cultural and cross-national studies, comparing Saudi culture with other studies. Studies concerning the relationships between sociodemographic characteristics and consumer satisfaction are presented. Consumer expectations, perceptions of service experience and the perceived importance of a service are reviewed. Studies concerning the impact of health insurance on the utilisation of, and access to, health care are also presented. Finally, the study's conceptual framework is presented.

**Chapter 6: Research methodology**

This chapter describes methods and techniques used to collect data. The study population and sample frame are identified, and the data collection techniques used in the present study are reviewed, including the pilot study. In addition, the questionnaire construction and validity are discussed. This chapter also deals with data collected from interviews by the researcher, to gain information about the views of beneficiaries and their satisfaction with the provided health care services under the CHIS.

**Chapter 7: Quantitative data analysis and results**

This chapter contains the data analysis and research findings of the questionnaire. It provides a statistical description of the whole sample developed through the use of the demographic data collected in this study and analysis of data related to measurement of beneficiaries` satisfaction (CMT) attributes. Data is presented from the participants who answered the questionnaire.

**Chapter 8: Qualitative data analysis and results**

This chapter deals with data analysis and research findings of the interviews and observation. This chapter also contains the results of the open questions in the questionnaire.

**Chapter 9: Discussion, conclusion and recommendations**

This chapter discusses the findings in the light of the literature and highlights their implications for theory and practice. The discussion is presented according to research questions set out in chapter One. This is followed by a consideration of the limitations of the research findings, suggestions for future research and drawing attention to the contribution obtained, based on the field study. In view of the discussion, specific recommendations are offered for the improvement of the implementation of the CHIS based on empirical findings. The following diagram represents the thesis outline:

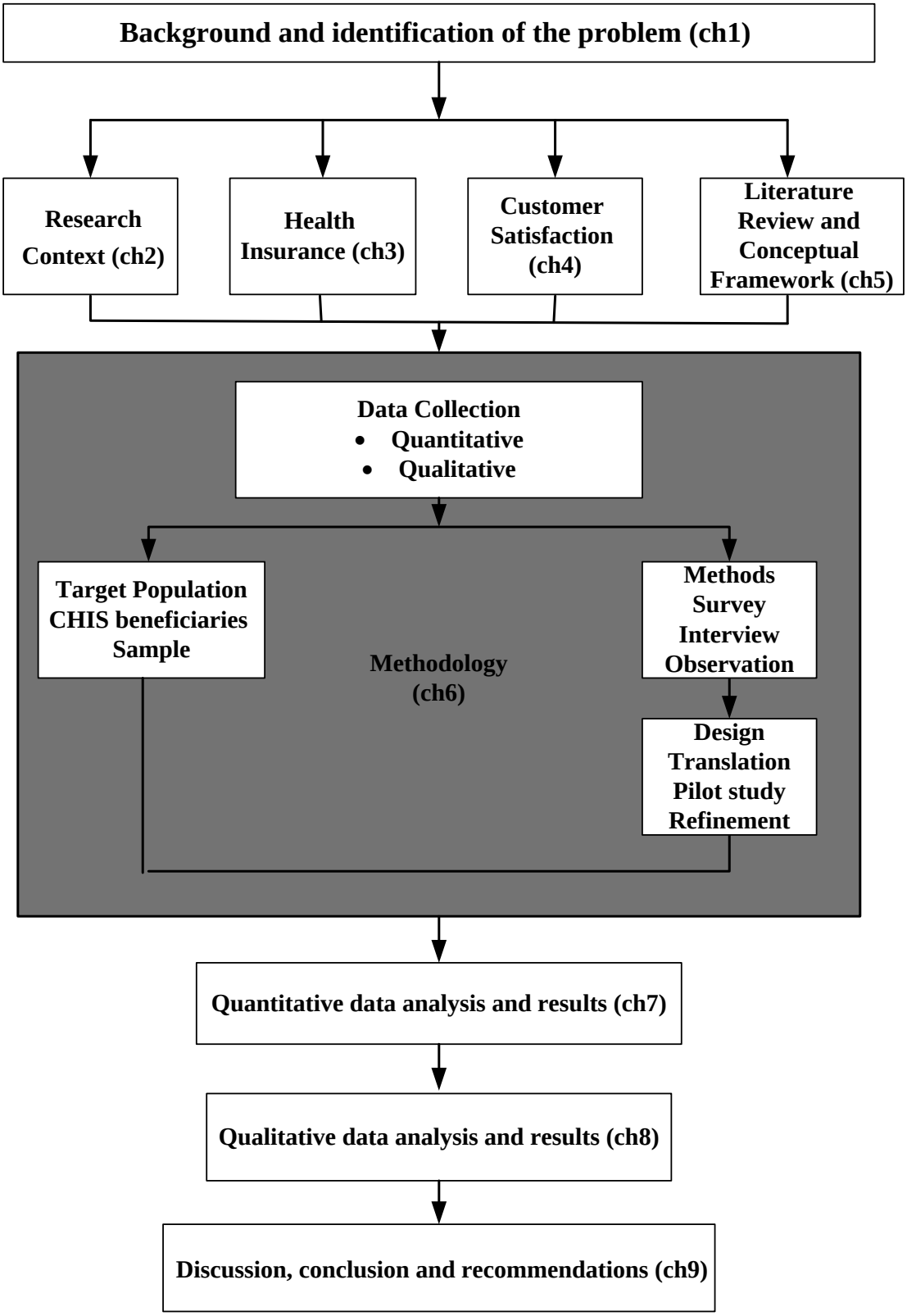



**Figure 1.2: Thesis Outline**

# CHAPTER TWO

## Background and Introduction to Saudi Arabia and the Saudi Health Care System

# 2. The Research Context

## 2.1 Introduction

It is essential for the reader to know some facts about Saudi Arabia and the development of its health care system. A short account of the country will be provided in terms of historical, religious, political and social structure and economic development.

## 2.2 Background to Saudi Arabia

### 2.2.1 History

The kingdom of Saudi Arabia as we know it today was formed only at the beginning of the twentieth century through the vision and leadership of King Abdulaziz Al-Saud (1880-1953), referred to as the Founding Monarch of Saudi Arabia. Riyadh city is centrally located in the Najd region. It is the largest city in the country extending over an area of 1,550 sq. Km (600 sq. miles) (MOH, 2004). The country was poor and backward and there was no formal development plan adopted in the country. The establishment of the Saudi Kingdom and the discovery of oil had dramatic impact on the economic, social, cultural and political life of the country (Askari and Babak, 1990). Oil has become the nation's major source of influence in the world and a major source of revenue for development within the country (Woodward, 1988). The oil sector is the backbone of the economy and the fluctuations in its market affects all other sectors, including health (Dossary, 1991).

### 2.2.2 Population demographics-age

Saudi families tend to be large, with over four or five children per family in 2005. A striking characteristic of the population of Saudi Arabia is the large number of young people under the age of twenty. In 2005, the under 20s formed 49.3% of the total population. The age structure of the population is changing as life expectancy in Saudi

Arabia has improved over the last thirty years, primarily due to improved health care facilities, education and construction of modern water and sanitary infrastructures. The average life expectancy was estimated at 75.5 years in 2005. The death rate per 1000 inhabitants decreased from 5.66 in 1995 to an estimated 4.17 in 2005, a decline of 26.3% and is expected to continue declining to 3.87 in 2015, a drop of 7.2% from 2005 (http://www.gmid.euromonitor.com). The proportion of pensioners to the total population started to increase reaching an estimated 4.5% in 2005 and is expected to rise to 5.7% in 2015. In absolute terms, the size of this age group is expected to reach 1.75 million in 2015. The overwhelming majority of pensioners are Saudi nationals. Government employees may retire and start drawing their pensions at age 60. Others, particularly those who have their own private business, continue long after they reach the age of 60. Only a small proportion of this group make significant provisions for retirement. They rely mostly on savings, family members, and an extended family network (http://www.gmid.euromonitor.com).

### 2.2.3 Population demographics-nationalities

Based on the 2004 census, the population of Saudi Arabia is 22,673,538 including Saudis and non-Saudis. Saudis accounted for 72.9% (16,529,302), while non-Saudis comprised just over 27.1% (6,144,236). The Saudi population was split almost equally into two, with 50.1% males and 49.9% females. On the other hand, the majority (69.5%) of non-Saudis are males. The total population of Riyadh is 5,455,363 including Saudis and non-Saudis. The total number of Saudis living in Riyadh is 3,726,523, while the non-Saudi population is 1,728,840 (MOH, 2004). The high proportion of non-Saudis and the gender imbalance in this group arise because the social and economic development in Saudi Arabia has attracted a large number of foreign workers. More than six million expatriates currently work in the kingdom. Expatriates come from diverse nationalities and ethnic backgrounds. Only 15% are engaged in skilled

industries such as health care, finance and trading. The remaining 85% work in unskilled industries such as agriculture, janitorial, construction and domestic help. The vast majority, over 76%, of expatriates work and live in the cities. They constituted 50% of the work force in Saudi Arabia in 2002 (http://www.gmid.euromonitor.com). This large labour force ought to be provided with basic health care facilities enjoying the same privileges as Saudi citizens (Mufti, 2000). Saudi Arabia grants foreign workers employment injury protection, but *"deny such workers public pensions, despite international conventions calling for equality of treatment between nationals and non-nationals"* (Gillion et al., 2000:548).

Unemployment among Saudi nationals is high because the government can no longer guarantee jobs for all (Barron, 2000). Saudi planners are pursuing a goal of "Saudization", that is, the reduction in the number of foreign workers, as guided by the Development Plans (Altassan, 2003). Forcing expatriates to buy health insurance may also be intended to oblige some of them to leave and, therefore, create more vacancies for unemployed Saudis. However, this is unlikely to be effective. The vast majority of Saudis are not prepared to undertake poorly paid, menial jobs (Barron, 2000).

### 2.2.4 Demographics-urban/rural

A majority of the population in Saudi Arabia live in urban areas. They accounted for an estimated 87.7% of the total population in 2005 (http://www.gmid.euromonitor.com). Over the past two decades, one striking outcome of Saudi development has been rapid migration of the population to the cities (Altassan, 2003). Health and other services tend to be heavily concentrated in the major urban areas.

### 2.2.5 Cultural values

Saudi Arabia is an Islamic monarchy, which has been gradually developing from monarchical to ministerial rule. The Constitution is the 'Holy Quran' (this book is

considered by Muslims to be the word of God, revealed by him to the Prophet Mohammed) and 'Hadith' or 'Sunna' which are the recorded and 'authenticated' sayings and traditions of the Prophet Mohammed (Altassan, 2003). Legislation and religion are united, and the Qur'an is the main source for religious and legislative practices. The Qur'an specifically sets down rulings through the Hadith and the Fiqh, from which civil and criminal law have been derived (Morris and Al Dabbagh, 2004). The executive and legislative branches of the Saudi Government are represented by the King, the Council of Ministers, and the Consultative Council (or Majlis Al-Shoura) (Mufti, 2000). All laws and regulations are drafted, then submitted to a commission of Ulama[1], or religious scholars, to ensure that they comply with Islamic Shari'a. The ulama are important for the definition of the rules and values around which Saudi society revolves. Discussion and implementation of health insurance in Saudi Arabia must be related to the social and religious fabric of Saudi society. Family and religious values have profound implications for future development and for policy planning. Family values and the corresponding behaviours of individuals have been institutionalised by the state in the process of centralising control and allocating resources (Altassan, 2003).

[1] **Ulama:** Islamic religious leaders who play a unique role by providing religious legitimacy for Saudi rule. Saudi Arabia is the only Muslim country in which the Ulama constitute such an influential political force. The Kingdom's Ulama include religious scholars, qadis (judges), lawyers, seminary teachers, and the prayer leaders (imams) of the mosques.

## 2.3 Health Care System in Saudi Arabia

Since this study is concerned with health insurance, it is essential to give a clear picture of components of the Saudi Health System. A health care system can be defined as an organised arrangement to provide health care using the resources allocated for that purpose (Basch, 1978).

> *A Health Service System is considered to be any set of arrangements in a society (or, more precisely for the purpose of this discussion, in a nation) which assigns social roles and resources to achieve the goals of protecting or restoring health to the eligible population* (Weinerman, 1971:273).

The USA has long been the chief source for health services provision in Saudi Arabia, both in human resources and in medical equipment. The current health delivery pattern replicates the inefficient USA hospital system introduced during the oil boom days of the 1950s and 1960s (Altassan, 2003). In his PhD thesis, Dossary (1991) described and analysed the development of the health care system in Saudi Arabia, particularly in the period since 1970. He found that two major differences between Saudi Arabia and most other countries have to be isolated. First, as a result of its oil wealth, Saudi Arabia has experienced extremely rapid economic growth. Second, a very strong value system, Islam, has a persuasive effect upon Saudi society, including the organisation of its health care system. It was concluded that economic growth is the principal explanation of better standards of health in Saudi Arabia.

It is obvious that the Saudi health care sector has experienced a rapid expansion during the last decades. The Saudi government has spent billions of dollars to build the necessary infrastructure to ensure adequate and appropriate health care for all citizens. Modern hospitals have been built and foreign expertise has been recruited (Al-Shekh, 2003). The Saudi health system has experienced a series of changes over the years as it has sought to respond to the demands of its citizens (Al-Yousuf et al., 2002). Investments in the Kingdom's private and public health sectors are estimated at S.R 500 billion (US$ 133,321,434,222) with an annual expenditure of some S.R 50 billion (US$

13,332,036,115) (Abdul Ghafour, 2007a). One of the main concerns at the current time is the quality of medical services offered to patients in health care facilities (Al-Shahrani, 1999). The commitment to providing high quality health care to residents, and the huge investment in health care by government and the private sector, have created a level of health care infrastructures and other resources comparable with highly developed countries. This, and the general improvement in economic and social conditions have, in turn, led to some very dramatic improvements in the health status of the population (Mufti, 2000). The provision of highly advanced medical services in the country is a prestigious achievement which is seen as a step in the country's quest for achieving an international standard of health provision (Alshammasi, 1986). The MOH has been responsible for health care standards. Yet in the face of financial stringency these standards tend to be relaxed.

### 2.3.1 Major Health Providers

The health care system in Saudi Arabia can be classified as a national health care system in which the government provides health care services through a number of government agencies. In the meantime, there is a growing role and increased participation from the private sector in the provision of health care services (http://en.wikipedia.org). Thus, Saudi Arabia's health and medical service provision can be divided into three major categories:

#### 2.3.1.1 Ministry of Health

The Ministry of Health (MOH) was established in 1950. MOH, headed by the Minister of Health, is considered to be the major provider and responsible for running the country’s health system. It has a well-defined, decentralised organisational and administrative structure (Al-Yousuf et al., 2002). The MOH is considered the lead Government agency responsible for the management, planning, financing and regulating of the health care sector. The MOH also undertakes the overall supervision

and follow-up of health care related activities carried out by the private sector. Therefore, the MOH can be viewed as a national health service (NHS) for the entire population (http://en.wikipedia.org).

The public health care system is the largest and most people, particularly low and middle income people, use it (Albaz, 1992). The actual delivery of MOH health care services is performed by its twenty regional health care directorates (MOH, 2001). The MOH sets policy guidelines to be followed and supervises the activities of the health regions, but the regions enjoy autonomy in the day-to-day running of health affairs (Mufti, 2000). There is a three-tier health care system organised through a referral system- primary, secondary and tertiary, corresponding respectively, to health centres, general hospitals and specialist hospitals (Al-Yousuf et al., 2002). The referral system reduces unnecessary hospital services by optimising use of services from general practitioner to high-level specialist. It has made health care in the Kingdom more efficient (Al-Dakeel, 2002). Primary Health Care (PHC) is the gate to the health care system and often to the social welfare system (Albaz, 1992). The emphasis on a PHC approach has resulted in a relative decline in the number of more costly outpatient visits to hospitals throughout the Kingdom (Al-Yousuf et al., 2002). In 2003, there were 336 PHC centres in Riyadh City with an average number of visits per doctor in health centres of 11,111,697 (MOH, 2004).

General and specialist hospitals are the second and third levels of the Saudi Health System. In 2003, there were 35 hospitals owned by the MOH in Riyadh city (MOH, 2004). Riyadh has become the Kingdom's capital for specialised health care, a trend that began when the King Faisal Specialist Hospital became the first facility in the country to pioneer specialised treatment at home. Today, the facility is a leading hospital in the Middle East and a premier research centre in the region. The Kingdom has one of the

world's largest and best equipped eye hospitals, the King Khalid Eye Specialist Hospital. Established in 1983, the hospital treated 590,000 outpatients and admitted more than 60,000 inpatients by 1993 (Altassan, 2003).

#### 2.3.1.2 Other governmental agencies

Other governmental agencies are operated, supervised, and fully supported by the government. This category includes the Ministry of Defence (MOD), Ministry of Interior (MOI), Ministry of Education (MOE), Ministry of Higher Education and university hospitals (MOHE), Ministry of Municipalities and Rural Affairs, Ministry of Labour and Social Affairs, the National Guard, Presidency of Youth Welfare, Saudi Oil Company (Aramco), Royal Commission for Jubail and Yanbu and the Red Crescent Society, provide health care. The other independent governmental health care delivery agencies in Saudi Arabia provide free health care services to their employees and their dependents and to religious pilgrims (who average about two million a year). The services they provide include PHC and hospital care. In 2003 there were 10,300 beds for other governmental agencies. For the same year there were 40 hospitals (MOH, 2004).

The medical services which are offered by the MOH and other governmental agencies are theoretically comprehensive. All citizens are expected to receive medical care from either PHC centres or any hospital close by. However, there is little or no chance of choosing the physician that they want. This makes clients feel uncomfortable. Some prefer to obtain their medical care through the private sector, with chosen doctors. All drugs given in hospitals and PHC centres and other government agencies are free of charge. Patients may purchase their drugs from any pharmacy at their own expense. Other equipment such as spectacles must be purchased, except artificial limbs, which are free of charge (Altassan, 2003).

#### 2.3.1.2.1 The private Health Care Sector

The private sector provides medical care services on a profit basis through hospitals, dispensaries, clinics, laboratories and pharmacies. Private hospitals are operated by private enterprises but subsidised and regulated by the government (Altassan, 2003). Private hospitals provide inpatient, outpatient and emergency services. The facilities are mostly located in urban centres (Al-Yousuf et al., 2002). Investment in private hospital business was encouraged by generous government incentives, including the provision of interest-free loans of up to 50% of the cost of the project (Alshammasi, 1986). The government policy of encouraging private sector participation in all aspects of the economy has led to growth in commerce, industry and health (Mufti, 2000). The growth of private health manpower reflects the expansion of private sector services. The number of doctors, paramedical staff, and administrative staff has consistently grown (Alshammasi, 1986). Some of the large private hospitals have all the latest in medical diagnostic equipment and are in direct competition with the public specialist hospitals for provision of highly specialised procedures. There were 110 hospitals in the private sector in 2003, with 10,133 beds. The total number of admissions was 614,278 (MOH, 2004). Private hospital income is divided between 80% for insurance companies patients and 20% in cash-paying patients. This means that private hospitals are relying on insurance companies. A hospital could face problems if the insurance company doesn't pay the dues or makes late payment. Saudi nationals are the most frequent users of the private sector, although they pay on a fee-for-service basis and not through insurance plans (MOH, 2001). Since Saudis have access to free, public sector services, the growing use of private sector services, where payment is required, may signal unavailability or dissatisfaction with the public services. Saudis are willing to pay for health services, if there is a perceived increase in quality and/or convenience (Mufti, 2000). Figure 2.1 shows the components of the Saudi Health System.

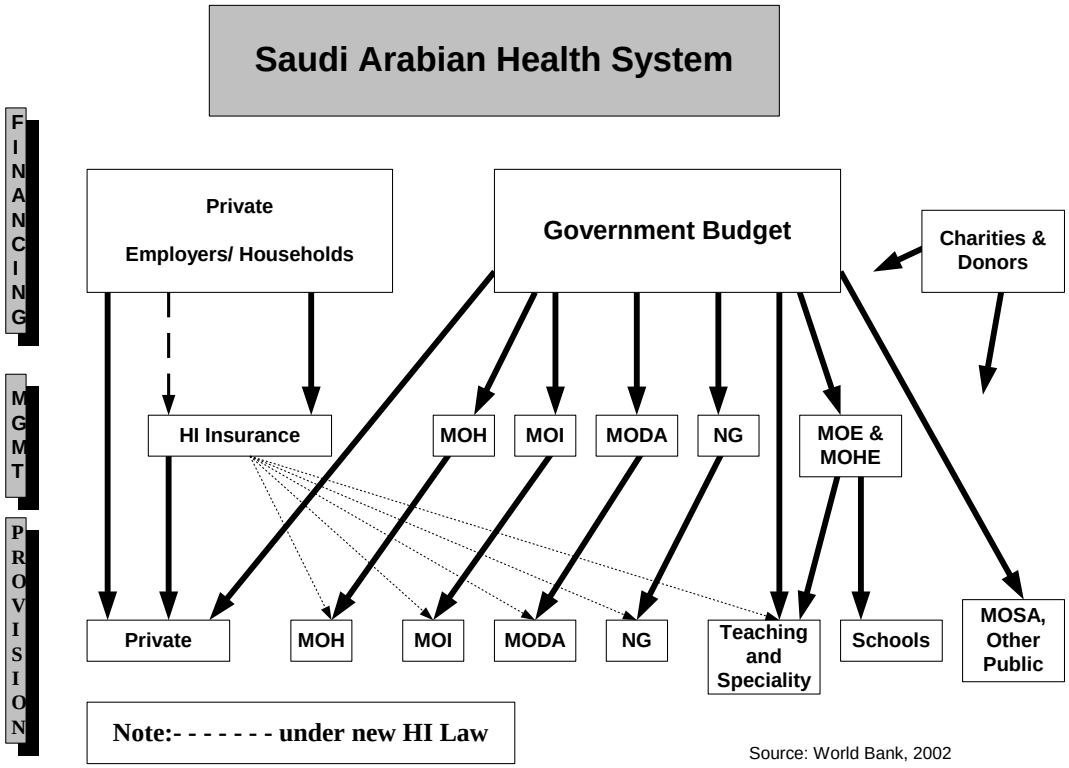



**Figure 2.1: The components of the Saudi Health System**

Source: Schieber (2002)

### 2.3.2 The five-year development plans

The decline in public expenditure and economic recession has affected levels of funding available for social sectors including health care. Reduced funding for public health care facilities has placed the health care infrastructure under considerable pressure. The fall in oil prices in the fourth quarter of 1993 led the authorities to aim for a balanced budget through a planned 19% reduction in expenditure, with the intention of reducing Saudi reliance on oil revenue (World Bank, 1997). Saudi Arabia has been paying great attention to the issue of diversifying income sources since its first development plan (1970 - 1975) until the seventh development plan (2002 - 2004). It did so by trying to facilitate the Saudi economy to activate other sectors such as services sections, especially health services, which potentially could be an important income source, if its inputs are utilised in a way that allows for maximum outputs (Al-Otaibi, 2005). One of the goals of the sixth development plan (1995-2000) was to

establish a system that will ensure a comprehensive health service delivery to the population. The CHIS is being introduced as a way of alleviating the decline in funding arising from these processes. This is manifested in a number of ways including freezing recruitment and dramatic reductions in equipment. Economic transition has a substantial impact on the ability of public providers to deliver affordable health services to patients. It was difficult to retain a skilled workforce in the public health sector because of the competition from the private sector. This has led to a phenomenon of `creeping privatisation' whereby a reliance on private funding distracts attention away from the provision of publicly funded services and towards more profitable enterprises (Ensor, 1999:873).

### 2.3.3 Funding

The national health system derives almost all its income entirely from revenues collected by the government from oil (90%) and other resources (10%) (Altassan, 2003). The MOH prepares an annual estimate of necessary health care expenditure. These estimations must go to the Ministry of Finance for final agreement. Funding flowing from the Ministry of Finance to Ministries is officially passive, based on normatives for each Ministry. In the health sector these are based largely on the number of staff in post and, for material items, numbers of bed days in the last year. Funding is provided strictly according to ‘chapters’. In theory this should preserve rigid control over each item of expenditure. Yet despite these restrictions, Ministries find ways to reallocate funding or relax normatives. The MOH has adopted zero-based budgeting, and has centralised planning and decentralised implementation (Altassan, 2003). However, budgetary constraints, the rapidly growing population and new medical technologies are causing the government to rethink how health care will be financed (MOH, 2001).

### 2.3.4 Health Care Expenditure

Expenditure statistics for the MOH are generally available, though their quality is often poor. Expenditure statistics for other government ministries and agencies are not available because they consider the provision of health care facilities a secondary function. Information about private expenditure on health services in Saudi Arabia is not available. Private health enterprises are reluctant to release financial statistics concerning their operations (Alshammasi, 1986). In 2003, the Gross Domestic Product (GDP) per capita was S.R 8,775, the MOH budget (as a percentage of government budget) was 6.40% and MOH expenditure per capita was S.R 179 (MOH, 2003). Health expenditures in Saudi Arabia are high. At 8% of GDP, health expenditures in the Kingdom, in relative terms, already exceed or come close to corresponding expenditures in most OECD countries (Mufti, 2000). Rapid increases in hospital expenditures have been enormous, since hospitals make up the largest component of the health care sector in almost all regions. Excess hospital capacity in general is widely viewed as a major factor in cost escalation, some of the high wages to the medical expertise (Altassan, 2003). The cost of an average hospital stay has therefore increased beyond expectations and control (Al-Swailem, 1990).

### 2.3.5 Privatisation of Health Care Facilities

As the Saudi government's ability to maintain high levels of public spending has declined in recent years, it has attempted to place more of the burden on its citizens (Barron, 2000). In August 1998, the Kingdom launched plans for the privatisation of key government facilities. The objectives of this privatisation programme, influenced by some key ideas of globalisation, are providing necessary services to citizens; increasing job opportunities for the Saudi population; boosting private citizens' participation in the stock market; raising private sector investment; and reducing the burden on the national budget (Altassan, 2003).

The traditional role of the MOH is likely to change, as it is currently examining options for increasing the managerial independence of public sector hospitals as part of a general move towards the MOH being a purchaser of services, with responsibility for overall policy and monitoring of performance. Privatisation of some health facilities may be considered in the future when insurance schemes are sufficiently well developed (WHO, 2006). In the absence of managed care volume contracts between insurers and health care providers, it is likely that increased privatisation will increase overall health costs to the insurers and private patients (Brown and Barnett, 2004).

### 2.3.6 Health Care Delivery

There are two different coverage groups: (1) Saudis and expatriates working in the public sector; and (2) expatriates working in the private sector (http://en.wikipedia.org). Health care is a basic need for all people (Albaz, 1992). Approximately 75% of the Saudi population of nearly 17 million depend exclusively on public health assistance provided by the MOH, and other government agencies (MOH, 2003). The general public considers health services as part of the welfare services of the government (Alshammasi, 1986). Generally, free health care is regarded as a right for all Saudi citizens and expatriates working in the public sector. They receive free care in MOH facilities as well as other public specialised facilities to which they are referred. They are eligible for a comprehensive package of benefits including diagnostic, curative services, preventive and pharmaceuticals. Most services, including cardio-vascular diseases, cancer treatments and organ transplants are covered. The private sector is very important in its role as the main source of health services for private sector expatriates. Except in cases of emergency, private sector expatriates are not eligible for health services provided in public health facilities. Private employers purchase medical services for their employees solely from private sector providers. Some companies

contract with private hospitals for comprehensive coverage of their employees for a prospectively agreed price, while others buy services on a fee-for-service basis (Mufti, 2000). According to Article 144 of the Saudi labour law which was based on Royal Decree No. M/51 (27 September 2005):

> *an employer shall provide his workers with preventive and therapeutic health care in accordance with the standards set forth by the Minister, taking into consideration whatever is provided for by the CHIS*
>
> (http://www.mol.gov.sa/mol_site/labor_law.pdf).

The CHIS (based on Royal decree number (M/10) and dated 10/5/1420H), which is being phased-in, requires employers to purchase private health insurance for their employees and their dependents (http://en.wikipedia.org). According to Article 14 of the Council of Ministers Decision No.71 dated 11.08.1999 EC:

> *If an employer fails to participate or pay the premium of insurance on behalf of his employee and his family, he will be penalised up to a maximum limit not exceeding the annual premium. An employer henceforth will be suspended from bringing foreign workers or banned till further notice*

In addition, millions of Muslim pilgrims from around the world come to the Kingdom every year to visit the holy places at Mecca, the birthplace of the Prophet, and Medina, the site of his tomb. The need for more health facilities to provide more health services is noticeable during the period of the annual Hajj (pilgrimage). The law makes the government responsible for providing health services to foreign pilgrims during the Hajj season (Abdul Ghafour, 2007c). Besides the temporary clinics that are usually set up during the Hajj, the Saudi Red Crescent Society provides first aid and emergency ambulance services for pilgrims (Altassan, 2003). According to Altassan (2003:340) "nearly one million illegal immigrants" who come to visit the holy places "never went back to their home countries". They "cannot use any of the government or private facilities including health services". When they are sick they usually go to any pharmacy and describe their medical problem to the pharmacist and ask for suitable medication without the need for prescriptions.

### 2.3.7 Problems of the Saudi Health Care System

Although health services have been expanded and health conditions have improved, there are some outstanding problems facing Saudi Arabia's health system. While some of the problems result from a worldwide phenomenon of escalating cost, population explosion and technological innovations, a few of them stem from factors peculiar to the kingdom's health system-funding, organisation, delivery, utilisation etc (Mufti, 2000). There are a number of critical challenges facing health development (WHO, 2006):

- Financing health care services. This is one of the most important challenges facing the MOH. It is becoming increasingly difficult to continue funding the health service through the public sector, as has previously been the case.
- Strengthening the organisation of health services. It is evident that the traditional health system is failing to meet emerging needs. There is growing interest in separating the components of health care, namely, financing, provision, control and supervision.
- Health human resources: lack of skilled health manpower and the heavy reliance on the international health labour market who thus lack awareness of cultural and local problems (Dossary, 1991; Altassan, 2003). Moreover, a sizeable proportion of Saudis working in the health field are engaged in administrative duties.
- Health information systems. Another challenge is establishing an efficient national health information system (NHIS).
- Epidemiological data indicate an alarming increase in the incidence and prevalence of chronic diseases such as diabetes, hypertension, cancer and road traffic accidents (El-Sebai, 1987).

- Lack of national planning: The variation in scale of provision results in geographical misdistribution of services. Some cities and regions have many services while others do not. The wasteful outcome of fragmentation in the provision of health services is exacerbated by the lack of national planning for health services, or coordination between various providers of services and has led to duplication in the provision of services (Altassan, 2003, Dossary, 1991).
- Bureaucracy: the centralisation of power in the system strengthens the position of the bureaucrats, and creates organisational inflexibility in the decision making process. Public bureaucrats and traditional social groups influence the decisions of health policy makers, and this reduces the effectiveness of national health planning (Alshammasi, 1986).
- Health promotion and improving environmental health: the rapid urbanisation of the population, and the changes in lifestyle linked to diet change, modern transport and changes in youth culture require changes in communities if healthier lifestyles are to be established.
- Lack of awareness of the notion of health and its value due to the absence of comprehensive primary care and preventative medicine (Altassan, 2003).
- High cost of health care: the private sector is very expensive and many patients cannot afford it from their own pocket. In addition, the private sector in Saudi Arabia has no defined national role and is growing rapidly and in an unplanned manner (Banoob, 2001).

### 2.3.8 Satisfaction with the Saudi Health Care System

There is some dissatisfaction with the way that patients receive health services in the new movement at the PHC centres. The service capacities in both rural and urban areas are insufficient to meet the needs of the nation. Also there is very little or no opportunity for patients to choose their physicians (Altassan, 2003). Bureaucracy in the

public sector may have led to negative consequences in treating patients, such as impersonality in treatment, the rushing of patients to meet physician schedules, long waiting times, long waiting lists, complex forms, and multiple registration procedures. Sommers (1988: 415) states that the *"majority of time spent at doctor offices is not directly related to health care. Most of the time is spent waiting to see the doctor, filling out multiple forms or moving from one station to another"*. Low patient satisfaction as a result of deficiencies in the health care system can lead not only to problems in health, but also to problems with family, employment, and social relations (Albaz, 1992:13).

# CHAPTER THREE

# Health Insurance

# 3. Health Insurance

## 3.1 Introduction

In order to understand the relationship between current forces of change in the insurance and health care reform, it is important to understand the economics and the history of the health insurance movement (Altassan, 2003). The literature reviewed for this study addressed the following areas: theoretical background about insurance in general and health insurance in particular, insurance in Islam and Saudi culture, health insurance in Saudi Arabia, international experience and lessons to be learnt.

## 3.2 Theoretical Background about Insurance in general

Insurance may be defined as a social or commercial device providing financial compensation for the effects of misfortune, the payments being made from the accumulated contributions of all parties participating in the scheme. Thus, it may be seen as a kind of fund, into which all who are insured will pay an assessed contribution (called a premium*).* In return, those insured will have the right to call on the fund for any appropriate payment should the insured event occur (Hansell, 1999). Consumers buy insurance to replace the uncertainty of a large loss or major expenditure with the more certain prospect of regular premiums (Folland et al., 2001). Vaughan and Vaughan (2003:34) defined insurance from the individual's viewpoint as:

> *"an economic device whereby the individual substitutes a small certain cost (the premium) for a large uncertain financial loss (the contingency insured against) that would exist if it were not for the insurance"*

According to Hansell (1999), the functions of insurance include: (a) Identifying risk; (b) Quantifying risk; (c) Recommendations; (d) Monitoring results. Insurance exists to combat the adverse effects of risk. Risk is inseparable from life and nobody is exempt from it. Insurance as an economic device is justified because it creates certainty about the financial burden of losses and because it spreads the losses that do occur. In

providing a mechanism through which losses can be shared and uncertainty reduced, insurance brings peace of mind to society's members and makes costs more certain. Insurance also provides for a more optimal utilisation of capital (Vaughan and Vaughan, 2003). A contract of insurance is embodied in a policy that specifies the terms under which the insurer agrees to indemnify the policyholder for loss in consideration of the payment of a stated premium (Altassan, 2003). Insurers frequently resort to reinsurance for the sake of avoiding retaining the full amount of insurance on risks by paying a premium to another insurer to assume part of the risk by reinsuring a portion of its risks, a company is assured of the availability of funds to pay for very large losses or an unusually large number of smaller losses (Davids, 1984).

## 3.3 Theoretical Background about Health Insurance

There are two separate types of insurance included in the generic term health insurance: disability income insurance, which provides periodic payments when the insured is unable to work because of sickness or injury, and medical expenses insurance, which pays the cost of medical care that results from sickness or injury (Vaughan andVaughan, 2003). According to Sa'aty (1999:1), there are three types of insurance in the Kingdom:

a) Social Insurance which provides cover for work-related incidents.
b) Private Insurance, which is provided, by commercial insurance companies covering a wider area such as sickness and accidents
c) Direct Insurance, which is serviced by health care providers in direct contract with companies or individuals.

The present research deals with medical expenses insurance only. Health insurance provides people with a way to protect themselves against the financial implications of medical catastrophe and to assure themselves and their families of access to the health

care system (Altassan, 2003). Given the high latent demand from people for health care services of good quality, it has been argued that health insurance may improve access to health care of acceptable quality (Jutting, 2001).

Health financing systems through general taxation or through the development of social health insurance were intended to respond to the goal of fairness in financing, in that beneficiaries were asked to pay according to their means while guaranteeing them the right to health services according to need. In social health insurance systems, households and enterprises generally pay in via contributions based on salaries or income. Ron et al. (1990:29) contended that *"If both contribution and benefit specifications are sound and programme administration is efficient, compulsory health insurance becomes a useful means to rationalise, redirect and optimise household expenditure on health"*.

Economists often recommend that cost-sharing be included in insurance programmes to discourage overuse of services by insured persons, who would otherwise face a zero price at the point of service as insurance creates an incentive for behavioural change on the part of the insured, who are protected from severe financial loss and are thus likely to demand more services than the uninsured. This additional demand is called moral hazard and is conceptually similar to what is often termed "unnecessary utilisation" arising in free care systems. Cost-sharing refers to the amount that health insurance beneficiaries have to pay each time they use services. Forms of cost-sharing include co-payments (the amount of the charges for specific services which insurance does not pay, excluding the deductible) and deductibles (a set amount which the beneficiary must pay before receiving insurance benefits) (Kutzin and Barnum, 1992).

## 3.4 Insurance in Islam and Saudi Culture

Culture, according to Hofstede (1980) can be applied to human groups sharing some characteristics. Language is considered as the most recognisable characteristic of culture. Murphy (1986) defined culture as the total body of tradition borne by a society and transmitted from generation to generation. It refers to the norms, values, and standards by which people act, and it includes the ways, distinctive in each society of ordering the world and rendering it intelligible (Evangelos, 2007:85). Saudi Arabia is a country of rich culture and enormous diversity. Saudi society is traditional, patriarchal and highly conservative. It is based on Islamic principles, rules and traditions (http://www.gmid.euromonitor.com). However, the Saudi culture has been affected by other cultures (especially western cultures) because of pilgrimages and expatriate employees. Galloway (1995:35) suggests as contended by Al-Shekh (2003:165) that the Saudi people place a high value on preserving their culture and tradition. She states:

> *Although they actively seek the infusion of foreign technology, they are determined to use new knowledge without diluting the old faith or treasured traditions. Their strong religious beliefs influence everything they do in the work place as well as in their private lives. These beliefs also affect the service delivery of health care services and must be taken into consideration when planning health care services.*

Islamic teachings provide guidance to Muslims in all aspects of life i.e. social, political, economic and affairs. The Saudi society is relatively permeated by religion, and its socio-cultural forces, unlike other developing countries, are quite influential (Alshammasi, 1986). Culture influences individual life through shaping beliefs, attitudes and values (e.g. Hofstede, 1980; Murphy, 1986). Saudi social life is also based on many moral values, including those related to personal relations and extended family values. In a simple family setting, special respect is given to the authority of the father and the older sons. This respect is extended to older people; hence patients tend not to complain if priority is given to elderly patients (Al-Shahrani, 1999).

There has been much debate on the consistency of insurance with Islamic teaching. Taking preventive measures and arranging beforehand for compensation for likely losses involved in cases of pure risk, whether done individually or collectively, is absolutely compatible with the belief in predestination and submission to the Will of God. This is the right inference from an understanding of the practice of the Prophet and his Companions. The absence of any provision for security against unforeseen contingencies and calamities will adversely affect economic efficiency. It will also give rise to general dissatisfaction and cause social disequilibrium (Siddiqi, 1985). Thus, the basic concept of insurance is acceptable. What is of concern, however, is the way it is implemented, since the types of schemes typical in western societies contain features incompatible with Islamic values on financial transactions. However, these problems are not insurmountable. Insurance is a basic human need. The objectives of insurance are desirable ones, according to the Shari'ah. Siddiqi (1985:12) stated that:

> *It is possible to organise insurance under an Islamic system in such a way that, purified from all incompatible elements, it becomes a blessing for the society. Interest permeates modern insurance operations but is not a necessary constituent of them. It is possible to organise insurance without interest.*

The Supreme Religious Committee in Saudi Arabia, having examined the CHIS, expressed their approval of the compatibility of the cooperative insurance system with Islamic values in their Decision No.51 dated 04.04.1397H. The Supreme Religious Committee stated that the contract of cooperative insurance is one which allows groups or individuals to create a common fund to be applied for the benefit of the subscribers of the fund in the event of unexpected incidents, which can affect the financial position of a family or a community, as in natural catastrophes. The Committee considered such a system to be compatible with the teaching of Islam. Since the main objective of a cooperative insurance system is not profit but to serve the community and distribute the surplus to the subscribers, it is socially and morally justifiable (CHIS Booklet, 1999).

Cooperative insurance is different from private (commercial) insurance, which is driven by profitability. Cooperative insurance is a non-profit making organisation driven totally by socially-oriented principles. In cooperative insurance, when a surplus is realised, it is distributed equally among all members of the scheme. The health insurance Act guarantees the concept of cooperation and social harmony between groups and individuals. The burden of loss is spread across a large number of members of society and shared among them. Without such a common fund an individual would be left to carry the financial burden by himself and could be financially ruined in the event of an accident. However, by spreading the risk among members of the community, the burden becomes minimal (CHIS Booklet, 1999). Cooperative health insurance is the focus of this study because it is the only type of insurance acceptable in Islam.

Altassan (2003), in his PhD thesis, explored the problems concerning the preparation of a new health insurance programme in Saudi Arabia. A number of target groups (Insurance company employers, twenty university females, ten religious representatives, non-urban citizens (Bedouins), health personnel and other Saudis, and non-Saudis) were studied. The researcher used multiple methods to collect the data such as interviews (un-structured, semi-structured and telephone interviews), observation and, case studies and focus groups. Extensive interviews were conducted with 152 Saudi and non-Saudi men and women in the city of Jeddah and the rural areas. Their attitudes to health insurance, primarily, were ascertained; as well as experiences of the existing health delivery modes.

A high percentage of the participants were dissatisfied with the health services. Religious and female groups perceived that the Saudi health system as inadequate. The common complaints coming from both groups were long queues; cancellation of

appointments; cold food for patients; long waiting list for hospital beds; and malpractice. Women were in favour of health insurance being mandatory, while the religious group was in favour of it being optional and not compulsory, because they were totally opposed to it from the beginning. Religious leaders state that private health insurance contains gambling making it unacceptable on religious grounds. The only acceptable form of health insurance for Muslims is one which is formulated on the basis of mutual assistance. More favourable responses came from university women, employers, government employees, and the insurance companies themselves.

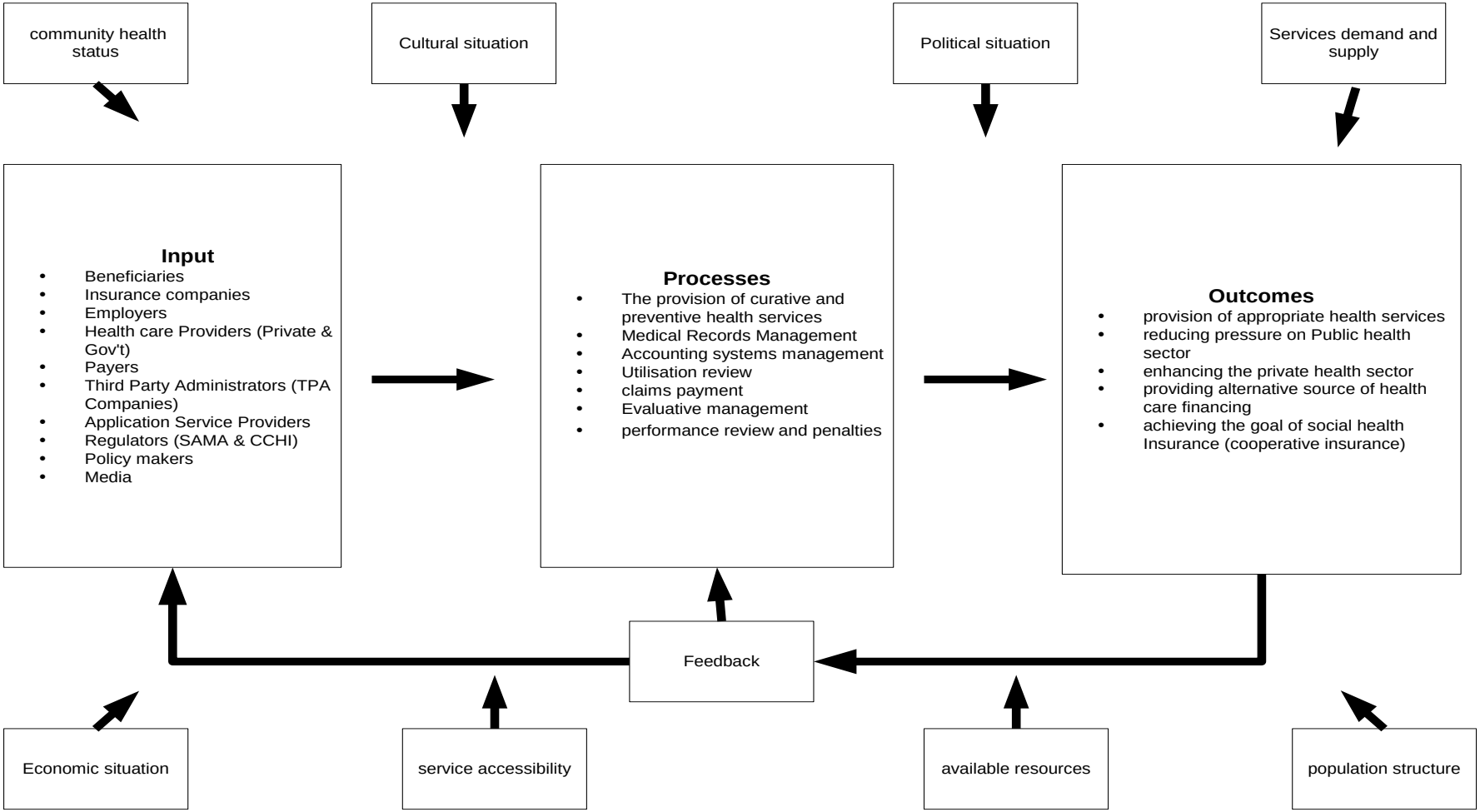
## 3.5 Health Insurance in Saudi Arabia

The health insurance market in Saudi Arabia is expected to grow to $40 billion over the next five years after the implementation of CHIS to include Saudi nationals. There are over 70 foreign companies selling insurance in Saudi Arabia. In 2001, these companies generated an annual turnover of $800 million. Several international companies have entered into negotiations with Saudi partners to open offices in the Kingdom (Khammash, 2003).

The MOH, in association with the Ministry of Labour and Social Affairs, the Ministry of Finance and National Economy and the Ministry of Trade, made a thorough study of the legality of a cooperative health insurance Act and submitted a draft of proposed legislation to the Council of Ministers, which approved it by its decision No.71 dated 27/4/1420 H (1999). The cooperative health insurance Act aims to regulate the provision of health care services to all Saudis and non-Saudi legal residents and their dependents in the Kingdom (www.cchi.gov.sa). It may be applied to Saudi citizens and others by a cabinet decree (article 1 of the Act). The Saudi government has approved the CHI Act as a strategic option for realisation of many laudable goals, notably the principle of social cooperation, rationalisation of expenditure and improvement of

health services. According to Article 3 of this Act, anyone sponsoring a resident shall be obliged to participate in the CHIS for the benefit of the resident. A residence permit shall not be issued nor renewed without prior obtaining health insurance policy. The period covering the residence permit (Iqama) must be equivalent to the policy period. If an employer fails to subscribe or pay the premiums of the health insurance for his employee covered together with his dependants in the health insurance policy, the employer shall be obliged to pay all premiums due, in addition to a financial fine not exceeding the annual contribution of each individual. All companies in the private sector should be able to properly insure their employees, even if their employment contract would not guarantee the provision of health care, based on Article 144 of Labour Law, issued on 2005. For the public sector however, health care provision will be based on whether it is included in the individual's employment contract or not (www.cchi.gov.sa). Alhaidar and Alturkey (2002) pointed out that one of the outcomes of implementing the CHIS is to increase beneficiaries' satisfaction.

The following figure (Figure 3.1) summarises the components (elements) of the CHIS in Saudi Arabia.




Source: Alhaidar and Alturkey (2002:105)

**Figure 3.1: The cooperative health insurance system**

Altassan (2003) contended that the MOH officials' philosophy with regard to the CHIS is based on five objectives:

a) To nurture a healthy nation by promoting good health;
b) To promote personal responsibility for one's health and avoid over reliance on the MOH or health insurance;
c) To provide good and affordable basic medical services to all Saudis and non Saudis;
d) To rely on competition and market forces to improve service and raise efficiency; and
e) To intervene directly in the health care sector, when necessary, where the market fails to keep health care costs down.

Al-Otaibi (2005:23) stated that the benefits of implementing the CHIS from the governmental point of view are:

1. The transfer of liability to provide health care to foreign workers reduces the burden laid on government hospitals and allows the utilisation of financial allocations in executing other essential tasks (Homaidahi, 2002).
2. The implementation of CHIS means in its core the operation of government and private hospitals in accordance with economic standards because insurance companies will pay the health care cost against the collected instalments regardless of its value or the financial capabilities of the beneficiary.
3. The expected instalments for health insurance may allow participating insurance companies to constitute reserves, which could be utilised in investments in various activities. As they should have sufficient experience regarding the nature of investment in the health sector, this could lead to a substantial participation of the private sector in the national economy.

4. Establishment of cooperation and solidarity between social classes. Basically, CHIS is based on cooperation and solidarity among the society's members, which in turn means that widening cooperative health insurance activity will lead to a transfer of the burden of health care cost from the government to the society with all its classes and population groups (Saudis and non-Saudis) within a cooperative framework.
5. Qualifying insurance companies to practise health insurance and participate in the health insurance law could initiate the first step forward by reviewing the current situation in the market as a whole and open initiatives to organise it and set regulations and ordinances, which ensure continuity (www.cchi.gov.sa).
6. Expanding health insurance activity in the kingdom through establishing several Saudi insurance companies and increase of investment in other health services, in addition to development in several related activities, is expected to provide thousands of job opportunities for Saudi youth, not only in medical insurance but in the Saudi insurance market as a whole, since market organisation might be the most significant result of the implementation of CHI.

The MOH is responsible for managing and supervising the CHIS. The MOH and the Council of Cooperative Health Insurance (CCHI) are considering the viability of extending health insurance to Saudis who are aged, unemployed and suffering from chronic diseases and expatriate domestic workers such as drivers and housemaids (Abdul Ghafour, 2007b). The KSA selected a strategy of "gradual implementation" of health insurance to avoid any shortfalls in delivering the promised levels of service. This meant that compulsory insurance coverage was limited according to various criteria such as geographical area, size of the undertaking and category of dependant. Employees in urban areas working in large undertakings were first covered, and then gradually the type of persons protected expanded, to include more categories of

employees, their dependants and eventually also groups of self-employed. According to Ron et al. (1990:31) it is:

> *common for compulsory health insurance coverage to be applied first to selected categories of persons in the labour force. A clear preference is to start with categories of employees, leaving compulsory insurance for the self-employed for a later stage.*

The medical insurance scheme was implemented over a three-year period in three phases, as follows: within the first phase of enforcement, companies with more than 500 non-Saudi employees were subject to the regulations; within the second phase of enforcement, companies with at least 100 non-Saudi employees had to comply with the regulations; and at the end of third phase of enforcement, the regulations applied to all companies (www.cchi.gov.sa). All non-Saudis are included in the scheme, regardless of whether they are employed in the private or non-private sectors. In 2007, more than 1,135,000 people have been insured in the Kingdom, 970,169 are expatriates and 165,712 are Saudis (Abdul Ghafour, 2007d). The number of insured has increased in 2008 reaching 4.7 million persons, including 360,000 Saudi citizens (http://www.cchi.gov.sa/sites/en/). However, there is still a lack of effective health insurance coverage for many persons in Middle Eastern countries (Shaheen and Souqiyyeh, 2005:2909) and Saudi Arabia is no exception. Saudi Arabia plans to establish a national cooperative fund to provide free health insurance coverage to all of its nationals after privatising state-owned hospitals (Abdul Ghafour, 2007d).

One of the mechanisms used to manage care in the CHIS was to control access to specialised care by general practitioners (GPs) as gatekeepers who work for the health care provider. The CHIS policy covers the basic and essential needs of the patients. However, patients who prefer more coverage can purchase an optional coverage (Altassan, 2003). The united policy approved by the CCHI has left the minimum acceptable benefits and maximum limits up to the market mechanisms (Murad, 2007).

The maximum financial coverage for an individual under the scheme is S.R 250,000 (about $67,000), according to the by-laws. Table 3.1 summarises the characteristics of CHIS.

**Table 3.1: Characteristics of CHIS**

| | |
|---|---|
| Eligibility | • All employees<br>• < 65 years<br>• Spouse / (s)<br>• Infants<br>• Children : Up to18 years<br>• Unmarried daughters |
| Benefits | • Max. Coverage S.R 250,000 ($66,667)<br>• Outpatient: Co-payment 20% Max 100 ($ 26.7)<br>• Physicians' Fees :<br>▪ GP 50<br>▪ Consultant/ Specialist:<br>▪ By Referral 150<br>▪ Without referral 50<br>• Inpatient deductibles Nil<br>• Accommodation Max 350 S.R/day<br>• Pregnancy 10,000 ($ 2,667)<br>• Premature up to 250,000<br>• Repatriation 10,000<br>• Range of Coverage Within Saudi Arabia |
| Care Coverage | • Investigations<br>• Physical clinical Examination<br>• Treatment<br>• Hospital Stay<br>• Dental & Gingival Treatment<br>• Preventive Measures |

Source: Power Point Presentation entitled "Health insurance in Saudi Arabia" by Dr.Abdullah AL Sharif, The Secretary General, CCHI, 2007.

The CHIS faces many problems because it is still in the development phase. The misuse of medical insurance is a problem for implementation of the new system. Doctors and insured consider the insurance companies as the only beneficiary disregarding the role of the cooperative insurance. Some also abuse insurance by throwing on the insurance companies the maximum amount of costs (http://www.cchi.gov.sa).

### 3.5.1 The parties of health insurance

Each health plan may be conceived as a social system, made up of three components (Hetherington, 1975): the insured company with its staff that needs insurance services; the insurance companies that pledge to provide these services; and the hospitals and medical centres that are adopted to provide the health care services (http://www.cchi.gov.sa). These components interact with one another according to formal rules peculiar to each plan and with role-expectations derived from participation in the larger system. Interactions may involve, for instance, enrolment, provision of medical care, billing, provision of insurance, payment of premiums and responses to complaints (Hetherington, 1975). The relation between the hospitals, the insurance companies and the customers is controversial and sticky, for there is a clash and intersection between the interests. The insurance companies fear that the customer would use the insurance card without a medical reason, while the hospitals suffer from the delay in services, while customers demand good services while focusing on the price provided by the insurance companies, which requires great harmony the Council works hard on providing (CHI Magazine, 2008). Figure (3.2) shows the interaction of the parties in the Health Insurance relationship in Saudi Arabia.

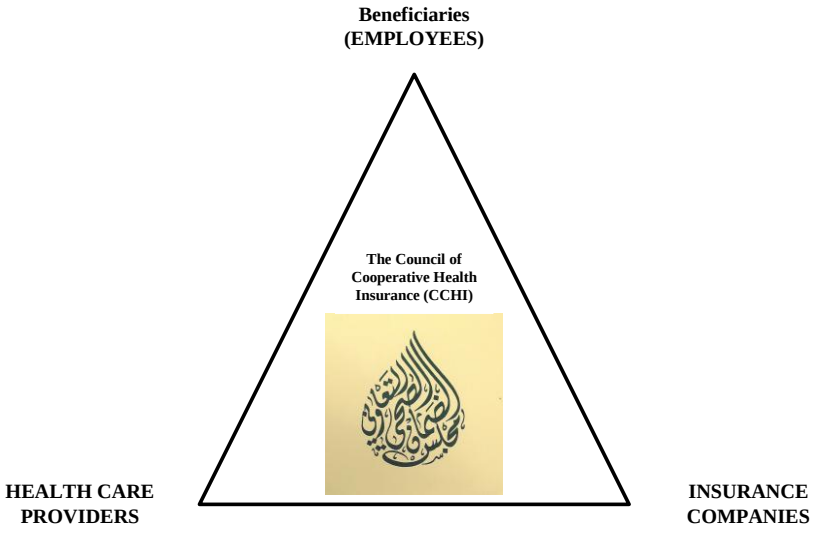



**Figure 3.2: Interaction of consumers, providers and health insurance companies**

#### 3.5.1.1 The insured

Everyone's goal is to satisfy the beneficiary. There is a lack of trust in the Arab world between the insured and the insurance companies. Some people think that the goal of the health insurance company is to get their money without providing them with acceptable levels of health care (Murad, 2007).

#### 3.5.1.2 Employers

Employers are part of the insurance process and they should insure their employees with a qualified insurance company as per the CHIS. They can choose between competing insurance companies. They should adhere to the insurance policy and they should make sure that their employees are fully aware of their rights and duties towards the CHIS (Murad, 2007). In their paper, Whitmore et al. (2006:1668) examined employers` views on the importance of health benefits and their perspective on policies aimed at expanding health coverage, reducing administrative expenses, and improving the quality of care. It was found that employers hold a positive view of the value of health benefits in attracting and retaining workers and in improving workers` health and productivity. However, employers believe that workers must contribute to the cost of health benefits.

#### 3.5.1.3 Health providers

Health providers as mentioned in chapter two, seek with full force to attract insurance companies by improving their services to spare the beneficiaries the complications. The health care providers are required to provide high quality services. This is expected to occur when the MOH starts to provide health care services as a major health care provider (Murad, 2007). While numerous factors affect patient satisfaction, the provider of care remains a key element in patient satisfaction (Mawajdeh, et al., 2001).

### 3.5.1.4. Health Insurance companies

The CHIS has created new investment opportunities (Al-Shaikh, 2006) by allowing national insurance companies to meet the demands of both private and public sectors, as well as individuals (Altassan, 2003). There are several health insurance companies operating in the Saudi market and they compete with each other to win health insurance contracts. The government has invited foreign insurance companies to open their branches in the Kingdom which is considered as a radical step. Foreign companies will almost certainly have to operate in partnership with a Saudi company (Barron, 2000).

Licensing the insurance companies, as well as qualifying them to operate under the cooperative approach in order to optimise the implementation of the law, requires more time and effort. Especially, a mechanism will have to be established through substantial modifications of the cooperative insurance concept, which attracts investors to this sector (Al-Otaibi, 2005). The companies, which have been selected for the service, have already applied for licences from the Saudi Arabian Monetary Agency (SAMA), the Kingdom's insurance regulator (Abdul Ghafour, 2005). It is expected that the expansion of the insurance market will promote greater professionalism in the business and speed up delivery of service. It is also expected that tougher and new regulations will reduce market irregularities (Hassan, 2006). The insurance company has the right to improve the choice of health care provider and make sure that the services provided to the insured are of good quality, in addition to making sure that the insured is aware of his duties and responsibilities. It is also important that preventive medicine fully plays its role to spare the beneficiaries the threat of avoidable diseases (Murad, 2007).

Several Saudi health insurance companies have started to increase their medical insurance policy prices, to avoid any expected loss. Current prices range between 500 and 2,000 riyals. Experts say that these additions are due to the successive addition in

the number of subscribed citizens in the CHIS, the increase in the costs of producing health services, the crowding of public hospitals, and the high cost of medical services in the private sector. Medical insurance experts assert that the price rise of the insurance policy, on the technical standard for covered risks, is natural to limit the burdens and responsibilities of the companies, and to pay compensations, taking into consideration what would result from service shortage (CHI Magazine, 2008:11). Because the insurance business is relatively new in Saudi Arabia, there is limited understanding among a wide sector of the population regarding the need for insurance and the benefits it provides. Many Saudis have no understanding of health insurance and its mechanism e.g. benefits, terms, conditions (Altassan, 2003). The customers should know the services the insurance provides and the documents needed for the beneficiary to ask for his/her rights. Increasing public awareness concerning insurance is one method companies use successfully to develop and expand their business. Awareness programmes are implemented by insurance companies primarily to educate the public about the benefits of insurance while promoting the company's range of products. Such programmes also aim to enhance the general public's perception of insurance companies as based on the Islamically approved concept (Altassan, 2003).

### 3.5.2 The procedures of delivering a health service under the CHIS

The cycle for serving the beneficiary starts when the patient visits the health care facility in order to open a new file. The patient will be asked to provide his own insurance card and then the clerk will check the patient identification by any methods of proof (Iqama 'work permit' or Passport). The medical record clerk then completes the required data to open the file and record personal information including the name of the insurance company; insurance card number; insured category; insurance limit coverage; and any other information. The patient is then given a hospital card which includes his file number and personal information; the United Claim Form (UKAF) is then attached

to the patient medical record. Following this, the patient will be asked to go to the outpatient department (OPD) in preparation for a medical examination. For a follow-up appointment, the patient presents his hospital card to the receptionist; the medical record will be retrieved and the personal identification checked through insurance card and Iqama. The UKAF form is then attached to the file and sent to the OPD.

#### 3.5.2.1 Outpatient Department

Upon arrival at the outpatient department, the receptionist asks the patient about his problem to determine the type of specialisation needed. The patient will be asked to go to the OPD cashier to pay the deductibles/physician copayment after which the receptionist will send the patient file to the clinic and ask the patient to wait in the patients' waiting room. When the patient is called to the clinic for check up, the nurse will verify his personal identification; check his vital signs and take him to the physician. Once the physician completes the check up, he will prescribe medicine for the patient and request any additional tests, then the patient will be asked to go back to the OPD cashier (insurance accountant). The patient will be informed of the cost of his treatment and his copayment contribution. A fax will be sent to the insurance company for approval, if needed. The approval should be received within an hour of submission, otherwise the requested procedures will be considered approved automatically. A follow on appointment will be scheduled for the next visit.

#### 3.5.2.2 Pharmacy

After obtaining a prescription from the physician, the patient will go to the pharmacy to get the medicines. The pharmacist will review the prescription and inform the patient about the cost of the medicines and the percentage of copayment the patient has to pay. The insurance accountant will collect the payment and stamp "paid" on the prescription. The patient will be asked to go back to the pharmacy to collect the medicine.

### 3.5.2.3 Claims Department

This department is responsible for preparing the hospital claims from other companies according to the costs of health care services rendered for policyholders. This department collects patient files from the OPD, prescriptions from the pharmacy, the employee copy of the patient file, UKAF form and procedures requests which show the health care cost (patient deductibles and insurance company). The files must be reviewed, signed and stamped by the insurance physician in the hospital. The files will be classified according to each company on a daily basis, after which a list of claims will be prepared with complete documentation to be sent to the insurance company. The following diagram represents the procedures of delivering health service under the CHIS.

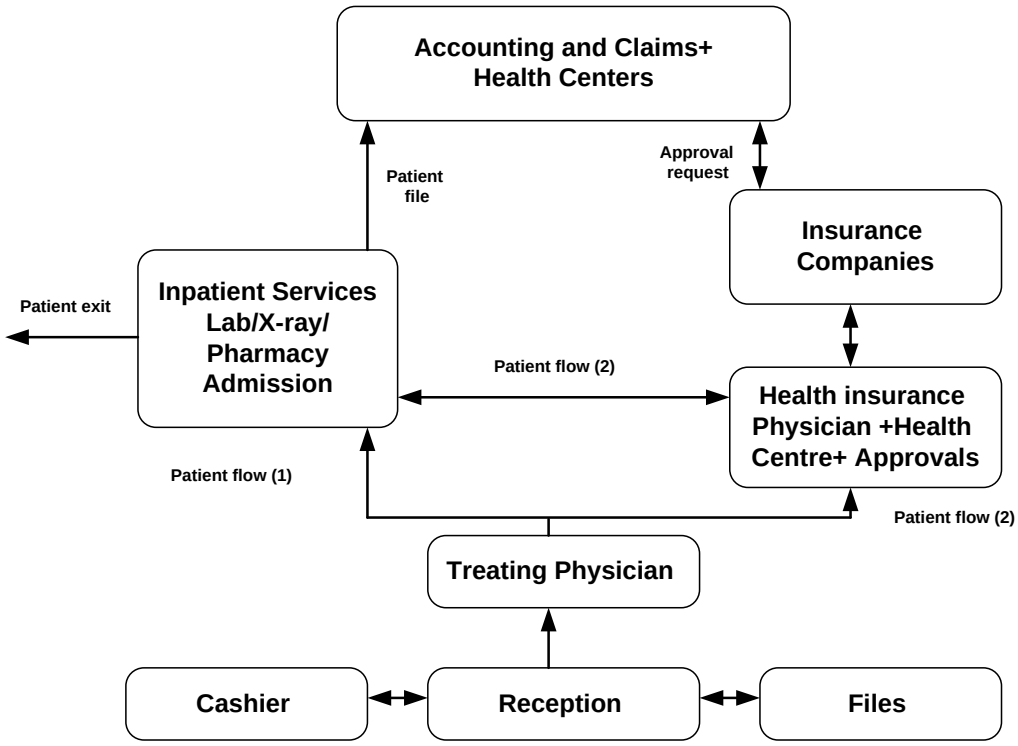



**Figure 3.3: The procedures of delivering health service under the CHIS**

Source: Documentary Cycle for Cooperative Health Insurance (2007) *Journal of Health insurance*, Issue No. (1):36.

### 3.5.3 The Council of Cooperative Health Insurance (CCHI)

The CCHI was set up as an independent government body, by the decision of the Cabinet of ministers' No.71 dated 11/8/1999, to regulate health insurance and the implementation of CHIS. According to Article 5 of the CHI Act, the CCHI shall issue necessary decisions for regulating changing matters regarding the implementation of the rules governing the CHI act, including implementation phases, the family members of the beneficiary to be covered by this insurance, the percentage of contributions of the beneficiary and the employer in the CHI and the maximum limit for this amount based on actuarial and specialist study. Based on article 58 of the rules of implementation of the CHIS the CCHI *"shall supervise and monitor the universality of the Health Insurance coverage and shall ensure that the parties in the Health Insurance relationship perform the tasks and responsibilities entrusted to them under these rules"* (http://www.cchi.gov.sa). Any violations of any articles of the CHI Act could be raised to the CCHI where the appropriate penalty will be decreed by the head of the council.

## 3.6. International Experiences

Similar to the Saudi health care system, developed healthcare systems are facing problems in how to respond to increasing patient and professional quality expectations with increased governmental pressures to contain the cost of service delivery (Al-Dakeel, 2002). In this section, a historical and comparative study of the experiences of the United States of America (USA) and the United Kingdom (UK) with regard to health delivery and the implications of policy changes will be presented to give an indication of the success and the failures of the policies developed so far, as well as the issues now facing each country in relation to the subject of health care and health financing. The advantages and disadvantages of each approach may be beneficial to the Saudi planning and reform process.

### 3.6.1 The United States

Throughout periods of intense debate on the political acceptability of national health insurance, the United States retained a preference for private insurance (Ron et al., 1990). Until early in the 20th century, physicians in the private practice of medicine almost universally billed Fee-For-Service (FFS) (Boesz et al., 1995). Physicians introduced prepaid group practice into the American medical care system during the second quarter of the 20$^{th}$ century. This marked the true beginning of managed medical care delivery in the United States. The prepaid plan is considered the forerunner of Blue Cross plans, which were organised by a group of hospitals to permit and encourage prepayment of hospital expenses. Coverage under the Blue Cross policies was typically for a hospital stay of a specified number of days or for particular hospital services (Navarro, 1973). The Blue Cross and Blue Shield plans traditionally established premiums by community rating: that is, everybody in the community paid the same premium (Altassan, 2003).

In the 1930s, commercial insurance companies began to market hospital and surgical expense insurance. Commercial insurers provided coverage on a reimbursement basis, providing payment up to a specified dollar maximum per day while the insured is confined to a hospital, or a specific limit of coverage for various surgical procedures. In 1949, commercial insurers introduced a form of catastrophe medical expense coverage called major medical insurance. The health insurance provided by Blue Cross and Blue Shield organisations and insurance companies is now referred to as FFS coverage. Under this approach, the insured had complete autonomy in the choice of doctors, hospitals, and other health care providers. The insured were free to choose any specialist without getting prior approval and insurers did not attempt to decide whether the health care services were necessary. Insurers attempted to control costs through deductibles and coinsurance (Vaughan and Vaughan, 2003).

In 1965, Congress amended the Social Security system by establishing the Medicare programme to provide medical expense insurance to persons over 65. Approximately 60% of Medicare-covered persons purchase private insurance to supplement the protection under Medicare. The same legislation created Medicaid, a state-federal medical assistance programme for low-income persons and some individuals who have enough income for basic living expenses but cannot afford to pay for their medical care. The Medicare and Medicaid programmes are under the supervision of the United States Department of Health and Human Services (Altassan, 2003). During the years immediately following Medicare in 1965, the cost of health care (and of private health insurance) increased dramatically. It was during the early 1970s that the United States government began to realise the financial impact of the FFS health care delivery system (Kongstvedt, 1996). In 1971, the federal government adopted a policy of encouraging and promoting Health Maintenance Organisations (HMOs) as an alternative to the FFS approach to health care financing (Luft, 1978). HMOs play a direct role in the management and delivery of health care. To do this they "develop financial arrangements specifically designed to spread the risk between provider and insurer" (Simonet, 2003:97). HMOs attempt to provide care at a lower cost than the traditional FFS approach; in return, patients must sometimes accept less choice in treatment options and providers. Firms employing more than 25 people had to offer coverage from an accredited HMO as an alternative (or substitute) for traditional insurers offering FFS payment. Employees could then choose between an HMO and an FFS insurer (Simonet, 2005). The FFS system has been replaced by a system of capitation. In return for a fixed monthly fee, the individual receives virtually all the medical care required during the year. There may be a nominal charge, of the order of $5, paid by the participant when visiting the physician, but this charge is the same regardless of the service rendered.

The subscriber is required to choose a primary-care physician (also known as the gatekeeper), who is responsible for determining what care is received and when the individual is referred to specialists. If the primary care physician decides the patient requires the services of a specialist, the patient is referred to a specialist in the HMO network. If the network does not include a specialist of the type required, referral is made to a specialist outside the network. Emergency care services are provided out of the network when there is a sudden onset of an illness or injury, which, if not immediately treated, could jeopardise the subscriber's life or health (Freund and Lewit, 1993). However, primary care physicians rarely have sufficient knowledge to treat complex and chronic health problems (Simonet, 2005:430). This system is certainly less flexible than the FFS regime. However, it is cheaper for patients, as expenses (i.e. co-payments) are lower if they receive care within the HMO network. If the patient wishes to consult a provider outside the HMO network, however, consultation costs must be borne by the patient (Simonet, 2005).

The HMO Act of 1973 set the stage for the development of the current managed care industry. It "recognised the promise of HMOs and encouraged their growth nationwide by removing legal impediments to their development" (May et al., 1996). From 1973 to 1990, managed care organisations experienced unprecedented growth (Kongstvedt, 1996). Despite this growth of managed care, FFS continued to drain the pocket of the United States government. Elder (1998:37) stated that *"Health care costs have increased disproportionately for over 30 years"*. From the 1990s onward the independent practice association (IPA) or network, which is a new type of HMO, began to emerge. Here, physicians are independent of the HMO, they can have agreements with more than one HMO at a time, they receive a fee for their services and they continue to see patients covered by a traditional insurance scheme (20-30% of their caseload consists of HMO patients, as opposed to 60-70% in the case of practitioners

working for group-model HMOs). IPAs are preferred by patients because they are less expensive than fee-for service plans (Simonet, 2003).

Although the rate of growth in health care costs slowed in the late 1990s, it began to accelerate again in 2000 and 2001. The cost of health care continues to increase in the face of the efforts of the federal government, insurers, and managed care consultants. Both the FFS system and managed care contain built-in incentives to practice bad medicine. Under the FFS system, the incentive is to provide unneeded services. Under the managed care approach, there is an incentive to deny needed services. Patient satisfaction is less good under managed care agreements as compared to the FFS system (Simonet, 2003). Managed care has restricted patients' choice of doctors and limited access to specialists, reduced the professional autonomy and earnings of doctors, shifted power from the non-profit to the for-profit sectors and from hospitals and doctors to private corporations. It has also raised issues concerning the future structuring and financing of medical education and research and concerning practice ethics (Sisk et al., 1996). However, managed care has also accorded greater prominence to the assessment of patient satisfaction, profiling and monitoring of doctors' work, the use of clinical guidelines and quality assurance procedures and indicated the potential to improve the integration and outcome of care. Sisk et al. (1996) stated that the positive implications of managed care for patients include: better outcomes, better informed care, clearer expectations, patient driven guidelines and increased satisfaction. The negative implications include restriction of treatment or doctor, altered doctor patient relationship and less satisfaction.

In the United States, the duty of monitoring insurers' service quality is assigned to the state regulating bodies, so the measurement of service quality is a concern of both insurers and regulators. Mostly, the tool used for measuring service quality by regulators

is the "complaint ratio" (http://www.ins.state.ny.us/); a fraction with the numerator being the number of official complaints received (usually within a year) and the denominator being a measure of the total business in effect (usually total premium written or total number of insurance contracts) - which is calculated yearly for each company (Wells and Stafford, 1995).

#### 3.6.1.1 Health benefits

Every employer has its own history and its own health benefits issues. Health benefits are a part of a complex package of total compensation whose parts are interrelated and are often negotiated. Employers understandably see health benefits primarily as a tool in the labour market, not an instrument of health policy. Employers' efforts to control costs through the use of "managed care" were temporarily successful in the 1990s. For a few years they brought the growth of health spending into line with U.S. GDP, mainly by squeezing provider payments and shortening hospital stays, strategies that have been played out (Enthoven, 2003).

#### 3.6.1.2 Problems of the American Health Care System

The U.S. health care system faces many problems which is a source of growing dissatisfaction with the health care financing system. These problems include rapidly rising costs, inadequate health care services for some segments of the population and the failure of past measures to solve the problems. HMOs are under attack as consumers resent and resist any attempt to limit their care, while doctors and hospitals resent and resist any attempt to limit their use of resources (Enthoven, 2003). Many patients have complained about the quality of health care under the HMO system and limits imposed on them, particularly access to care (Simonet, 2005). According to Davis et al. (1995), the freedom to choose an insurer and practitioner is a major determinant of patient satisfaction. Several studies have reported that HMO patients' satisfaction regarding

their coverage is lower than for FFS patients (Reschovsky et al., 2000; Lake, 2000). Simonet (2005:427) stated that "Patients were dissatisfied with the assignment to a gatekeeper and the limitations imposed on specialist access". Patients prefer to consult a practitioner of their choice (Rubin et al., 1993; Schmittdiel et al., 1997) and prefer direct access to care, including emergency care, without gatekeeper pre-authorisation (Chan et al., 1997).

The American Statistics Bureau stated that 47 million Americans were insured in 2006. The consumer group, Families USA, announced that more than one-third of the American population under the age of 65 years have been without medical insurance over the past two years (CHI Magazine, 2008:55). Individuals may be uninsured for a number of reasons. The high cost of health care is generally considered one of the major reasons for the size of the uninsured population (Yu, 2004). Approximately three-quarters of the uninsured are employees and their dependents. Approximately half of these workers have insurance available at their place of employment, but elect not to purchase it. Many of the uninsured are low-income workers. Some of the uninsured are unemployed and approximately one-third have incomes at or below the poverty level and do not qualify for Medicaid. Others are between jobs or have taken early retirement and are not yet eligible for Medicare (Vaughan and Vaughan, 2003). The huge number of people without medical coverage during the last two years helps to explain why medical treatment was one of the most important issues for the presidential elections in 2008 in the USA.

#### 3.6.1.3 Coverage in the U.S

Virtually every insured person has coverage of inpatient hospital services, with the result that in 1991 only about 3% of all U.S. hospital bills were paid directly by patients. Coverage of physicians' services, especially those rendered in the hospital, is

also extensive. Overall, less than 20% of physicians' services are paid for by patients. A higher percentage of fees for nursing-home care (about 45%) are paid out-of-pocket. For most other expenditures, such as dental services, drugs, and eyeglasses, the percentage paid by individuals is even higher, varying between approximately 55 and 75% (Altassan, 2003).

Managed care offers appropriate coverage for the population who are in good health, but does not seem satisfactory for vulnerable patients (i.e. the elderly, and low-income and chronic patients). Miller and Luft (1997) found that the quality of care provided by HMOs is comparable with FFS insurers, except for care provided to certain vulnerable patients. Indeed, while vulnerable patients are often in poorer health than the general population and need more medical attention, access to care is more difficult under the managed care regime. Older people have not been excluded from managed care. For Medicare insured patients, satisfaction surveys have not been uniformly critical of managed care. In certain studies (Schneiders, 1994; Newcomer et al., 1996), the satisfaction of elderly patients enrolled in HMOs was comparable with that of Medicare insured patients and those with FFS schemes.

While HMO insured patients were less satisfied with the choice of a provider, patients' personal judgment of quality was identical. Costs were perceived as more reasonable under HMOs (insured co-payment was lower than in the FFS regime). HMO patients had more difficulty accessing care than Medicare FFS insured, a trend observed for the general population (Simonet, 2003). Simonet (2003:103) stated that *"Patient satisfaction with Medicaid managed care is less than with traditional Medicaid"*. But it improves once there is easier access to the practitioner (Tempkin-Greener and Winchell, 1991). Compared with FFS patients, Medicare HMO patients were given access to more preventive care (e.g. mammography) (Simonet, 2003:432). The cover provided in

respect of drugs by the Medicare managed care plans is too restrictive, so patients switch away from their HMO (Rector, 2000). Medicare HMO patients appreciate that certain aspects of their treatment have to be paid for (Schneiders, 1994).

Compared with healthy or high-income patients, those with lower incomes have more difficulty obtaining care and their satisfaction was also lower under managed care (Lillie-Blanton and Lyons, 1998; Davis et al., 1995; Carlson et al., 2000). For poor patients under managed care, the freedom of choice of an insurer is narrower (Simonet, 2005:430). According to Simonet (2003:102), the quality of health care given to low-income patients under the managed care system is comparable to that of the traditional system or inferior to it. However, HMOs are reluctant to finance complicated procedures or innovative drug therapies. HMOs have little incentive to prescribe drugs which are beneficial but expensive over the long term (Simonet, 2003:100).

#### 3.6.1.4 Cost of Insurance

The cost of insuring various services affects the extent of coverage for each service. The cost equals the amount of the premium the insurer retains to cover business expenses and is called the loading charge. Because the cost of processing claims varies little with the size of the claim, the loading charge as a percentage of the premium tends to be relatively low for hospital insurance and relatively high for services involving many small claims, such as drug insurance. This is one reason why insurance is nearly complete for hospital services and rare for drugs. Loading charges are also lower when individuals purchase insurance through groups, making this type of plan more popular (Altassan, 2003).

#### 3.6.1.5 Recent Changes

Private insurance companies determine premiums through actuarial assessments of the risk associated with the insured group and premiums differ from group to group because their risk varies. Premiums were based on medical claims experience which is known as experience rating. Some large companies noticed that their work force was large enough that aggregate medical experience and expenses of their work force would vary from year to year. Given such unpredictability of medical experience and expense, it was feasible for large companies to self-insure; rather than pay insurers a premium to bear the risk, the employer could simply assume the risk by budgeting a certain amount to pay claims. In addition, the firm could retain control over funds until the time a medical bill needed to be paid. This provision of health services to workers by employers depends, of course, on the profitability of the company. In cases when a company goes bankrupt, it follows that the company will not be able to fulfil its insurance obligations (Altassan, 2003).

### 3.6.2 The United Kingdom

Following the gains made by the state during the early part of the twentieth century, it was the Beveridge Report, published in 1942, that first proposed the establishment of a fully comprehensive, universal welfare state. Of all its recommendations, the creation of the National Health Service (NHS) was by far the most important. The 1944 White Paper "A National Health Service" had three core aims (Pollard, 1999:1):

1. To ensure that everyone in the country, "irrespective of means, age, sex or occupation," should have equal opportunities to secure the medical care they needed;
2. To provide a comprehensive health service covering all aspects of preventive and curative medicine;

3. To divorce the care of health from questions of personal means and to provide the service free of charge, apart from certain possible charges in respect of appliances.

Pollard (1996:6) stated that *"These laudatory aims-which should remain the governing framework for any reforms to the NHS - were given statutory form in the NHS Act of 1946"*. Under the provisions of this Act, the Minister of Health was empowered to take any hospital that he thought appropriate into public ownership. These hospitals would be organised under Regional Health Boards into a comprehensive system of health care that would be free at the point of delivery (Pollard, 1996). According to Ron et al. (1990), in the NHS the benefits are provided entirely by the State as a public service to all citizens. The Government undertook full responsibility for the provision of health services to the entire population as of right. It is believed that the treatment of diseases and the elevation of the community health care need to be within the welfare state as disease affects all segments of the society, rich and poor. The Government also undertook the commitment to pay for the NHS mainly through general revenue financing.

Since the mid-1980s, governments in the United Kingdom have sought to increase the extent of private finance for welfare provision (Thomson and Mossialos, 2004). The British Health System has been criticised for long waiting lists for physician visits and surgeries, unavailability of some types of treatment as a result of the high costs and hospital budget deficit which has led to the accumulation of debts (The editor, 2007). The scope of the NHS has narrowed since its inception - dental care, eye care and prescription charges, for example, are not covered - and there always has been, in the U.K., a private system that operates parallel to the public system (i.e. that provides acute, long-term and other types of care). While everyone is insured by the NHS, people

are permitted to buy insurance and/or any medical service from private insurers and health providers, respectively (Akhmetov and Nishimura, 2004). Private medical insurance "may increase access to health care for those who are able to purchase an adequate and affordable level of private cover" (Thomson and Mossialos, 2004:2). Purchase is optional and does not preclude use of the NHS nor, with the exception of the minor amount of tax relief for the over 60s, does it reduce the buyers` contributions to the tax-financed NHS (Propper et al., 2001).

Over 11% of the United Kingdom population has private medical insurance (PMI) and PMI is an important contributor to the United Kingdom's health economy (the market being worth almost £3 billion a year) (Foubister et al., 2006). The most fundamental changes to the U.K. health system came in the last decade, notably through the NHS and Community Care Act (1990) and the Health Act (1999). The reforms of the early 1990s introduced into the NHS an "internal market". There were three main components of this effort to inject more choice and competition into the public system: the creation of general practice fund-holding schemes; the setting up of NHS trusts; and the creation of a purchaser-provider split. GPs were given the option of becoming fund-holders. These fund-holding practices of one or more GPs not only provided general medical services but were also given an additional sum of money with which to purchase, on behalf of their patients, certain services (elective surgery, mainly) from whichever provider they chose. Prior to 1990, such decisions were made by a health authority. Additionally, NHS trusts were established (Akhmetov and Nishimura, 2004). In the UK set up, interactions, from the point of view of the demander, are dependent upon the relative (perceived) quality of care in the two sectors. Interactions between the sectors will be affected by the conditions of employment in the two sectors. Senior hospital doctors in the NHS have contracts that allow them to work concurrently in both the

private and public sectors. Therefore a shock[2] that may reduce resources in the public sector will reduce the quality of the NHS but may also increase the resources available to the private sector and so may increase the demand for private care (Propper, et al., 2001).

The 1980s saw still more pressure on health care providers in the U.K. to seek the views of patients for the processes of monitoring and improving quality of services, with a resultant rise in publications specifically devoted to considerations of enhancing public influence on U.K. health services (Jones et al., 1987). Consumer satisfaction with health care has, in recent years, gained widespread recognition as a measure of quality, especially since the publication of the 1983 NHS Management Inquiry and its call for the collation of user opinion (Newsome and Wright, 1999). This has arisen partly because of the desire for greater involvement of the consumer in the health care process and partly because of the links demonstrated to exist between satisfaction and patient compliance in areas such as appointment keeping, intentions to comply with recommended treatment and medication use (Willson and McNamara, 1982). According to Sitzia and Wood (1997), the importance of incorporating patients' perspectives in service management was noted in documents giving guidance on NHS contracting, with the use of patient surveys advocated in the Griffiths report (DHSS, 1984) and U.K

[2] **Shock** is "a sudden event beyond the control of authorities that has a significant impact on the economy" (Varangis et al, 2004:4). The term shock in economics means the unpredicted event that affects the economy (positively or negatively). It refers to an unpredictable change in external factors (factors unexplained by economics) - which may have a significant impact on internal economic variables. If the shock is due to constrained supply it is called a supply shock and usually results in price increases for a particular product. Shocks can be produced when accidents or disasters occur. The ability to recover from such events depends on general preparedness, economic policy, existing infrastructure and effective emergency management planning (Selim, 2008; Pennington-Cross, 1997; Klein, 2007; Helmut, 2008).

government policy documents Promoting Better Health (Secretaries of State for Social Services, 1987) and Working for Patients (Secretaries of State for Health, 1989).

## 3.7 Lessons to be learnt

The listing of international experiences was aimed at comparing their health systems with the Saudi health care system. Health insurance cannot be separated from political and economic frameworks. The United States and the United Kingdom could be called advanced industrial nations. Both countries had variants of a market economy with advanced citizens' rights within a liberal democratic framework. Both countries had established health delivery 'systems', with variations of health insurance. At one extreme was the USA expensive health insurance, with 20% of the population not being privately covered. The UK version showed rapid change according to the wind of political change. After reviewing the experiences of the United States and the United Kingdom, the meaning of health insurance can be partly summarised thus. Firstly, it is a way of raising all or part of the money to pay for health care. Secondly, it is a way of securing the provision of health services. Each aspect needs to be considered separately. The American health system has been growing rapidly, with an expanding supply of physicians, other health manpower, new technology, advanced research, and financial support. As a system, it has been divided into three areas: planning, services, and research. Its sponsorship is divided by different agencies ranging from church investors, to community, to local, state and federal government. More than 50% of the system is run by the private sector. Disadvantaged groups are supported by Medicare and Medicaid.

Patient satisfaction is a key factor in quality assessment of the health care system in developed countries (Gold and Woodridge, 1995), whereas in developing countries, the main quality concern has been the accessibility to health care services (Mera, 2002). It

can be concluded as cited by Alshammasi (1986:9) that the *"experiences of the already developed countries cannot necessarily be expected to be repeated in the presently developing world. Differing cultural structures and newly available technologies could cause them to take different courses"*. Tseng (2003: 281) also stated that *"every community is different more or less in terms of its socioeconomic condition, medical facilities and system, and ethnic and cultural backgrounds of its members"*. The Saudi case is special. An important feature of Saudi Arabia is its socio-cultural character (Alshammasi, 1986). The Saudi health system shares some characteristics with other developed countries such as the United States and the United Kingdom; however, it differs from them in a number of important aspects, which makes it especially suitable for the study. Table 3.4 gives a brief description of Saudi Arabia, its health care system and compares its health care system with the USA and the UK.

**Table 3.4: Comparative health care systems of the selected countries: USA, UK and KSA.**

| | USA | UK | KSA |
|---|---|---|---|
| **Population** | 303,824,640 | 60,943,912 | 28,146,656<br>note: includes 5,576,076 non-nationals |
| **Age structure** | 0-14 years: 20.1% (male 31,257,108/ female 29,889,645)<br>15-64 years: 67.1% (male101,825,901/ female 102,161,823)<br>65 years and over: 12.7% (male 16,263,255/ female 22,426,914) | 0-14 years: 16.9% (male 5,287,590/ female 5,036,881)<br>15-64 years: 67.1% (male 20,698,645/ female 20,185,040)<br>65 years and over: 16% (male 4,186,561/ female 5,549,195) | 0-14 years: 38% (male 5,458,023/ female 5,245,911)<br>15-64 years: 59.5% (male 9,470,353 /female 7,284,696)<br>65 years and over: 2.4% (male 356,910/ female 330,764) |
| **Land area /sq km** | 9,161,923 sq km | 241,590 sq km | 2,149,690 sq km |
| **Life expectancy at birth** | total population: 78.14 years<br>male: 75.29 years<br>female: 81.13 years | total population: 78.85 years<br>male: 76.37 years<br>female: 81.46 years | total population: 76.09 years<br>male: 74.04 years<br>female: 78.25 years |
| **Ethnic groups** | white 79.96%, black 12.85%, Asian 4.43%, Amerindian and Alaska native 0.97%, native Hawaiian and other Pacific islander 0.18%, two or more races 1.61% (July 2007 estimate) | white (of which English 83.6%, Scottish 8.6%, Welsh 4.9%, Northern Irish 2.9%) 92.1%, black 2%, Indian 1.8%, Pakistani 1.3%, mixed 1.2%, other 1.6% (2001 census) | Arab 90%, Afro-Asian 10% |
| **Health costs of GDP** | 14% | 6.9% | 11.8% |
| **Main causes of death** | 1) Heart diseases<br>2) Cancers<br>3) Carebrovascular diseases<br>4) Accidents<br>5) Pneumonia | 1) Heart diseases<br>2) Cancers<br>3) Carebrovascular diseases<br>4) Pneumonia<br>5) Accidents | 1) Road Traffic Accidents (RTA)<br>2) Heart diseases<br>3) diabetes<br>4) liver cirrhosis<br>5) kidney failure |
| **Health finance** | 1) Private Health Insurance for the general population.<br>2) National Insurance Schemes.<br>- Medicare: population aged over 65 years.<br>- Medicaid: for the needy regardless of age. | 97-98% Health Care provides by NHS. NHS:<br>-Nationally financed.<br>Income derived from:<br>-Govt. taxation (89%).<br>-NHS Insurance.<br>-Contributions (9%).<br>-Charges (2-3%). | 1) Government's obligation to supply funds for the health system. MOH prepares an annual estimated need for the health care cost. These estimations must go to the Ministry of Finance to get the final agreement. MOH has adapted the zero-based budgeting programs, and has centralized the planning and decentralized the implementation.<br>2) Cooperative Health Insurance Schemes for expatriates and their dependents funded by employers |

**Table 3.4: Comparative health care systems of the selected countries: USA, UK and KSA (con't)**

| | USA | UK | KSA |
|---|---|---|---|
| **Health Care System** | 1) Primary Health Care:<br>-Mainly provided by GPs and specialists.<br>-Govt. Public Health Agencies run community health, maternal and child health, school health and preventive health services.<br>2) Institutional Care:<br>-Most are private hospitals providing short-term acute curative services.<br>-There is a free movement of generalists and specialist between hospitals and doctors clinics.<br>-The Govt. runs the Veterans Hospitals and Hospitals for Eskimos and Indians.<br>-Nursing Homes (75% private). | Services provided by NHS:<br>1) PHC Services.<br>-General Medical Services.<br>-PHC Teams.<br>-General Dental Services.<br>-Pharmaceutical Services.<br>-Ophthalmic Services.<br>-Chiropody Services.<br>2) Hospital Services<br>-Specialist Care provided through referral from PHC.<br>-Inpatients, outpatients and day patients.<br>3) Private Health Care - Private medical practice is small.<br>-Provides both outpatient and inpatient care.<br>-Inpatient care provided in private beds in NHS hospitals and private hospitals. | Primary Health Care: a network of PHC centres' and clinics mainly provided by MOH. A network of advanced hospitals and specialized treatment facilities. Strategically placed in major urban areas throughout the country to be accessible to all. MOH bears primary responsibility for the health care program: It operates 62% of the country's hospitals and.53% of its health care clinics and centres. Of the remaining hospitals and clinics, the majority are operated by the private sector; the functions of these facilities and the training of their staff are supervised and supported by the MOH. Other government agencies have their own hospitals and clinics |

Sources:
1-World fact book [online] available at https://www.cia.gov/library/publications/the-world-factbook (accessed 10 July 2008) and various Country Reports.
2- Altassan, 2003:442-443.

# CHAPTER FOUR

## Customer Satisfaction

# 4. Customer Satisfaction

## 4.1 Introduction

Human satisfaction is a complex concept that is related to a number of factors including life style, past experiences, future expectations and the values of both the individual and society (Carr-Hill, 1992). Stakeholders have a vested interest in understanding the relationship between customer expectations, perceptions and their satisfaction with the CHIS. Satisfaction studies have borrowed a number of theories from other disciplines that help to explain the cognitive mechanisms involved in the way consumers relate their experience to their expectations and values, resulting in feelings of satisfaction or dissatisfaction. Such theories have implications for the way satisfaction is investigated. An attempt has been made to illustrate practical models of the relationship between expectations and satisfaction, to identify the influential personal and social variables, and to develop an understanding of the causal relationships of expressed perceptions in relation to expectations and to how well the health care services are provided under the CHIS. The various theories of satisfaction are therefore reviewed here and their implications for this study pointed out.

## 4.2 Consumer Satisfaction

The terms consumer and customer differ in that consumer is "one that utilises economic goods" while customer is "one that purchases a commodity or service" (Encyclopaedia Britannica Online Dictionary). A consumer may or may not personally purchase the commodity/service he/she utilises whereas a customer may purchase (and pay for) a commodity/service for someone else to utilise. In financial services, and especially insurance, the terms consumer and customer most often refer to the same individual as the insured is usually the policy owner (Evangelos, 2007). For this reason the two terms “consumer” and “customer” are used interchangeably. A

review of the existing literature indicates a wide variation in the definitions of satisfaction. Giese and Cote (2000:1) stated that:

> *The lack of a consensus definition for satisfaction creates three serious problems for consumer satisfaction research: selecting an appropriate definition for a given study; operationalising the definition; and interpreting and comparing empirical results.*

A basic definitional inconsistency is evident by the debate on whether satisfaction is a process or an outcome (Yi, 1990). Most definitions have favoured the notion of consumer satisfaction as an affective response to an evaluation process (e.g., Halstead et al., 1994; Howard and Sheth, 1969; Oliver, 1997, 1981; Tse and Wilton, 1988; Westbrook and Reilly, 1983) or as evaluation process (e.g., Fornell, 1992; Hunt, 1977; Oliver, 1981). This approach takes into account the social-psychological determinants of satisfaction, that is, the perceptions, evaluations and comparisons which precede an evaluation. There is an overriding theme of consumer satisfaction as a summary concept i.e., a fulfilment response (Oliver, 1997); psychological state (Howard and Sheth 1969; Vavra, 1997); global evaluative judgment (Westbrook, 1987); summary attribute phenomenon (Oliver, 1992); or evaluative response (Day, 1984). From a general definition perspective, process definitions are problematic in that there is little consistency in the satisfaction process. From an operational perspective, process definitions are plagued by antecedent constructs included in the conceptual definition; thus, there is an overlap between the domains of the determinative process constructs and the consumer satisfaction construct (Giese and Cote, 2000). Tse and Wilton (1988:204) define satisfaction as:

> *the consumer's response to the evaluation of discrepancy between prior expectations and the actual performance of the product as perceived after its consumption.*

Customer satisfaction can be defined as the idea obtained by comparing the incidents experienced during the period in which the customers search for, find, buy, use, mend

and consume the product or service to their expectations. Expectations are subjective, may change and sometimes are hard to tell. Some of the expectations are apparent but some need to be discovered. The kind of health service of which the patient is in need, his characteristics, economic facilities, past experiences, environmental factors, existing health institutions and social insurance are factors affecting patient expectations (Bostan, et. al., 2007).

While the literature contains significant differences in the definition of satisfaction, all the definitions share some common elements. When examined as a whole, three general components can be identified: 1) consumer satisfaction is a response (affective or cognitive (the perceptions or beliefs about the service)); 2) the response pertains to a particular focus (expectations, product, consumption experience, service provided, etc.); and 3) the response occurs at a particular time (during or after consumption, after choice, based on accumulated experience, etc.) (Giese and Cote, 2000; White and Yu, 2005). As can be seen by examining table 4.1, these three general categories capture the essence of all the definitions presented.

**Table 4.1 Conceptual and Operational Definitions in Consumer Satisfaction Literature**

| Source | Conceptual Definition | Response | Focus | Time |
|---|---|---|---|---|
| Oliver 1997 | The consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over fulfillment (p. 13) | Fulfillment response/judgment | Product or service | During consumption |
| Halstead, Hartman, and Schmidt 1994 | A transaction-specific affective response resulting from the customer's comparison of product performance to some pre-purchase standard (e.g., Hunt 1977; Oliver 1989) (p. 122). | Affective response | Product performance compared to some pre-purchase standard | During or after consumption |
| Mano and Oliver 1993 | (Product satisfaction) is an attitude - like post-consumption evaluative judgment (Hunt 1977) varying along the hedonic continuum (Oliver 1989; Westbrook and Oliver 1991) (p. 454). | Attitude - evaluative judgment Varying along the hedonic continuum | Product | Post-consumption |
| Fornell 1992 | An overall post-purchase evaluation (p.11). | Overall evaluation | Post-purchase perceived product performance compared with pre-purchase expectations | Post-purchase |
| Oliver 1992 | Examined whether satisfaction was an emotion. Concluded that satisfaction is a summary attribute phenomenon coexisting with other consumption emotions (p. 242). | Summary attribute phenomenon coexisting with other consumption emotions | Product attributes | During consumption |
| Westbrook and Oliver 1991 | A post-choice evaluative judgment concerning a specific purchase selection (Day 1984) (p. 84). | Evaluative judgment | Specific purchase selection | Post-choice |
| Oliver and Swan 1989 | No conceptual definition. (with the salesperson) a function of fairness, preference, and disconfirmation (pp. 28-29). | | Salesperson | During purchase |
| Tse and Wilton 1988 | The consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some norm of performance) and the actual performance of the product as perceived after its consumption (p. 204). | Response to the evaluation | Perceived discrepancy between prior expectations (or some norm of performance) and the actual performance of the product | Post-consumption |

**Table 4.1 Conceptual and Operational Definitions in Consumer Satisfaction Literature (cont)**

| Source | Conceptual Definition | Response | Focus | Time |
|---|---|---|---|---|
| Cadotte, Woodruff and Jenkins 1987 | Conceptualised as a feeling developed from an evaluation of the use experience (p. 305). | Feeling developed from an evaluation | Use experience | During consumption |
| Westbrook 1987 | Global evaluative judgment about product usage/consumption (p. 260) Also cited Hunt (1977). | Global evaluative judgment | Product usage/consumption | During consumption |
| Day 1984 | the evaluative response to the current consumption event...the consumer's response in a particular consumption experience to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product perceived after its acquisition (p.496) | Evaluative response | Perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product | Current consumption event … particular consumption experience … after its acquisition |
| Bearden and Teel 1983 | No conceptual definition. A function of consumer expectations operationalised as product attribute beliefs (Olson and Dover 1979) and disconfirmation (p. 22). | | | During consumption |
| LaBarbera and Mazursky 1983 | Post-purchase evaluation. Cited Oliver's (1981) definition: An evaluation of the surprise inherent in a product acquisition and/or consumption experience (p. 394). | Evaluation | Surprise | Post-purchase Product acquisition and/or consumption experience |
| Churchill and Surprenant 1982 | Conceptually, an outcome of purchase and use resulting from the buyer's comparison of the rewards and costs of the purchase relative to anticipated consequences. Operationally, similar to attitude in that it can be assessed as a summation of satisfactions with various attributes (p. 493). | Outcome | Comparison of the rewards and costs of the purchase relative to anticipated consequences | Implies after purchase and use |

**Table 4.1 Conceptual and Operational Definitions in Consumer Satisfaction Literature (cont)**

| Source | Conceptual Definition | Response | Focus | Time |
|---|---|---|---|---|
| Westbrook and Reilly 1983 | An emotional response to the experiences provided by and associated with particular products or services purchased, retail outlets, or even molar patterns of behavior such as shopping and buyer behavior, as well as the overall marketplace (p. 256). An emotional response triggered by a cognitive evaluative process in which the perceptions of (or beliefs about) an object, action, or condition are compared to one's values (or needs, wants, desires) (p. 258). | Emotional response | Experiences provided by and associated with particular products or services purchased, retail outlets, or even molar patterns of behavior such as shopping and buyer behavior perceptions of (or beliefs about) an object, action, or condition are compared to one's values | Post-purchase |
| Oliver 1981 | An evaluation of the surprise inherent in a product acquisition and/or consumption experience. In essence, the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience (p. 27). | Evaluation summary psychological state Emotion | Surprise disconfirmed expectations coupled with the consumer's prior feelings | Product acquisition and/or consumption experience |
| Swan, Trawick and Carroll 1980 | A conscious evaluation or cognitive judgment that the product has performed relatively well or poorly or that the product was suitable or unsuitable for its use/purpose. Another dimension of satisfaction involves affect of feelings toward the product (p. 17). | Conscious evaluation or cognitive judgment Another dimension involves affect of feelings | Product has performed relatively well or poorly or that the product was suitable or unsuitable for its use/purpose Toward the product | During or after consumption |
| Westbrook 1980 | Refers to the favorability of the individual's subjective evaluation of the various outcomes and experiences associated with using or consuming it (product) (Hunt 1977) (p. 49). | Favorability of the individual's subjective evaluation | Outcomes and experiences | During consumption |

Source: Giese, Giese and Cote, Joseph A. (2000) Defining Consumer Satisfaction, Academy of Marketing Science Review, V (1):5. Available at: [http://www.amsreview.org/articles/giese01-2000.pdf]

Emotional response is defined as a subjective judgment regarding the actually experienced pleasure that a product or service gives the purchaser, and reputation is understood as the prestige or status of a product or service perceived by the purchaser, based on the image of the brand (Tsai, 2005:286). Emotions evoked during the consumption process are proposed to leave affective traces in memory. These traces are available for individuals to access and integrate into their satisfaction states (Cohen and Areni, 1991). Affect needs to be distinguished from an emotion which is the "*person's overall feeling and has a variety of influences acting upon it*". An affective response is defined as "*a short term emotional change, which may or may not have long term impacts on a person's overall emotion*" (Bentley, 2006:261). The affective response is the feeling towards the service (Decrop, 1999). It is the feeling state that occurs in response to a specific stimulus, based on feelings, with a potential range of cognitive effort (Anand et al., 1988; Cohen and Areni, 1991; Hoffman, 1986; Compeau et al., 1998:296; Andrews, 2008:55). Consumers' affective responses would increase from less intense feelings to more intense emotions. Feelings are considered to be less intense than emotions such as anger and regret (Cohen and Areni, 1991). Affective response is a construct measuring emotional responses with satisfaction being regarded as one of a large number of possible unfavourable/favourable responses to an experience. Some affective responses could be classified as either positive or negative. However, attention has been shifted to positive affects that are found in post-purchase/post-experience situations (Fournier and Mick, 1999; Gardial et al., 1994; Giese and Cote, 2000).

## 4.3 Importance of customer satisfaction

Donabedian (1980) points out that patient satisfaction provides feedback for the quality assessment process and programme evaluation. Assessing patient satisfaction provides a means of monitoring quality (Lin, 1996). The measurement of satisfaction is, therefore,

an important tool for research, administration and planning (Turner and Pol, 1995). Measurement of patient satisfaction fulfils several distinct functions such as understanding patients' experiences of health care, promoting cooperation with treatment, identifying problems in health care and evaluation of health care (Fitzpatrick, 1984). In order to provide health services which are responsive to consumers' needs, those organisations whose role it is to purchase, provide, or assess health services have a duty to carry out consumer appraisal work. Consumers are experts on their own priorities, their own needs, and their own experiences, and they should be consulted as should any other (Steele, 1992). Customer satisfaction has been shown to increase repeat purchase intentions, increase loyalty, generate less complaint behaviour, and generate positive word-of-mouth (Sharma et al., 1999). In contrast, customer dissatisfaction increases switching behaviour, generates negative word-of-mouth, and increases complaint behaviour (Zeithaml et al., 1996). Thus, customer satisfaction has an impact on revenue generation and cost of doing business.

## 4.4 Patient satisfaction

Patient satisfaction is central to the marketing concept as applied in health care marketing (Joby, 1992). Satisfaction with health care may be different from other fields (Newsome and Wright, 1999) because it is considered as a humanistic outcome that needs to be measured given its importance in determining the viability and sustainability of health care services (Pradnya et al., 2009:535). There is a lack of a universally accepted definition and theory of patient satisfaction. Theoretical frameworks, borrowed from varied disciplines, have laid the foundations for understanding patient satisfaction (Festinger, 1954; Fishbein and Ajzen, 1975; Vroom, 1964; Lawler, 1971; Merton and Rossi, 1968; Linder-Pelz, 1982a; Fox and Storms, 1981; Ware et al., 1983; Oliver, 1980). Patient satisfaction is a patient's (affective or emotional) response to his or her (cognitive or knowledge based) evaluation of the

health care provider's performance (perceived quality) during a health care consumption experience (Ross et al., 1987). Behavioural intention, as a predisposition to future behaviour, is the (behavioural or cognitive) outcome of the (cognitive) evaluation and the (emotional) response to that evaluation (John, 1992). Andaleeb et al. (2007:3) contended that:

> *a patient who endures the physical, psychological, social and economic experiences during the overall health service delivery process would be able to make an appropriate evaluative judgment of how they were treated, as reflected in their overall satisfaction or dissatisfaction measures.*

The work of Ware et al. (1978) has influenced several studies in Saudi Arabia. It suggests that there are three reasons to justify the measurement of patient satisfaction: (1) satisfaction is the ultimate outcome of the delivery of health care; (2) satisfaction ratings provide useful information about the structures, process, and outcomes of care; and (3) satisfied and unsatisfied patients behave differently. Some current issues concerning patient satisfaction should be noted. Social scientists are questioning what is actually being measured by patient satisfaction surveys and whether patients actually fit the model of consumerism assumed by many surveys. Williams (1994) suggests that patients might have a complex set of important and relevant beliefs that cannot be embodied in terms of expressions of satisfaction. Many of these beliefs and expectations originate from factors external to the health care system and remain to be identified.

The work of Linder-Peltz (1982a) on the interaction between patient expectations and perceptions is seen to be particularly influential in this respect. Linder-Peltz tested the social psychological determinants of patient satisfaction among patients attending the primary care clinics of a university medical centre in Manhattan. Data concerning patients' health care values, expectations and sense of entitlement to care were collected from 125 first-time patients at a primary care clinic, immediately before seeing a physician. Post-visit satisfaction with a number of dimensions of care was also recorded.

Two findings from this research suggest that disconfirmation theory might not be an entirely appropriate model for the health care setting. The first is that, in spite of being the most important antecedent social-psychological variable, patient expectations could only account for 8% of the variance in satisfaction and, together with values and perceptions (of the service received), only 10% of the variation (Thompson and Sunol, 1995). This suggests that while there is evidence that patient expectations and values are involved in evaluations, they do not appear to be related in any simplistic fashion. According to this study, there is little evidence to suggest that satisfaction is largely the result of fulfilled expectations and values. Linder-Pelz's (1982b) second important finding is that expectations have an effect on satisfaction independent of other variables (i.e. irrespective of their fulfilment) leading the author to conclude that:

> *the independent effect of expectations on satisfaction with doctor conduct implies that clinic staff and particularly doctors themselves can ensure the satisfaction (favourable ratings) of their clients by engendering positive expectations. With regard to health services research, this finding suggests that knowledge of patients' expectations can tell a great deal about how they will later rate the visit* (Linder-Pelz's, 1982b:588).

## 4.5 Quality as a Concept in Health Care

Satisfaction with health care is closely related to concepts of health care quality (Asoh et al., 2007) and is vital for quality improvement and continuous monitoring in health care delivery systems (Pradnya et al., 2009). El Shabrawy and Mahmoud (1993:51) stated that "Quality of care is a critical component of service. What we define as 'good quality' is determined by value judgments that can vary widely with time and among different groups". Much of the established research in the last decade attempting to define and measure overall quality in health care has its foundation in Avedis Donabedian's classic work in quality assurance. His distinction between components and categories of health care quality is an integral part of most conceptualisations of

quality. Donabedian differentiates among three components of quality: technical aspects, interpersonal aspects, and amenities of care. The technical aspects refer to how well medical science and knowledge are applied to the diagnosis and treatment of a medical problem. Little research indicates that patients' satisfaction is related to perceptions of the provider's competence and technical skills (Meterko, Nelson and Rubin, 1990). Ware, Wright, and Snyder (1976) found that patients were not able to evaluate providers' technical skills. The interpersonal component of quality refers to the management of the social and psychological interactions between the beneficiary and practitioner. The amenities of care include the appeal and comfort of the health care facility. However, Donabedian later considers this as part of interpersonal care (Turner and Pol, 1995; Lin, 1996). Al-Shekh (2003:83) stated that "Quality is seen as the appropriateness and effectiveness of the clinical care delivered to patients, and the manner in which that care is delivered". This means that efficient technical care is unlikely to satisfy most people's criteria, if it is delivered without compassion, courtesy or regard for the patient's wishes.

Donabedian took "structure", "process" and "outcome" as the three basic approaches to evaluation of quality of care (Sitzia and Wood, 1997; Westaway et al., 2003; Lin, 1996). Structure refers to the relatively fixed characteristics of the medical delivery system such as the number, types, and qualifications of health care providers and facilities. Process measures reflect what is done to and for the patient; for example, the application of medical procedures and the dispensing of drugs (Turner and Pol, 1995). Outcome of quality is referred to as "a change in a patient's current and future health status and improvement of social and psychological function that can be attributed to antecedent health care" (Donabedian, 1980:82). Outcomes include health status, improvement in knowledge, change in behaviour and patient satisfaction (Donabedian, 1966, 1980). Donabedian (1988:1746) regards satisfaction/dissatisfaction as a 'patient

judgment on the quality of care in all of its aspects, but particularly as concerns the interpersonal process'. Interpersonal care relates to the professional's personal quality in interacting with patients. It includes the professional's interest, respect, friendliness, patience, understanding, and willingness to listen to and advise patients. Professional interpersonal care is very important to patients and contributes greatly to their satisfaction (Steiber, 1988; Ross et al., 1981). If patients feel positive towards, or are satisfied with professional interpersonal care, they will positively evaluate or be satisfied with professional clinical care and the overall health care services (Ben-Sira, 1976, 1980; Steiber, 1988; Albaz, 1992).

According to Redfern and Norman (1990), quality of health care must incorporate considerations of accessibility (being available and not unduly restricted by time or distance), appropriateness (meeting the actual needs of individuals, families and communities), equity (care being fairly distributed), acceptability (provided in such a way as to satisfy reasonable expectations of patients, providers and the public), effectiveness (achieving the intended benefit for the individual and the community) and efficiency (resources not being wasted on one person to the detriment of another).

### 4.5.1 Service quality

An important debate surrounds what is meant by ‘service quality’. It is agreed that it is a judgment concerning the superiority of a service, but the exact nature of this judgment is not agreed. According to Lewis and Booms (1983) service quality is *"a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis”*. Some believe that service quality is distinct from customer satisfaction; service quality being an overall attitude towards a service provider; customer satisfaction being specific to an individual service encounter. Thus, it is possible for consumers to form opinions

concerning the quality of a service without having experienced it, but experience is a prerequisite to forming a satisfaction judgment (Donovan et al., 2001:43).

Distinguishing between service quality as a cognitive construct and satisfaction as an affective construct suggests a causal order that positions service quality as an antecedent to satisfaction. There is a positive relation between measurement of patient satisfaction and service quality (Cleary and McNeil, 1988; McAlexander et al., 1994). Brady et al. (2001) explored the antecedent role of service quality and satisfaction in a sample of US consumers; a cross-cultural analysis of the relationship in view of the recent theory suggesting that the intrinsic characteristics of a population determine the nature of the service quality-satisfaction link. Specifically, Dabholkar (1995) predicts that the antecedent role of service quality and satisfaction is largely dependent on the cognitive versus affective predisposition of the service customer. Brady et al., (2001:53) stated that "the antecedent role of service quality and satisfaction would vary depending on such factors as the nature of the service experience and the consumers' rational predispositions".

### 4.5.2 Service quality measurement scale (SERVQUAL)

SERVQUAL (Parasuraman et al., 1988) has been the most extensively used service quality measurement scale (a multiple-item scale for measuring perceptions of service quality). The cognitive status of service quality is strongly implied in the SERVQUAL scale, which is based on the assumption that consumers apply a mental calculus to reach an evaluation. Evaluation of service quality results from comparing the perception of service received to prior expectations of what the service should provide (Grönroos, 1984). Table 4.2 shows the service quality dimensions:

**Table 4.2 Service quality dimensions**

| Dimension | Description |
|---|---|
| Tangibles | Appearance of physical facilities, equipment, personnel, and written materials |
| Reliability | Performing the promised service dependently and accurately |
| Responsiveness | Helping customers and providing a prompt service |
| Assurance | Inspiring trust and confidence |
| Empathy | Providing a caring and individual service to customers |

Source: Parasuraman et al. (1988:23)

Zeithaml, Parasuraman and Malhotra (2000) extended the SERVQUAL model - which consists of four gaps in explaining customer satisfaction: design gap, information gap, communication gap and fulfilment gap - with an awareness gap between objective user needs and effective user requirements. SERVQUAL suffers from a number of empirical and conceptual difficulties (Verdegem and Verleye, 2009; Van Dyke, Kappelman and Prybutok, 1997; Jiang, Klein, and Carr, 2002). Conceptual criticisms of SERVQUAL include arguments that it is the current performance of a service that affects customer perception. Donovan et al. (2001:42) state that the SERVQUAL has a number of defects. Firstly, asking about an ideal service leads to the resulting gap nearly always being negative, which reduces the potential for identifying priorities. Secondly, because the weighting is applied only at a very broad level, once again, the usefulness in identifying priorities is limited. Thirdly, it focuses on the process of the service delivery, not on the outcomes of the service encounter.

## 4.6 Satisfaction theories and models

### 4.6.1 Disconfirmation theory

The construct of satisfaction has largely been interpreted within the expectancy disconfirmation paradigm (e.g., Oliver, 1993a and Johnston, 1995). The disconfirmation paradigm is based on a cognitive process and the assumption is made that people who enter into an exchange relationship bring with them preformed expectations and an ability and willingness to judge the quality of that relationship (Thompson and Sunol,

1995). Expectations are defined as being *"beliefs that a given response will be followed by some event; an event has either a positive or negative valence or affect"* (Linder-Pelz, 1982a:587).

Satisfaction is seen as a function of (dis)confirmation of expectations and is best conceptualised as an attitude toward service performance (Turner and Pol, 1995). "Disconfirmation is the degree to which performance deviates from expectations"(Al-Shekh, 2003:100). The degree of incremental (dis)satisfaction is a direct function of positive (negative) disconfirmation (Oliver and Swan, 1989). Performance above the standard has been termed positive disconfirmation (where performance exceeds expectations). If performance equals expectations, zero disconfirmation or, simply, confirmation occurs. Negative disconfirmation occurs if performance falls below expectations (Oliver, 1981).

Disconfirmation theory proposes that the higher one's expectations, the less likely that service or product performance can meet or exceed them, the result being reduced satisfaction or even dissatisfaction; the higher the perceived level of performance, the more likely that expectations will be exceeded, resulting in increased satisfaction (Davidow and Uttal, 1989). Newsome and Wright (1999:162) stated that:

> *"Disconfirmation theory suggests that when perceptions of attribute performance differ only slightly from expectations, there is a tendency for people to displace their perceptions toward their expectations - the assimilation effect. There comes a point either side of this range, though, where people can no longer effect displacement and instead they begin to exaggerate the increasingly large variation between perceptions and expectations - the contrast effect".*

Oliver (1993b) proposed a conceptual model of consumer satisfaction as shown in Figure 4.1.

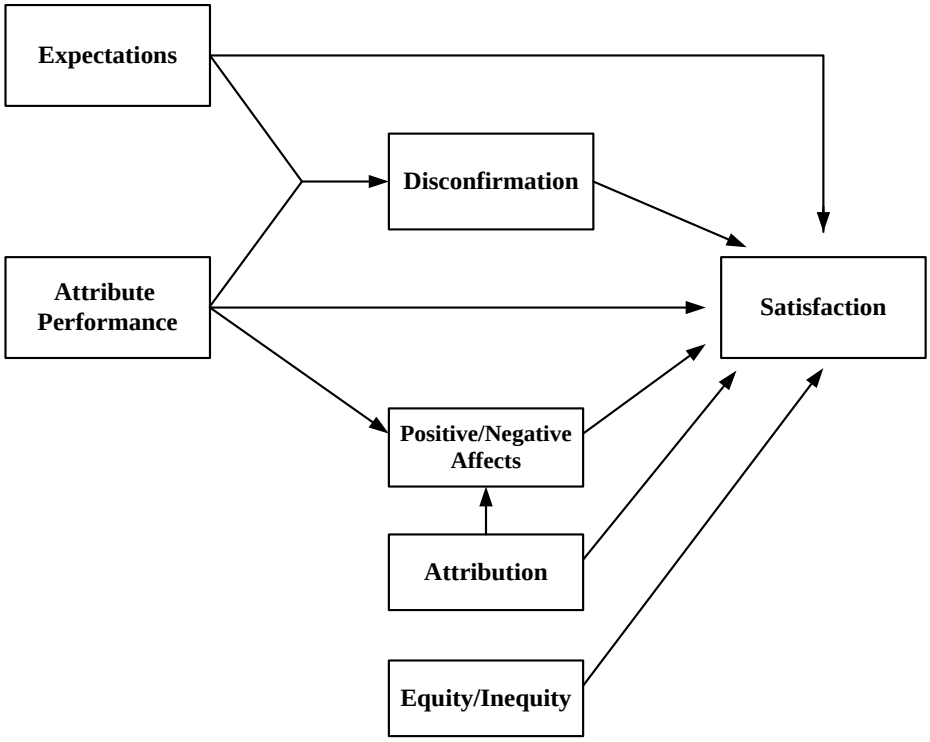



**Figure 4.1: Cognition-Affect model of satisfaction**
Source: Oliver (1993b)

Cognitive antecedents include expectations, performance, disconfirmation, attribution and equity/inequity. Expectations and performance may exert a direct effect upon satisfaction or may be mediated indirectly through the process of disconfirmation. According to Newsome and Wright (1999), consumer (dis)satisfaction can only arise following an actual experience with the health care provider. Prior to an exchange, consumers hold attribute norms or form attribute performance expectations. The affect domains, both positive and negative, are seen as other intermediaries between both attribute performance and attribution, and the satisfaction outcome. Oliver (1993b) suggests that affective responses are generated by attributions derived from product attribute satisfaction which, in turn, influence global satisfaction judgments. Oliver (1993a) found that both affect and disconfirmation influenced consumers' satisfaction evaluations. According to Alford and Sherrell (1996:76):

> *Oliver (1993) incorporates affect in his revised model of satisfaction formation. However, he envisions affect as an outcome of attribute performance and not a psychological reaction to the service provider. Oliver did find that affective judgments explained a significant amount of variance in satisfaction judgments for a service and that affective judgments were equal in importance to attribute performance evaluations for those satisfaction judgments*.

Equity is posited as a further distinct contributor to satisfaction, unrelated to affect or other cognitive components. In the health care context, equity is defined as "the ability of the health care system to guarantee everyone access to a range of minimal treatment without discrimination as to age, gender, means or ethnic origin" (Simonet, 2003:103).

### 4.6.2 Social equity theory

Social equity theory is particularly relevant to satisfaction with services and asserts that individuals compare their gains (the balance of what they put in and what they get out) with those of other consumers and with those of the service provider (Oliver and Swan, 1989; Jaipaul and Rosenthal, 2003). According to this theory, satisfaction exists when a customer perceives that his/her outcome-to-input ratio is proportionate to that of the partner (Oliver and Swan, 1989; Oliver and Desarbo, 1988). The concept of equity relates to the theory of social comparison which spells out the way social comparisons influence the formation and evaluation of opinions - people ascertaining whether their opinions and evaluations are correct by comparing themselves with other people (Festinger, 1954). Festinger's social comparison process identified five social-psychological determinants of patient satisfaction: value, occurrences, expectations, interpersonal comparisons, entitlement.

According to Maxham (2001), equity theory (Adams, 1963) focuses on the motivational and cognitive processes of evaluating investments (fairness of inputs) against rewards (fairness of outputs), and comparing the result with others' experience in like situations. In 1978, Walster et al. identified two types of anxiety or distress that an advantaged

individual may experience within any sort of inequitable relationship. The first type of distress that may be experienced is retaliation distress; in this case, an individual who gains from an inequitable relationship may then become anxious about revenge from the disadvantaged party to the relationship. The hierarchy of need theory by Maslow (1954) covered five basic needs: basic survival and physiological needs, safety, social, esteem, and self-actualisation. People are climbing in their hierarchy of needs and they demand quality health care once their basic health care is assured. The second type of distress that might be experienced pursuant to the equity theory is that of self-concept distress (or loss of self-esteem), the highest level in Maslow's hierarchy. In this type of inequitable relationship, the self-esteem of the person who is benefiting from the inequitable relationship may be what suffers. Equity theory has been criticised by several scholars (Beugré, 1998). Anderson (1991) maintains that Adams' view is inadequate since equity is fundamentally a problem of multiple determination; further, this author points out that the objective stimulus field must be considered in terms of its value and meaning to each individual. *Without a capability for analysis of multiple determinations and without a measurement capability for assessing personal values only limited progress on equity theory is possible* (Anderson, 1991: 45). The equity theory framework seems especially relevant in a service context, given that customers often perceive an inequity following a service. Equity theory provides a meaningful framework for shaping consumer perceptions of satisfaction, purchase intent, and word-of-mouth when inequity arises.

### 4.6.3 The Cognitive Dissonance Theory

The theory of cognitive dissonance proposes that people have a motivational drive to reduce dissonance by changing their attitudes, beliefs, and behaviours, or by justifying or rationalising their attitudes, beliefs, and behaviours (Festinger, 1957). Cognitive dissonance theory is one of the most influential and extensively studied theories in social

psychology. Dissonance normally occurs when a person perceives a logical inconsistency among his or her cognition. Dissonance theory seeks to explain varying gaps between individual (and subjective) expectations and realities. According to dissonance theory (Brehm and Cohen, 1962: 262) the more the cognitions against taking a discrepant stand, the greater the dissonance and consequent attitude change toward that position when one does take the stand (Warren, 1970).

Carr-Hill (1992) argued that memory or cognitive dissonance may be factors to explain the way expectations affect satisfaction. Carr-Hill cites Friedson's (1975) distinction between ideal and practical expectations. Ideal expectations are defined as the preferred outcome given the patient's evaluation of their problem and their goals when seeking medical care while practical expectations being the anticipated outcome based on the individual's own experiences, the reported experiences of others, or knowledge from other sources. The patient may express satisfaction because their practical expectations were met, although the care they receive does not meet all their goals (consumer-defined need). In contrast, Fitzpatrick and Hopkins (1983) showed how any tentative expectations were raised in the light of experience of attendance at the clinic. These apparently contradictory results may be reconciled by postulating that negative experiences may be easier to remember (they are more available in memory) (Tversky and Kahneman, 1974). Therefore**,** the longer the temporal framework being evaluated, the more negative experiences are recalled. Alternatively, patients may have a positive bias when rating 'my care' to reduce cognitive dissonance (Crosby, 1982).

### 4.6.4 Contrast Theory

The assimilation contrast theory combines elements of Festinger's (1957) theory of cognitive dissonance with its opposite theory of exaggerating incongruities between expectations and perceptions (Thompson and Sunol, 1995:132). This theory suggests

that, when perceptions of attribute performance differ only slightly from expectations, there is a tendency for people to displace their perceptions towards their expectations, which is known as the *assimilation* effect. However, there comes a point either side of this range where people can no longer effect displacement but begin to exaggerate the increasingly large variation between perceptions and expectations; the *contrast* effect. Figure 4.2 illustrates part of that presented by Anderson (1973) where the horizontal axis represents the objective product performance and the vertical axis represents the perceived product performance. The level of expectations, shown in the diagonal axis, influences the perceptions, such that when there is little difference between the two there is an *assimilation* effect, but outside this range there is a *contrast* effect. This model moves us beyond a rather limited linear formulation towards a more empirically supported explanation of why, using the disconfirmation paradigm, there can appear to be little variance in measures of satisfaction, except under extreme circumstances.

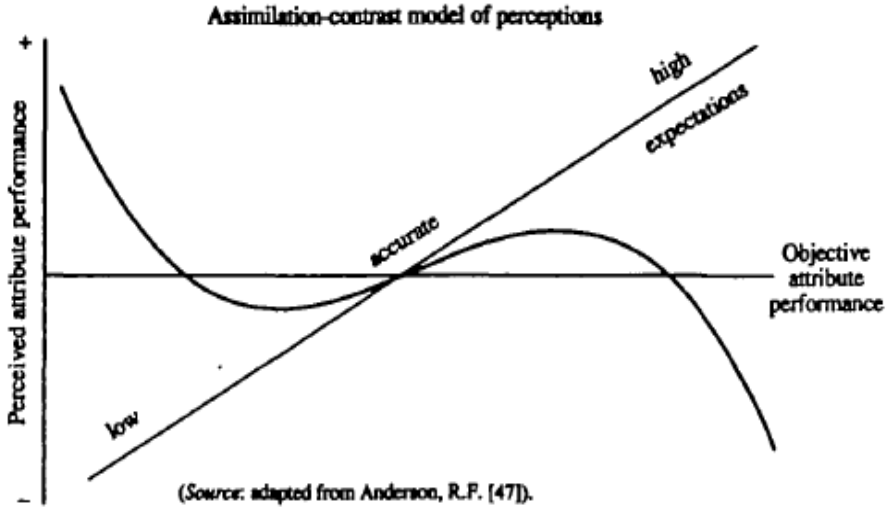



**Figure 4.2: Assimilation-contrast model of perceptions**

**Source: Adapted from Anderson, R. F 1973.**

### 4.6.5 Control theory

Sharma et al. (1999) developed a framework for monitoring customer satisfaction based on the literature on control theory. According to control theory, the primary objectives of control models are to identify changes in the performance criteria, determine its

causes, and take the necessary corrective actions to bring the system back into control. Control models can be classified as yes–no control models, post-action control models and steering control models. Of these three types of control models, the steering control model is consistent with the concept of monitoring satisfaction over time. The major objective of a steering control model is to develop a plan to *steer* the process to meet the set objectives. Figure 4.3 depicts the steering control model used to monitor customer satisfaction.

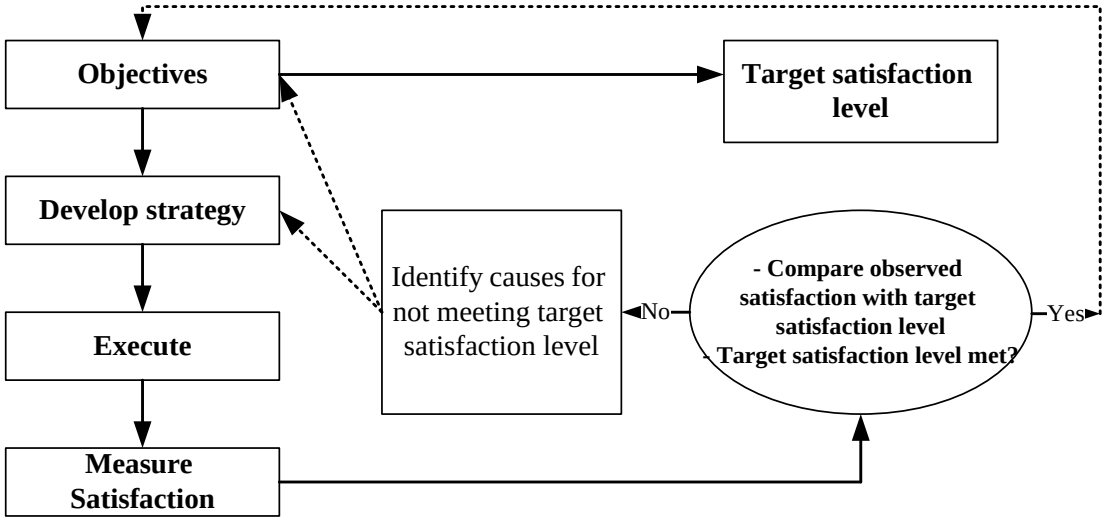



**Figure 4.3: Framework for monitoring satisfaction**

As shown in figure 4.3, the first step is for management to set clear objective(s) and the target satisfaction level they expect to achieve. Second, a strategy for meeting the targeted satisfaction levels needs to be developed and executed. Third, the management should be in a position to measure and compare the actual satisfaction level with the target satisfaction level. If the actual satisfaction level does not deviate significantly from the target level or shows a significant trend, then satisfaction is assumed to be under control. On the other hand, if there is a significant difference or a trend then satisfaction is considered to be out of control and corrective measures need to be taken to steer the process back in control. Fourth, if the target satisfaction level is not met, then management needs to identify the causes for not meeting the set target level. Fifth,

having determined the causes for not meeting the target level, management must take corrective action. Monitoring customer satisfaction is achieved by periodically measuring customer satisfaction over time.

### 4.6.6 Social-psychological theory

An important theoretical and empirical contribution to understanding the way expectations relate to patient satisfaction has been made by Linder-Pelz (Thompson and Sunol, 1995). Linder-Pelz tested a series of five hypotheses of expectations as determinants of patient satisfaction. Linder-Pelz's definition rests on a social-psychological theory that expression of satisfaction is an expression of an attitude, an affective response, which is related to both the belief that the care possesses certain attributes - components/dimensions - and the patient's evaluation of those attributes; patient satisfaction thus becomes defined as *"the individual's positive evaluations of distinct dimensions of health care"* (Linder-Pelz, 1982:580). She concluded that expectations and perceived occurrences make independent contributions to satisfaction, rather than satisfaction resulting from an interaction between expectations, values and occurrences (Thompson and Sunol, 1995).

Williams (1994) argued that patient expectations were the key to understanding the reasons for expressed dissatisfaction. This appears as a simplified form of the "value expectancy" model, and is attractive in that it allows the approaches of both Linder-Pelz and Fitzpatrick to be valid. Williams (1994) concludes that there is still little evidence that satisfaction is largely the result of fulfilled expectations and values. Furthermore, he questions whether values and expectations actually exist in all situations. For example, he suggests that they may do for some attributes of care, such as amenities, but not for others where there is a passive opinion, such as for medical technical care. Williams (1994:513) stated that: *"the greater the perceived esoteric or technical nature*

*of treatment the more likely it is that many service users will not believe in the legitimacy of holding their own expectations or of their evaluations".*

### 4.6.7 Importance-Performance Theory

The importance performance theory was originally developed by Martilla and James (1977). According to this theory, importance and performance of products or services are measured on a set of selected attributes. Any gaps in the performance of specific attributes relative to preferred performance levels can be identified as they apply to the perception of value and satisfaction by the consumer. Importance is typically measured prior to the actual consumption experience and performance is measured after the experience has been completed. Results are typically presented on a two dimensional grid which consist of vertical and horizontal axes scaling the importance and performance of mean values of both importance and performance scores (Byeong-Yong and Oh, 2002). The theory suggests that respondents should be asked how important services are to their overall satisfaction, in order to appreciate the implications of their ratings of individual services.

### 4.6.8 Discrepancy theory

Most satisfaction studies in marketing appear to use discrepancy theory. Satisfaction is a function of the perceived discrepancy of what an individual desires and what he or she actually experiences as a proportion of those desires (Jaipaul and Rosenthal, 2003). Marketers define "desires" as expectations, while others ascribe the meaning of "what is important" or "what should be." If patients are encountering a health care service for the first time or entering with the paternalistic disposition (frequently seen in the "older generation" of patient), expectations may be minimal, unrealistic, or even irrelevant. Results of satisfaction surveys of such patients will be independent of the quality of care received (Turner and Pol, 1995). Fox and Storms (1981) argued that the lack of

variability in satisfaction responses should prompt a shift in focus from obtaining stability of results to understanding the conditions under which *discrepant* findings can be predicted. This implies that a concentration upon areas of expressed dissatisfaction is more valuable than obtaining consistency of expressed satisfaction.

Ware et al. (1983a) made the distinction between objective satisfaction reports about providers and care (waiting times, for example), and satisfaction ratings, which "attempt to capture a personal evaluation of care that cannot be known by observing care directly" (Ware et al., 1983a:247). Satisfaction ratings, it was argued, reflect three variables: the personal preferences of the patient, the patient's expectations, and the realities of the care received; satisfaction with the last variable is affected by many different components of that care. In this way, a satisfaction rating is both a measure of care and a reflection of the respondent (Sitzia and Wood, 1997:1832). Linder-Pelz (1982b) asserted that the construct had generally been examined in two distinct ways: as the dependent variable which was determined by patient and service characteristics, or as the independent variable which is predictive of subsequent behaviours. Both aspects are similar, in that the research is problem oriented, aiming to provide practical data, and not concerned with the building or testing of theories.

### 4.6.9 Satisfaction Theory

Alford and Sherrell (1996) proposed that categorisation processes constitute the source of affective reactions toward service providers, when the target service provider fits an accessible mental category. If no such category is available, the consumer is hypothesised to follow the more traditional attribute-based disconfirmation model. Alford and Sherrell (1996) assessed the applicability of the disconfirmation model, along with the affective extension suggested by Oliver (1993b), to the services setting. Affect is posited to have a direct positive effect on performance evaluations, satisfaction

with the service encounter, and repeat patronage intentions. Alford and Sherrell (1996) found no significant effect for disconfirmation when testing either with or without affective influences. Affect has a significant influence on performance evaluations only. The significant influence of affect in the model may be due to the nature of services. Consumers in service encounters may be forced to use other types of information to reach their evaluations (such as the steps in the process used to deliver the service). Secondly, the service provider is the central point of the service encounter (Garland and Westbrook, 1989; Bitner, 1990). Some provision in the disconfirmation model must be made for customers' reactions (affective or otherwise) to the service provider. If customer reactions to the service provider exert an independent impact on performance and/or satisfaction, such responses, logically, should come before, not after, performance evaluations in any model of service satisfaction (Alford and Sherrell, 1996).

### 4.6.10 Comparison Theory

Comparison theory (Thibaut and Kelley, 1959) maintains that people tend to compare themselves with specific reference groups. Satisfaction is based upon patients' direct comparisons of the care they received, relative to their perceptions of the care received by others (Jaipaul and Rosenthal, 2003). If the comparison is favourable (they observe that they are doing as well as or better than the referent), they feel satisfied. On the other hand, "*if they observe that they are not doing as well as the referent, they feel dissatisfied"* (Blenkhorn et al., 1998: 125). According to Mettee and Smith (1977), people who are materialistically oriented will be more likely to use high society, high class, and affluent people as their individual reference groups when making social comparisons of standard of living, and therefore are more likely to feel dissatisfied with their current standard of living. Comparison theory can help predict expectation - outcome discrepancies; these considerations are relevant to self/self comparisons if

individuals compare the different outcomes they receive on the basis of different status characteristics (Masters and Smith, 1987). According to Veenhoven (1996:16), "comparison theory sees satisfaction as the result of a match between standard and reality. In this line, it is commonly assumed that standards of comparison shift continuously. Adjustment of standards to reality would produce the pattern of low correlations. Cultural differences in standards would cause variability in correlations".

### 4.6.11 Service Satisfaction

Most services are characterised by experience or credence properties (Darby and Karni, 1973; Zeithaml, 1981). Several studies of service satisfaction have found that the interaction between employee and customer is an important ingredient in satisfaction judgments (e.g., Bitner, 1990; Day and Bodur, 1978; Surprenant and Solomon, 1987). Solomon et al., (1985) argue that a role theory perspective, considering the appropriateness of both the consumer's and the service provider's behaviour, is a useful perspective in explaining service satisfaction. Swartz and Brown (1989) utilised such a role theory perspective to examine Parasuraman, Zeithaml, and Berry's (1985) model of service quality for physicians. Patients' perceptions of their interaction with the physician were found to be the most important predictor of satisfaction with the service encounter. The theoretical model is shown in Figure 4.4.

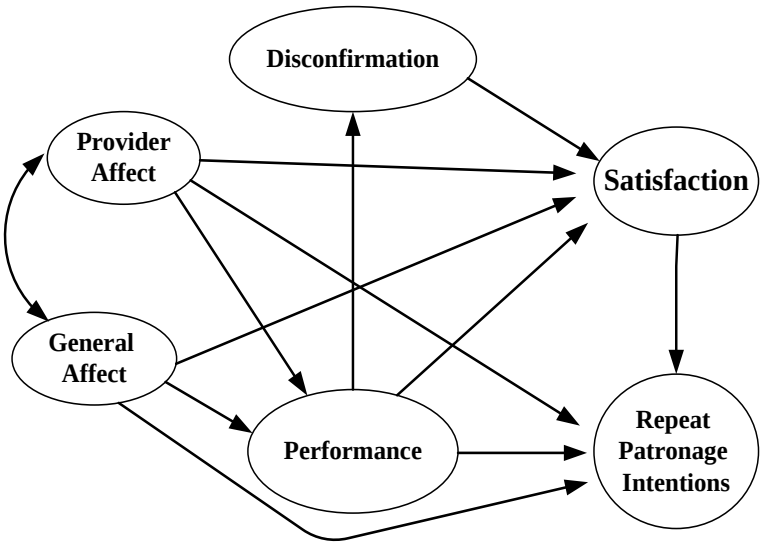



**Figure 4.4: Affect-Based service satisfaction model**
Source: Alford and Sherrell (1996):76

The model contains the traditional components of the disconfirmation model, minus the expectation construct typically used in the product literature. The model posits that consumers may have two bases of evaluation for the service encounter: affective and process oriented. Professional services are generally characterised by high credence properties and provide a context where a consumer's reliance on service provider affects generated by categorisation should be high. General affect represents the existing affect stored with the service provider category in the mind of each consumer. This is a broad level affect that has been generated over time by past experiences with the service provider category. General affect does not pertain to one specific service provider. Provider affect pertains to the feelings a consumer has toward the individual service provider. The labour intensiveness of services makes the traditional distinction between affect for the product and affect for the person extremely difficult. With professional services, the person performing the service may be considered the service itself. Provider affect is developed through the interaction from the service encounter. As the consumer receives more information regarding the service provider, an independent affective reaction should arise that characterises the service provider apart from the

general category affect. Provider affect and general affect should be correlated to some degree, but they are formulated in the model as separate and somewhat independent sources of affect. The influence of general and provider affect on performance is based on the temporal order of response for affect and performance. The development of affect is instantaneous, whereas the performance evaluation requires more time to develop. Thus, the affective response may influence the perception of performance. Solomon et al. (1985) observe that satisfaction and repeat patronage may be determined by the personal encounter in a pure service setting. This is also supported by Ben-Sira (1976, 1980) from the perspective of social interaction theory.

The process associated with delivery of the service also provides consumers with information. Performance is defined as how well the service provider performs each step of the process of delivery of the service. The performance of each step of the process of delivering the service can be assessed by comparing script expectations with experience during the service encounter. Because evaluation of the technical quality of the procedure, such as a root canal, is difficult, consumers rely instead on their evaluations of the process of service delivery, not the procedure completed. Performance influences satisfaction judgments, as well as consumers' intentions to purchase again (Swan, 1988). Swan found that satisfaction was predicted by performance and that intentions to revisit were predicted by satisfaction and performance. As modelled by the disconfirmation paradigm, performance also influences disconfirmation.

In the professional service case, disconfirmation is an assessment of how well the service provider performs events constituting the process of delivery during the service encounter. If the perception of service provider performance exceeds the level expected by consumers, then there is a positive disconfirmation of expectations. Whereas service

encounters leading to either a confirmation of expectations or a positive disconfirmation of expectations should result in satisfaction, service encounters producing a negative disconfirmation of expectations should result in dissatisfaction. Repeat patronage intentions refer to the consumer's probability of using the service provider in the future for the same need and also other needs the service provider is qualified to fulfil.

## 4.7 Satisfaction Constructs

The traditional view of satisfaction has its roots in the satisfaction/dissatisfaction paradigm, in which satisfaction is event specific and typically is defined as the post-consumption evaluative judgment of a particular transaction (Sharma et al., 1999). Researchers have conceptualised the satisfaction construct in different ways (Albaz, 1992). They look at it as a global construct, as a specific dimension, or as multi-dimensional, as follows:

### 4.7.1 Global Construct

This type of research looks at overall satisfaction. Respondents are asked about their satisfaction with health care service in general. Satisfaction is determined using global measures, which may include one item or several items (Larsen and Rootman, 1976; Fleming, 1981; Zipkin et al., 1984; Boscarino, 1988). Albaz (1992) reported criticisms by Locker and Dunt (1978), and Greenfield and Attkisson (1989) of this type of research, since there is evidence that the majority of studies reviewed had adopted and measured satisfaction as a multi-dimensional construct (Pradnya et al., 2009, Ware et al., 1983b). Albaz (1992:25) argued that "general satisfaction measures are an inadequate measure of consumer opinion, since the majority of studies indicate that the level of satisfaction expressed varies with different aspects of medical care". Instead of studying global patient satisfaction, a few researchers have studied patient satisfaction regarding specific dimensions of health care service.

### 4.7.2 Specific Dimensions

In research based on satisfaction as a specific dimension, patient satisfaction with only one aspect of health care service is studied. Although this type of research may be promising, since it points out specific deficiencies which can be easily corrected, very few studies have used this approach. Given the high cost of research, researchers often seek broader applications that are not limited to one aspect of health care service. Therefore, a multi-dimensional approach is more often adopted.

### 4.7.3 Multi-dimensional Construct

Knowledge of satisfaction with services provided under the CHIS requires, also, knowledge of other components that form the services. For example, beneficiaries' overall satisfaction with the health care provider will be a function of their satisfaction with such activities as appointment scheduling, access and availability of facilities, financial procedures, waiting time, communication, appearance of waiting area, courteousness of staff, and the services provided by the medical staff.

Health services have different aspects or dimensions, such as the accessibility of service, the service process, and the organisational environment where service is delivered. Patient satisfaction varies based on which dimension of health care service has been evaluated (Albaz, 1992). A multidimensional measure generally yields more score variability and higher reliability and validity than a unidimensional measure (Al-Juhani, 1994). After reviewing the literature, Luft (1981) characterised satisfaction as being related to access, availability of resources, continuity of care, information transfer, humaneness and quality. According to Andaleeb, et al. (2007:265-266), there is "a clear link between patient satisfaction and a variety of explanatory factors" which include:

- Reliability: refers to providers' ability to perform the promised service dependably and accurately
- Responsiveness: Patients expect hospital staff to respond promptly when needed. They also expect the required equipment to be available, functional and able to provide quick diagnoses of diseases.
- Assurance: Knowledge, skill and courtesy of the doctors and nurses can provide a sense of assurance that they have the patient's best interest in mind and that they will deliver services with integrity, fairness and beneficence.
- Tangibles: Physical evidence that the hospital will provide satisfactory services is very important to patient satisfaction judgments. Generally, good appearance (tangibility) of the physical facilities, equipment, personnel and written materials create positive impressions.
- Communication: If a patient feels alienated, uninformed or uncertain about his/her health status and outcomes, it may affect the healing process.
- Empathy: Health care providers' empathy and understanding of patients' problems and needs can greatly influence patient satisfaction.
- Process features: refer to an orderly management of the overall health care service process.
- Cost: Consumers will shop for the best value. It is assumed that the lower the perceived overall cost of health care services, the higher will be the level of patient satisfaction.
- Availability/access: Availability of doctors, nurses and hospital beds round the clock is of concern to patients in defining the level of access they have to health care.

### 4.7.4 Service

Baker (1991:171) states that "Health care is often described as a service industry and it cannot expect to remain isolated from the pressures of the consumer movement". A service is a complicated phenomenon. Vargo and Lusch (2004:326) argue that the common denominator of most service definitions is “activities” or “processes”. This activity or process, in turn, implies applying something and doing something for the benefit of some entity. Accordingly, they define service as "the application of specialised competences (skills and knowledge), through deeds, processes, and performances for the benefit of another entity or the entity itself (self-service)" (Vargo and Lusch, 2004:326). Grönroos (2007:52) defines services as:

> *"a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and/or physical resources or goods and/ or systems of service provider, which are provided as solutions to the customer problems".*

Lovelock (1991:13) defined service as "a process or performance rather than a thing". Services are not things, they are processes or activities, and these activities are more or less intangible in nature. A service is normally perceived in a subjective manner. When services are described by customers, words such as 'experience', 'trust', 'feeling' and 'security' are used. These are highly abstract ways of formulating what a service is (Grönroos, 2007). Johnston and Clark (2008:7) defined service from the customer perspective as "the combination of the customers` experience and their perception of the outcome of the service".

#### 4.7.4.1 Characteristics of Services

A whole range of characteristics of service has been suggested and discussed in the literature. Much of the discussion of the relationship between goods and services has focused on how they characteristically differ and the implications of these differences for marketing. According to Gummesson (1995), both goods and services render

service. Zeithaml, Parasuraman, and Berry (1985) identify four characteristic differences goods and services. These characteristics include intangibility, heterogeneity, inseparability and perishability.

Intangibility - lacking the palpable or tactile quality of goods.

Heterogeneity - the relative inability to standardise the output of services in comparison to goods.

Inseparability of production and consumption - the simultaneous nature of service production and consumption compared with the sequential nature of production, purchase and consumption that characterises physical products.

Perishability - the relative inability to inventory services as compared to goods (Vargo and Lusch, 2004:326). Table 4.3 summarises the characteristics of services as compared to physical goods.

**Table 4.3 Differences between Services and Physical Goods**

| Physical Goods | Services |
|---|---|
| Tangible | Intangible |
| Homogeneous | Heterogeneous |
| Production and distribution separated from consumption | Production, distribution and consumption simultaneous processes |
| A thing | An activity or process |
| Core value produced in factory | Core value produced in buyer-seller interactions |
| Customers do not (normally) participate in production | Customers often participate in production |
| Can be kept in stock | Cannot be kept in stock |
| Transfer of ownership | No transfer of ownership |

Source: Grönroos (2000:47)

The most important characteristic of services is that they are "processes consisting of a series of activities where a number of different types of resources - people as well as other kinds of resources - are used, often in direct interactions with the customer, so that a solution is found to the customer's problem" (Grönroos, 2000:48). Most other characteristics are consequences of the process nature of services (Grönroos, 2001).

Because of the inseparability of production and consumption, services cannot be subject to a predetermined quality control process or marketed in the traditional way (Grönroos, 2000).

Gummesson (2000:121) claims that *"the distinction between goods and service has become a burden"*. Grönroos (2000:88) suggests that "services and physical goods should not be kept apart any more. This means that physical goods marketing and services marketing converge but services oriented principles dominate". Vargo and Lusch (2004:325) argue that the characteristics of services (a) do not distinguish services from goods; (b) only have meaning from a manufacturing perspective; and (c) imply inappropriate normative strategies. Vargo and Lusch (2004:327) argue that the intangibility, heterogeneity, inseparability and perishability characterisations fail to delineate services from goods adequately. Also, they argue that (a) these characteristics are inaccurate and misleading about the nature of market offerings; (b) their implications for marketing strategy are contradictory to a market and consumer orientation; and (c) their implications should be inverted (see Table 4.4).

## Table 4.4 Limitations and Implications of Distinguishing Characteristics of Services

| Dimension | Dispelling the Myth | Perspective | Inverted Implication |
|---|---|---|---|
| **Intangibility** | | | |
| Services lack the tactile quality of goods | Services often have tangible results<br>Tangible goods are often purchased for intangible benefits<br>Tangibility can be a limiting factor in distribution | The focus on manufactured output is myopic and goods oriented<br>Consumers buy service even when a tangible product is involved<br>Intangibles such as brand image are more important | Unless tangibility has a marketing advantage, it should be reduced or eliminated if possible |
| **Heterogeneity** | | | |
| Unlike goods, services cannot be standardised | Tangible goods are often heterogeneous<br>Many services are relatively standardised | Homogeneity in production is viewed heterogeneously in consumption | The normative marketing goal should be customisation, rather than standardisation |
| **Inseparability** | | | |
| Unlike goods, services are simultaneously produced and consumed | The consumer is always involved in the "production" of the value | Only manufacturing benefits from efficiency of separability<br>Separability limits marketability | The normative marketing goal should be to maximise consumer involvement in value creation |
| **Perishability** | | | |
| Services cannot be produced ahead of time and inventoried | Tangible goods are perishable<br>Many services result in long-lasting benefits<br>Both tangible and intangible capabilities can be inventoried<br>Inventory represents an additional marketing cost | Value is created at the point of consumption, not in the factory | The normative goal of the enterprise should be to reduce inventory and maximise service flows |

**Source: Vargo and Lusch (2004:327)**

Service marketing has developed as a subdiscipline of marketing because there was a market demand (Berry & Parasuraman, 1993) for the development of positive and normative theory to address market offerings that did not fit the traditional goods-based, manufacturing model. This manufacturing model assumed a standardised (or at least standardisable), tangible output, produced by adding value through manufacturing, without interference from the consumer, and inventoried until demanded and then sold. It was a model first developed by classical and neoclassical economists, and later adopted by marketers, at a time when the apparent great advances in economic exchange were those related to the production and distribution of tangible goods (Vargo and Lusch, 2004:332). Dixon (1990:342) argues that it is "the dissatisfaction with marketing theory that led to the services marketing literature" or, more generally, the creation of services marketing as a sub-discipline. Anderson, Fornell, and Rust's (1997) primary interest is in the relationship between satisfaction, productivity and profitability. The goods versus services distinction was employed as a surrogate for standardisation and customisation quality, by invoking an assumption that standardisation quality is more important in determining satisfaction with goods and customisation quality is more important in determining satisfaction with services.

The service encounter is defined by Shostack (1985:243) as: "a period of time during which a consumer directly interacts with a service". The service encounter often involves service employees, system and processes, use of technology and the environmental setting, thus emphasising the need for disciplines to work together to create and manage the encounter (Ng, 2008:14). As services are very often produced during an encounter between humans, service- employees and service customers (Drew-Rosen et al., 2003), services are bound to be heterogeneous to the extent that the performance of humans varies (Evangelos, 2007:40). In the goods-services spectrum, insurance is characterised as a "pure" service (Berry and Parasuraman, 1991) and as

such can cause different expectations to customers compared to services that include a greater proportion of tangible elements (Zeithaml et al., 1993). Because insurance is usually characterised by a substantial delay between purchase and use, many of its characteristics are not immediately evident. In most cases customers will not be fully informed about and aware of the exact features of their insurance policy before they actually need to use it, i.e. file a claim (Evangelos, 2007:60).

#### 4.7.4.2 The Service Package

Fitzsimmons and Fitzsimmons (2001) define a service package as a bundle of goods and services consisting of supporting facilities, facilitating goods, and explicit services. Customers perceive services as bundles or packages with two main ingredients, the "service outcome" or "core service", and the "service experience". The service outcome describes the result of the service for the customer, i.e. "what" the customer gets from the service. The service experience on the other hand is the customer's perception of the service process, i.e. "how" the service was provided. This generally depends on: how front-line employees deliver the service to customers, the organisation and its facilities and a number of "peripheral" services that facilitate the offering of the core service (Grönroos, 2000).

### 4.7.5 Service Delivery Process Model

Based on the literature review, the researcher adapted and extended the basic service delivery process model (developed by the Canadian Centre for Management) into a more specific model for studying beneficiaries' satisfaction with the CHIS. The conceptual model considers the different phases that the health insurance beneficiary must undergo. Insurance company and employer role are new in the model. The internal and external variables of the service delivery process that should be measured are:

- Beneficiary expectations.
- Perceptions of service experience.
- Level of satisfaction.
- Level of importance.
- Priorities for improvement.

In order to build upon these five service elements as a foundation for the Canadian Common Measurement Tool (CMT), a conceptual model of their relationships has been developed to explain the process of beneficiaries satisfaction with the CHIS (see figure 4.5). In addition, the major dimensions are represented in the graphic representation of the service delivery process model. The model incorporates the known influences on beneficiaries' satisfaction, including personal characteristics, expectations and disconfirmation of those expectations, past service experience with the health care delivery system and perception of experience. The grey circles in the model represent the insurance parties namely the insured company (employer), the insurance company and the health care provider (as mentioned in section 3.5.1, chapter 3). The dotted line and the inverse arrows are new in comparison with the basic model and indicate indirect relationship between the beneficiary and the insurance company. The solid inverse line between the beneficiary and the employer indicates direct relationship. The large dotted line indicates that insurance companies have no direct contact with the beneficiaries; however, their internal procedures and decisions with regard to treatment approval and claims processing may influence beneficiaries' satisfaction with the CHIS. The small dotted line indicate that once the levels of satisfaction against areas of importance are identified, those areas that are very important to the beneficiary but are areas of low satisfaction are the places to work on and improve first. The sections are numbered according to their numerical presentation in the customised survey which will be explained in section 6.9 of chapter six.

According to Taylor (1994), patient satisfaction is a shorter-term judgment of a service encounter than service quality and may best be conceptualised as very closely related to disconfirmation judgments. Moreover, satisfaction should be operationalised by measures that are able to capture the gap between patients' perceptions of performance, compared with their expectations (Al-Shekh, 2003). Each beneficiary brings with him/her unique characteristics when he/she uses the health services under the CHIS. These characteristics include background profile (personal characteristics, values and previous health care service experiences) of the beneficiary and the individual variables of cognitive appraisal of the health services and an affective response to these services. Each of these characteristics needs to be measured in order to deliver an integrative model of care. The elements of beneficiary-provider, beneficiary-employer and beneficiary-insurance company interaction are the affective support, health information, decisional control, and technical competencies that each party demonstrates during an interaction with the beneficiary. The degree to which each item under each dimension occurs varies with the presenting needs of the beneficiary. A summary of the main dimensions and their elements is found in Appendix A.

Satisfaction can be formed as a result of an affective response to an expectancy disconfirmation that involves a cognitive process. Beneficiary satisfaction with the CHIS is a beneficiary's (affective or emotional) response to his or her (cognitive or knowledge based) evaluation of the health insurance parties performance (perceived quality) during a health care consumption experience. Beneficiary evaluations and the consequent behavioural and emotional responses are based on his/her perceptions of the role of each health insurance party. These perceptions would be mediated by the beneficiary's previous experience while utilising health services under the CHIS. Beneficiary expectations about the services are derived from the image of the service

provider. This image of the service provider is based primarily on the perceived quality of previous experience(s) with the service provider.

As direct recipients of services provided under the CHIS, beneficiaries can provide information about their personal subjective experiences. Satisfaction with the CHIS is the outcome of activities where the beneficiary compares his previous experience with the health care system with his/her expectations and give priority to services requiring improvement from his/her point of view. If the delivered services meet his/her expectations then he/she generates (dis)satisfaction based on his/her perceptions of experience. Perceptions are cognitive in nature and represent the information the beneficiary has about the object in question. As the service rendered, the beneficiary compares performance perceptions to these prior comparison standards. In health care, benefits are largely the results of good quality service in both outcome and process domains. Like service quality, value is also a cognitive construct. Perceived value is the consequence of a mental weighing of perceived benefits versus sacrifices, whereas satisfaction is an affective response to service evaluation.

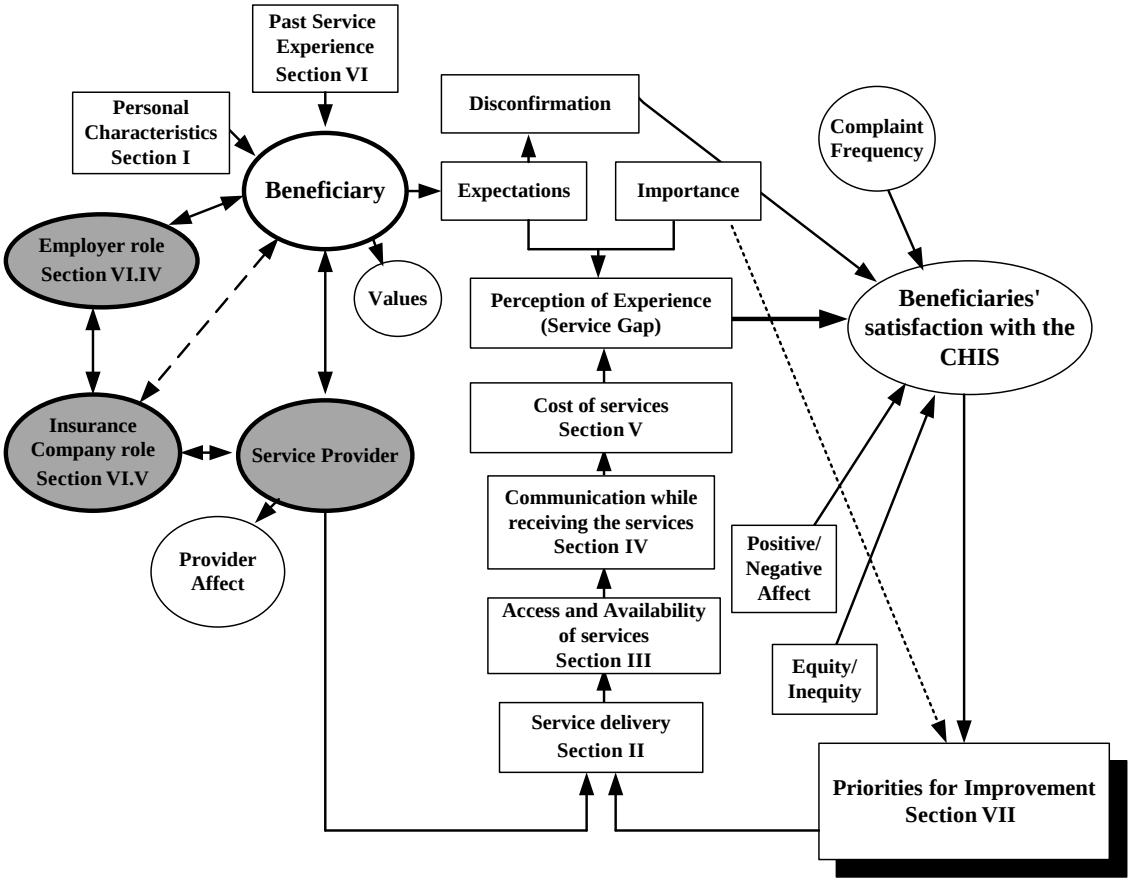



**Figure 4.5: Service delivery process model**

Source: Adapted with modifications from Schmidt (1998:9)

There is a clear link between beneficiary satisfaction with the CHIS and a variety of explanatory factors which include: personal characteristics, service delivery, access and availability of facilities for the provision of health services, communication while receiving a health care service, cost of health care, employer role and insurance company role. The literature on the aggregate relationships between beneficiary satisfaction (dependent variable) and service dimensions (independent variables) is quite rich but this is not the case when the individual dimensions of the constructs are taken into account. A model linking the seven independent variables with the dependent variable (satisfaction with the CHIS) was developed as presented in Figure 4.6. Further explanation of the conceptual framework will be given in the next chapter (section 5.11).

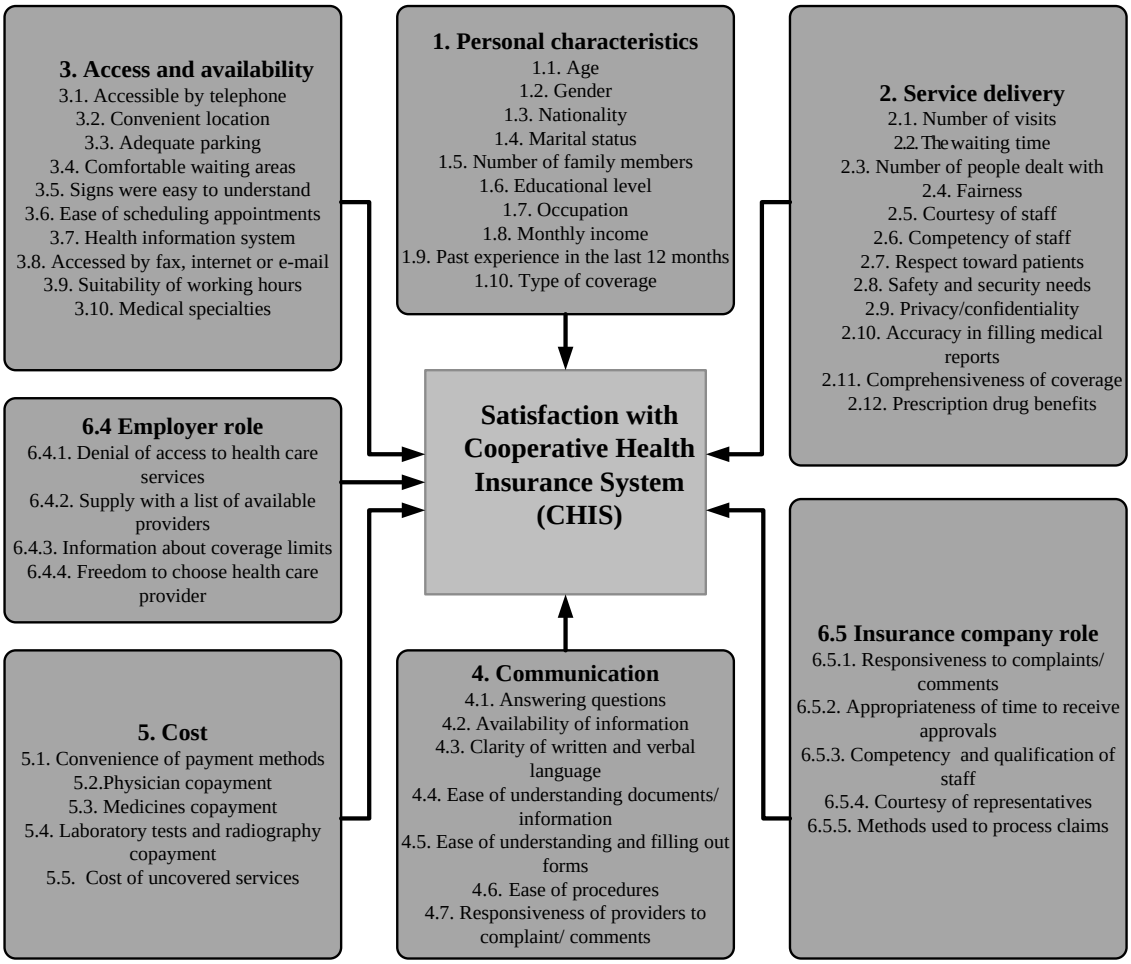



**Figure 4.6 Conceptual Framework**

### 4.7.5.1 Beneficiary Expectations

Beneficiary expectations of care include items such as previous experience with other types of insurance plans and perceptions of the adequacy of services that change with a move to health insurance (Oliver, 1980; Parasuraman et al., 1988; Strasser et al., 1993; Swan and Trawick, 1980; Woodruff et al., 1983). When beneficiaries approach a service provider on either a voluntary or involuntary basis they do so with a variety of expectations that originate from many sources. Personal experiences with the CHIS might be important - in particular items related to getting approvals, prompt care, communication with providers and their staffs. MORI (2002:491) states that "if the experience of the service greatly exceeds the expectations beneficiaries had of the

service, the satisfaction will be high and vice versa". Thus, understanding the beneficiary expectations at the onset of the service experience is crucial to addressing service satisfaction. Zeithaml's model of Customer Assessment of Service Quality (Zeithaml et al., 1990:23) identifies four key factors affecting a customer's (beneficiary's) expectations that are important to consider in relation to service quality: word of mouth, personal needs, past experience, and external communications by the service provider. A thorough understanding of the expectations that beneficiaries bring to the service experience will provide vital information to plan for either managing expectations or targeting areas of improvement. It is important to note that expectations will influence people's attitudes during the whole process and consequently may have an impact on both usage of, and satisfaction with, the services (ICCS, 2003).

#### 4.7.5.2 Perceptions of Experience: The Service Gap

Personal experiences with the CHIS include the following: use of health care services, problems experienced, and satisfaction with individual services. It is important for the service provider to understand beneficiary perceptions of the experience in order to identify potential areas of improvement. For example, the beneficiary may view the service staff as being unhelpful because they redirect them to another counter. The service staff, in contrast may perceive this response as helpful, since the beneficiary has been redirected to the appropriate service personnel. On one level, the problem in this situation is a difference in perception of the same service experience. On another level, the problem may be with the actual service delivery. By identifying beneficiary perceptions, the problem may be addressed by the service provider. Service providers may choose to clarify points of contact through communications or they may redesign their service delivery process to decrease the number of contacts required by the beneficiary in order to receive the

service needed. The disparity between the beneficiary expectations and the perceived experience will result in what Zeithaml et al. (1990) describe as a service gap. Service gaps are directly related to the level of satisfaction experienced by the beneficiary. It is logical to infer that the existence of a negative service gap (i.e., when expectations exceed actual service delivery levels) leads to a less than satisfactory service experience. Conversely, when expectations are lower than the level of service delivery, a satisfactory service experience is realised.

#### 4.7.5.3 Level of Importance

The perceived importance of a service (or its elements) is an essential service variable on two levels: as an antecedent of satisfaction and for planning purposes. As an antecedent of satisfaction, the beneficiary brings the level of importance to the service experience. As the beneficiary experiences service delivery, his or her perceptions of the experience are filtered by levels of importance that ultimately result in a level of satisfaction. Frequency of use is also considered to be a factor that influences the level of importance (Schmidt, 1998).

#### 4.7.5.4 Level of Satisfaction

Satisfaction is the result of customers' assessment of a service based on comparison of their perceptions of service delivery with their prior expectations (Johnston and Clark, 2008). Customers react to a combination of their expectations: the importance of the service to them, and the actual service experience, resulting in an emotional response or perception. Satisfaction levels are a result of this perception and an emotional assessment process. Perception is an initial response and satisfaction is a judgment of that response in relation to one’s needs.

#### 4.7.5.5 Priorities for Improvement

Measurement of service quality must go beyond exploring satisfaction levels in order to be useful for planning purposes. Information on how important the overall service and individual service items are to the beneficiary will promote well-informed planning decisions. Cross-analysis of satisfaction and importance variables will identify priorities for improvements and thus promote efficient allocation of resources. However, frequently when consumers are asked to stipulate levels of importance they indicate that all or most service elements are important, which is unmanageable for planning purposes. By requesting that beneficiaries select the top three (approximately) service priorities, a manageable portfolio can be provided for planning purposes (Schmidt, 1998).

### 4.7.6 Dimensions of Satisfaction with the CHIS

The previously mentioned five variables of the service delivery process illustrate the types of information needs to be considered to improve the service. The following service dimensions were identified: responsiveness, reliability, access and facilities, communications, and cost. Table 4.5 lists the variables in each service dimension. Information will be gathered for each service dimension from each of the variables (consumer expectations, perceptions of the service experience, level of satisfaction, level of importance, and priorities for improvement).

**Table 4.5 Service dimensions**

| Dimensions | Variables |
|---|---|
| Responsiveness | • timely delivery of service<br>• number of contacts to receive service<br>• waiting time<br>• timely reaction to expressed concerns<br><br>Service staff are:<br>• courteous<br>• helpful<br>• competent<br>• up-to-date information<br>• respectful<br>• fair<br>• protect my privacy/confidentiality |
| Reliability | • provided needed service<br>• provided what was promised<br>• adhered to policy and standards<br>• minimal error rate |
| Access and Facilities | • convenient location<br>• physical access to building<br>• comfort of offices and waiting areas<br>• adequate parking<br>• hours of service<br>• appearance, clarity and location of signs<br>• ease of obtaining appointments<br>• telephone access<br>• use of technology<br>• variety of access modes |
| Communication | • questions were answered<br>• availability of information<br>• plain language<br>• consistency of information/advice<br>• services delivered in official languages<br>• ease of understanding information, documents<br>• ease of understanding procedures |
| Cost | • ease of billing/payment<br>• reasonable cost |

Source: Schmidt and Strickland (1998:29)

#### 4.7.6.1 Personal characteristics

Based on previous research, personal characteristics may be characterised by demographic variables, age, sex, nationality, marital status, number of family members, educational level, occupation, monthly income, experience in the previous 12 months (year 2007) and type of health insurance coverage.

#### 4.7.6.2 Service delivery

The mode of delivery has two components. The first, referred to as the "delivery system", addresses where care is delivered (e.g., outpatient, clinic). The second, referred to as "providership," pertains to the mechanism through which care is delivered (e.g., cooperative health insurance). Security is the freedom from physical risk reflected in the consumers' confidence in successful medical outcome. Courtesy refers to the respect, consideration, politeness, and friendliness of the personnel with whom the beneficiary comes into contact. Competency of staff means having the skills and knowledge needed to perform the service. It could pertain to all personnel involved in delivering the service. If the conditions of the insurance contract is not fair from the provider point of view, then they may adopt negative methods to satisfy the conditions of the contract, including lowering the salaries of their staff, employing inexperienced doctors and nurses, or encouraging doctors not to give medication unless in case of emergency (http://www.cchi.gov.sa). Service processes are related to the administrative and financial processes employed by health providers in delivering health services (refer to section 3.5.2 of chapter 3). Service processes are based on more objective criteria and can be assessed by a more accurate measure, which is length of time. Service processes include waiting time at the health setting and length of visit, which is the amount of time patients spend with their physicians (Albaz, 1992). The longer the visit, the more the patient is satisfied. Waiting time refers to the amount of time patients are required to wait at the hospitals or physicians' offices before they can be seen.

#### 4.7.6.3 Access and availability of facilities for the provision of health services

Availability refers to ease of contact, approachability, and quantity of service. Accessibility is defined as the possibility of the patient obtaining the services he/she needs at a time and place where needed, in sufficient amount, and at reasonable cost (Al-Juhani, 1994), although it should be understood that adequate access is often perceived differently by beneficiaries and health care providers. Accessibility refers to the factors involved in arranging to receive health care, including time and effort to make appointments, waiting time required to get an appointment, and ease of reaching the location. An accessibility dimension was included due to the influence service accessibility has been shown to have on beneficiary satisfaction with the health services (Ware et al., 1983).

The availability of health care settings in patients' geographical areas to some extent determines patient satisfaction (Saeed et al., 2001). It affects how patients seek and use health care services (Al-baz, 1992). Hsiao (1992) found that of the five industrialised countries studied (the United Kingdom, Germany, the United States, Canada and Japan), Germans and Japanese have the highest number of contacts with their physicians, while Americans have the fewest. However, the number of visits does not necessarily reflect the amount of time or quality of care rendered during a visit. Access to physicians is just one of a myriad access elements to be considered; access to clinics, preventive programmes, and specialised treatment are but a few of these elements.

#### 4.7.6.4 Communication while receiving a health care service

Communication refers to informing beneficiaries and listening to beneficiaries expressing themselves about various aspects of their consumption experiences. Responsiveness of providers refers to the willingness or readiness of health care employees to provide a service and the timeliness of it. Patient perceptions of the

service provider are formed during the various service encounters. Because hospital services are high contact services, contact personnel play an important role in patient evaluations of the services. Contact personnel are, indeed, part of the service (John, 1991). Health care personnel are the individuals and groups of individuals involved in the delivery of care. With the new consumer approach to health care, the personal and humanistic aspects of health care are becoming as inherent to quality of care as professional qualifications. Obvious carryover measurements with consumer satisfaction are implied here. There is also increased impetus from the health care industry for the cross-training of health care professionals and the removal of certain professional-specific scope of practice boundaries.

Jones et al. (2003) conducted a study to investigate the impact of customer understanding of service instructions on post-purchase outcomes. The research highlighted the importance of providing instructions that are understood by customers. The research was based on a customer satisfaction survey of over 1,000 established customers of a health insurance organisation. 3,991 households who had been enrolled with the organisation for at least one year were surveyed; 1,127 usable surveys were returned, a response rate of 28.2%. Overall satisfaction was measured using a seven-point scale. 17.3% of the respondents indicated they had problems understanding the instructions. A chi-square analysis indicated that there was no significant relationship ($p > 0.10$) between problems understanding the instructions and any of the demographic variables. Customers who reported having no problem understanding the instructions reported significantly ($p < 0.05$) fewer problems than those customers who reported having problems understanding the instructions. Results show that customers who report high instruction understanding experience less difficulty using the service, have higher levels of satisfaction, are more likely to recommend the service to others, and

report lower switching intentions. Low compliance with instructions may lead to unsatisfactory service performance, making a costly service recovery attempt necessary.

McCormack et al. (2002) conducted a study to assess the effect of new consumer information materials regarding the Medicare program on beneficiary knowledge of their health care coverage under the Medicare system. Data were collected through a telephone survey of 2,107 Medicare beneficiaries in the 10-county Kansas City metropolitan statistical area. Beneficiaries were randomly assigned to a control group and three treatment groups each receiving a different set of Medicare informational materials. The "handbook-only" group received the Health Care Financing Administration's new Medicare and You 1999 handbook. The "bulletin" group received an abbreviated version of the handbook, and the "handbook and the Consumer Assessment of Health Plans Study (CAHPS)" group received the Medicare and You handbook plus the CAHPS survey report comparing the quality of health care provided by Medicare HMOs. Beneficiaries interested in receiving information were oversampled. Data were collected during two separate telephone surveys of Medicare beneficiaries: one survey of new beneficiaries and another survey of experienced beneficiaries. The intervention materials were mailed to sample members in advance of the interviews. Knowledge for the treatment groups was measured shortly after beneficiaries received the intervention materials. Respondents' knowledge was measured using a psychometrically valid and reliable 15-item measure. Beneficiaries who received the intervention materials answered significantly more questions correctly than control group members. The effect on beneficiary knowledge of providing the information was modest for all intervention groups but varied for experienced beneficiaries only, depending on the intervention they received. It was concluded that all of the new materials had a positive effect on beneficiary knowledge about Medicare and the Medicare plus Choice program. While the absolute gain in knowledge was

modest, it was greater than increases in knowledge associated with traditional Medicare information sources.

#### 4.7.6.5 Cost of health care

Service quality and cost are linked in the healthcare industry. The objective of health care reform in Saudi Arabia is to reduce cost and ensure accessibility to all people while not jeopardising the quality of the system (Al-Dakeel, 2002). Whenever beneficiaries evaluate the value of the service, they usually think of its cost. The cost of service is an antecedent of beneficiaries' satisfaction with the CHIS. Cost of services refers to user fees and value for services provided; this factor also encompasses related processes such as billing and payments (Schmidt and Strickland, 2005).

#### 4.7.6.6 Utilisation of health care services under the CHIS

The inconsistency of results obtained from satisfaction studies is possibly due in part to the differences in the frequency of service use. El Shabrawy and Mahmoud (1993:49-50) pointed out that *"Patient satisfaction is considered an indicator of the efficient utilisation of health service"*. It was observed that a sharp increase in the utilisation of health services has followed the implementation of the CHIS. All the low-skilled workers have access to health care when needed. Mufti (2000:56) stated that *"Health insurance tends to lead to frivolous and unnecessary over-utilisation of medical services, unless there are financial incentives not to do so"*.

The type of visit the beneficiary makes to the health care facility dictates the pattern of service, perceptions and satisfaction. The beneficiary's previous service experience has a direct relationship with satisfaction. New patients are likely to have no specific perceptions because of their lack of experience with the health care facility, while follow-up patients are well aware of different procedures and referral patterns and paperwork and are less likely to wait, or meet surprises, during the visit. Satisfaction

with health care does not determine or lead to more utilisation of health services. Dissatisfaction with health care is what determines service utilisation. So, if patients utilise health services a great deal, this could result in their being satisfied, but being satisfied does not mean that patients will utilise health care services even more. On the other hand, *"patients who are dissatisfied will under-utilise health care services"* (Albaz, 1992:12).

#### 4.7.6.7 Employer role

Medical care and the health insurance cover for private sector expatriates and their dependents is the responsibility of their employers (Mufti, 2000). Therefore, employers are responsible for informing and explaining the limits and contents of health insurance coverage to their employees as per Articles 80 and 91 of the CHIS Act; and, must hand the expatriate his insurance card within a period not exceeding ten working days from the date of his/her arrival (Article 14). Lust and Danehower (1990:214) stated that: *"unless the employer has a good benefit communication program or an employee is a frequent user of the benefit package, the worker may be unaware of the benefits available"*. However, employers are concerned about the costs of health care as they are responsible for paying premiums to the insurance company to cover their employees and their dependents as per Articles 5 and 36 of the CHI Act.

#### 4.7.6.8 Insurance company role

The insurance company is responsible, on the effective date of insurance coverage, for supplying the policy holder with an insurance card, explanatory manual including scope of insurance coverage of policy, limits, and authorised service providers' network. Additionally, the insurance company is responsible for notifying the authorised service providers' network of the new members and their insurance coverage limits as per Article 91. Although the insurance company should take care of beneficiaries'

circumstances by introducing a service provider network that can meet their needs so that they will not be forced to seek service from a service provider outside of the network (Article 92), some insurance companies select low cost health providers for the sake of profits, which may result in delivering low quality medical services to beneficiaries. According to Article 93 *"The insurance company may select any authorised service provider that is capable of providing the best of services to meet the requirements of the health service contract"*. Article 95 of CHI Act reads as follows: *"the insurance company is responsible for responding to the request for approval on treatment cost within sixty minutes, and in the event of non-approval reasons for disapproval shall be put in writing"*.

### 4.7.7 The distinction between CMT and SERVQUAL:

The satisfaction school holds the view that assessments of service quality lead to an overall attitude towards the service called satisfaction as expectations are placed in the centre of the conceptual model; on the other hand, the service quality school views satisfaction as an antecedent of service quality (MORI, 2002). The same line of reasoning is behind SERVQUAL and the CMT. The perception of service quality - according to the SERVQUAL model - is seen as the result of an evaluation process whereby “the customer compares the perceived service against the expected service” (Grönroos, 1984: 37). It was necessary to measure the importance of a certain aspect or indicator in view of the user in order to take into account the differences or discrepancies between expectations towards the service and the perceptions of the service (Kunstelj et al., 2007). The CMT approach is made up of three distinct strands. It measures expectation and perceptions of the service experience (thereby measuring the service quality gap); measures how important elements are to respondents (allows modelling of covert and overt priorities); respondents are also asked to directly identify

priorities for action, which provides useful comparisons of satisfaction and importance (Donovan et al., 2001:45).

## 4.8 Conclusion

In evaluating service quality, beneficiaries compare what they perceive they get in a service encounter with their expectations of that encounter, formed in relation to their values. A model that first examines expectations (e.g., as a function of previous access and relationships) and then focuses on satisfaction as a function of confirmation /disconfirmation of expectations should be more valuable in understanding the effects upon beneficiary satisfaction, increasingly sensitive to quality. However, not all service dimensions and attributes are equally important to all, because no two beneficiaries are precisely the same, especially when demographics and ethnic background are considered. Customers might vary in the importance they attach to cost of services, courtesy of staff, quality of tangible facilities and so on. All these possibilities must be considered when reforming the CHIS.

The literature review reveals that scholars in many disciplines have examined consumer satisfaction with medical care and that there are many dimensions of medical care that can influence a consumer's perception of satisfaction. In addition to these dimensions that are either directly or indirectly associated with satisfaction, characteristics of the individual consumer impact satisfaction. The theories presented in this chapter highlight some issues which provide a solid theoretical base for the investigation of beneficiaries' satisfaction with services provided under the CHIS, perceptions of the services and their satisfaction or dissatisfaction, and for the analysis and interpretation of the findings. Although the theories reviewed in this chapter are general theories of service quality and satisfaction, which were not developed specifically in the context of satisfaction within a health insurance context, as has been shown, they are applicable to it. These

concepts and theories provided a framework for the empirical investigation of beneficiaries' satisfaction with CHIS in Saudi Arabia. Understanding beneficiaries' experiences, values and expectations with regard to the received services under the CHIS will help policymakers, health care providers and insurance companies to develop appropriate responses to beneficiaries' needs.

# CHAPTER FIVE

## Literature Review and Conceptual Framework

# 5. Literature Review and Conceptual Framework

## 5.1 Introduction

Even with the progress made in the Saudi Arabian Health Care System, the literature on satisfaction with health insurance after the implementation of the CHIS is relatively weak. Few studies have been undertaken in the area of general satisfaction with health care services. Where these studies have been undertaken, the focus has been on provision of medical services, on patients affected by certain diseases or on single dimensions such as the impact of insurance programmes on the quality of care rendered to patients. A good literature review is necessary to help design the research (Nardi, 2006).

As of 16th of November 2008, there were 319,380 articles in the Medline Database related to health. 15,338 related to insurance and 5,702 related to health insurance. 11,230 related to satisfaction. 2,802 related to patient satisfaction. 158 related to consumer satisfaction. 130 related to customer satisfaction. One related to beneficiaries' satisfaction. Articles were read to determine if the aims of the research and the methodology used were matching and to evaluate the recruitment, settings, data analysis, ethics, findings and contribution to knowledge. Nine articles resulted from the review of different combinations (see Figure 5.1 for literature review flowchart and Table 5.1 for a summary of included studies).

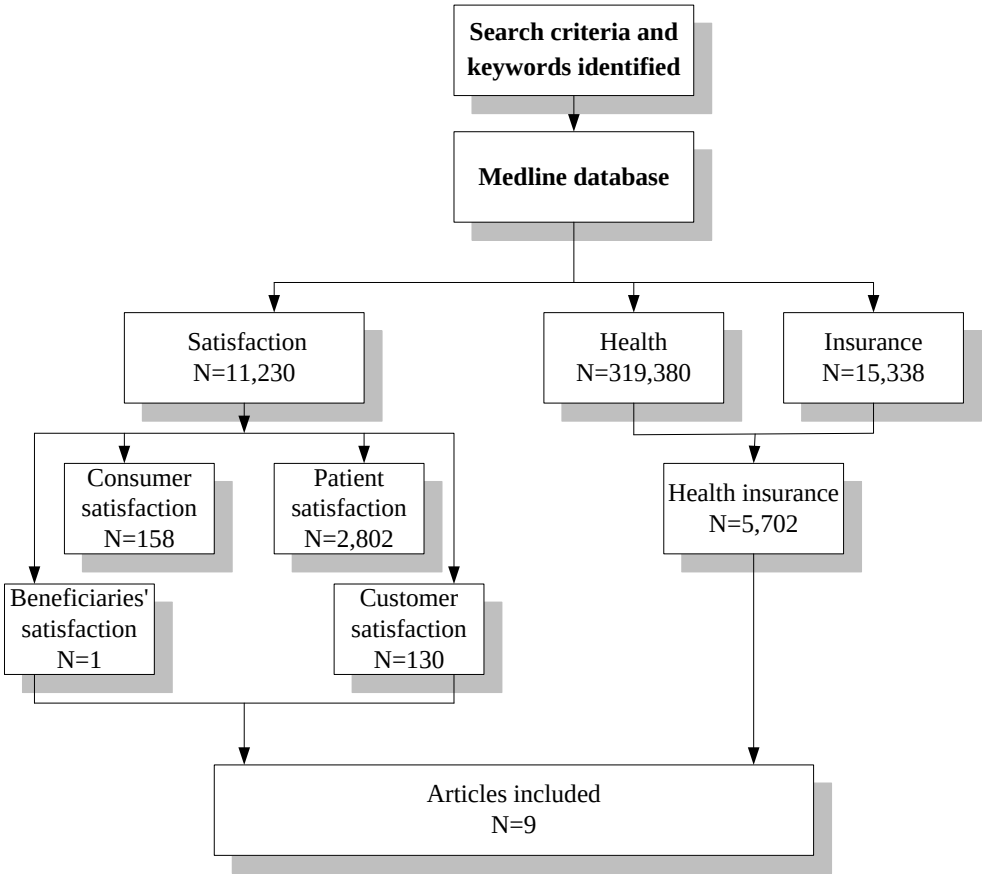



**Figure 5.1: Systematic literature review flowchart**

**Table 5.1: Summary of included studies**

| No. | Reference | Aim/s | Methodology and methods | Sample |
|---|---|---|---|---|
| 1 | Alnaif (2006) | To assess physicians' views on health insurance and its application in the health care system | Cross-sectional study in two major hospitals in Riyadh<br>Self-administered questionnaires | 400 physicians |
| 2 | Hastings (1999) | To determine perceived satisfaction with access to medical care among clients in the Medicaid managed care (MMC) programme | Mailed questionnaire to respondents aged from18 to 64 | 400 MMC clients in New York State |
| 3 | Al-Shawairkh (2006) | To study the perceptions of the Saudi Students attending American Universities towards the CHIS | An electronic survey was posted on the VCU SERL Web page to students who had experienced the American health care system | 2,210 Saudi students |
| 4 | Mansour and Al-Osimy (1996) | To evaluate the resources available in three large health centres in Saudi Arabia, and determine consumers' satisfaction with the services provided. | 1) 1st instrument: direct observation and checking the centres' records.<br>2) 2nd instrument was a 4-point Likert scale measuring consumers' satisfaction (interview method) | 1) three largest health centres in Riyadh chosen purposefully<br>2) 300 consumers chosen randomly from the three chosen centres |
| 5 | Kolodinsky (1999) | To examine consumer satisfaction with managed care | Mail questionnaires. All respondents had experienced the new plan for fifteen months | 2,955 employees eligible for health care benefits at a medium-sized university. |
| 7 | El Shabrawy and Mahmoud (1993) | -To estimate patient satisfaction with respect to PHC services in Riyadh City<br>-To explore the physician-patient relationship | Questionnaires<br>Family files checked and the household head were interviewed | -14 health care centres were selected randomly<br>-900 respondents were interviewed |

**Table 5.1: Summary of included studies (con't)**

| No. | Reference | Aim/s | Methodology and methods | Sample |
|---|---|---|---|---|
| 6 | Mainous et al. (1999) | To examine patient satisfaction across a variety of public and private health insurance programmes for low-income individuals | - A survey of randomly selected adults in Kentucky who had visited the outpatient department in the past year.<br>- The functional health status was measured according to the Medical Outcomes Study 12-item Short-Form Health Survey (SF-12). | 683 Medicaid recipients, 616 with private insurance, 287 in private sector charity program for uninsured indigents |
| 8 | Alaiban et al. (2003) | To investigate patient satisfaction and to discover if there were any correlations with the type of the facility and the satisfaction level of the patient. | Structured questionnaire was carried out. Only in-patients with at least a 3-day stay were included | 2 Ministries of Health and 5 private hospitals and 5 PHC centres in Riyadh 1000 patients (500 from hospitals and 500 from PHC centres. |
| 9 | Lust and Danehower (1990) | To examine correlates of satisfaction with several common benefits including health insurance and tested the impact of some personal characteristics which should have at least an indirect impact on benefit satisfaction such as age, gender, marital status, and number of dependents. | Questionnaires<br>five-point Likert scale was used | 1,185 employees at a medium-sized hospital located in the mid-western United States |

This chapter seeks to review the considerable amount of literature on consumer satisfaction. It starts by examining the literature related to the dimensions of the study giving particular attention to studies conducted in Saudi Arabia then progressing to review the literature that has been central to the development of this particular investigation. The objectives of the European and US studies seem to differ. The European studies are often theoretical, aiming at defining the concept of consumer satisfaction or finding its determinants, and they use the results to build theory, while American studies are often pragmatic, aiming at making a hospital more competitive and they use the results to rank hospitals and providers (Al-shahrani, 1999).

## 5.2 Socio-demographic characteristics

Several studies show that socio-demographic characteristics influence satisfaction with health insurance. Carlson et al. (2000) conducted a study to determine whether socioeconomic status was associated with managed care enrolee dissatisfaction. Data were collected from a cross-section using telephone survey of adults enrolled in New Jersey HMOs in 1998 (7,983 respondents). Health plan ratings were extracted as part of the CAHPS survey, along with income, education and race. Other factors known to influence satisfaction (gender, age, health status, payment for plan and extent of plan choice) were assured. The results showed that beneficiaries were more likely to give low ratings to their health plans. In a multivariate logistic regression model, those with incomes exceeding $100,000 were 1.65 times more likely to be satisfied compared with those with family incomes less than $25,000; those with a college education were 2.53 times more likely to be dissatisfied than those who had not completed high school. Those in the lowest income group were significantly more dissatisfied than higher-income enrolees.

In their paper, Lust and Danehower (1990) examined correlates of satisfaction with several common benefits including health insurance and tested the impact of some personal characteristics which should have at least an indirect impact on benefit satisfaction such as age, gender, marital status, and number of dependents. A five-point Likert scale was used ranging from (1) "not very satisfied" to (5) "very satisfied". Similarly, importance was measured with the same metric "not very important" to "very important". The data were drawn from a sample of 1,185 employees at a medium-sized hospital located in the mid-western United States. Questionnaires were distributed to all employees of the organisation with 791 returned in usable form for a 66% response rate. Multiple regression was used for data analysis. The model predicting satisfaction with health insurance has four significant variables: age, gender, position level, and number of dependents. The finding revealed that older workers, males, persons at higher levels in the organisational hierarchy, and individuals with fewer dependents are more satisfied with the corporate health insurance plan. All four of the predictors explained 10 to 11% of the variability in the dependent variable.

Reifel et al. (1997) examined the relationship among patient satisfaction, age, ethnicity, and personal patient characteristics. Patient satisfaction with dental care is compared across six U.S groups: Whites in Baltimore and San Antonio, African-Americans in Baltimore, Hispanics in San Antonio, and Native Americans in the Southwest and the Dakotas. First, differences in patient satisfaction across ethnic groups and between two age groups (65-74, and 35-44) are considered. Generally, people from all age and ethnic groups were satisfied with their last dental visit. Second, patient satisfaction is conceptualised as an oral health outcome influenced by characteristics of the dental service utiliser: predisposing socio-demographic characteristics, predisposing oral beliefs, enabling characteristics, oral needs, oral health behaviours, and oral health status. Multivariate analyses by age and ethnic group were used to identify

characteristics that influence patient satisfaction. It was found that socio-demographic characteristics were important among older people. Strong oral health beliefs influenced patient satisfaction among younger adults. Enabling characteristics such as income, having a usual source for dental care and dental insurance were important predictors among the Native American groups. This model explained 15 - 30% of the variability in patient satisfaction among the study age and ethnic groups. An examination of dimensions of satisfaction suggests that factors important to older persons may be different from those that are important to younger adults.

Asefzadeh (1999), in Iran, conducted a study for the purpose of describing demographic characteristics, morbidity, the use of treatment services and the satisfaction with Health Services Insurance under the affiliation of the MOH in order to improve the present delivery of the health insurance system. During 1995 and 1996, a 10% stratified random sample of 2,124 people representing permanent Iranian railroad workers in 12 provinces was selected to survey the use of health services by personnel and their families. Data were collected from 2,107 workers through interviews using a structured questionnaire. The findings of the survey revealed that the utilisation of medical services by households was like that of other developing societies regarding disease patterns, hospitalisations, insufficiencies of health insurance services and the client's lack of satisfaction. A new plan for the delivery of health insurance, focusing upon social accountability and community orientation and based on the roles of family doctors and nurses in railroad health posts, was proposed and evaluated. The findings also showed that, while the quality of services provided by the insurance system was not satisfactory, it was affordable; and that 39% of people considered quality of service to be the first priority when choosing a medical centre.

Dolinsky and Caputo (1990) researched the role of health care attributes and demographic characteristics in the determination of health care satisfaction. A cross-section sample of 879 HMO members and 801 non-HMO members were surveyed. This included overall satisfaction and satisfaction in seeing the doctor when needed; quality of doctor care; time after appointment was made before seeing the doctor; seeing a specialist when needed; the 24-hour doctor service; and out-of-pocket costs. A four-point Likert scale was used to measure satisfaction, with 1 being very satisfied to 4 being very dissatisfied. Overall satisfaction for the HMO sample was 1.48. The non-HMO sample reported 1.86 overall satisfaction. HMO members "tended to be younger, to have children, and to be more educated than non-members".

### 5.3 Consumer expectations

Studies that explored the relationship between patient expectations and satisfaction showed that patients with lower expectations and restricted knowledge of services available are more likely to be more satisfied, whereas those with higher or unrealistic expectations are less likely to be satisfied (Swan et al., 1985). In his dissertation entitled "Expectations and perceptions of patient satisfaction in a Saudi Arabian Hospital", Al-Shahrani (1999) assessed the effectiveness and quality of health care services through the measurement of patient satisfaction at the Security Forces Hospital (SFH), including the measurement of expectations and perceptions. The quality attributes used by Parasuraman in the SERVQUAL system were utilised, i.e. Tangibles, Reliability, Responsiveness, Assurance, Empathy and a sixth attribute, "Socio-Cultural/Religious", was added by the researcher. The sample included 330 respondents, among whom were 136 patients. The results of the study showed that the population is generally satisfied with the services provided but the exception is the "Reliability" attribute. Some patients were completely satisfied, while others were not, in certain aspects of each attribute. Most patients were not satisfied with the appointment system.

In a study entitled "Patient (customer) expectations in hospitals", Bostan, et al. (2007) measured the patients' expectations, based on Patient's Rights. The study was performed with a Likert-Survey of the Trabzon (A historical city in the north east of Turkey) population. The analysis showed that the level of the expectations of the patients was high on the factor of receiving information and at an acceptable level on the other factors. Statistical significance was determined between age, sex, education, health insurance, and the income of the family and the expectations of the patients ($p < 0.05$). According to this study, current legal regulations have higher standards than the expectations of the patients. The reason why the satisfaction of the patients was high is interpreted as due to the fact that the level of the expectation is low.

In a study aimed at determining patients' level of satisfaction with the PHC services in Riyadh, Saudi Arabia. Mansour and Al-Osimy (1993) selected a sample of 300 patients from three PHC centres. The researchers collected the data through the use of personal interviews. The tool consisted of demographic data, a 4-point rating scale of 40 statements (grouped into six categories (accessibility, continuity, humaneness, thoroughness, informativeness, and effectiveness), measuring satisfaction with different aspects of PHC services (such as reasons for visiting the centre and transportation used) and an open question eliciting the patients' suggestions for improvements. The analysis of variance (ANOVA) was used to determine the difference in level of patient satisfaction between the three centres. Cross tabulations were performed between satisfaction level and the independent variables, and the T-test was used to compare satisfaction level between Saudi and non-Saudi patients. The results show that the patients were moderately satisfied with the services. They were most satisfied with the effectiveness and humane aspects of care, and least satisfied with the thoroughness and continuity aspects of care. The reported results indicate that PHC services in Saudi Arabia are not up to the ideal standard expected by patients and that the patients are

facing problems. Respondents were satisfied with most of the items under "accessibility" except the ones related to "waiting time", "posters used in the centre" and "calling centre".

In another study aimed at estimating patient satisfaction with respect to PHC services in Riyadh City and exploring the physician-patient relationship, El Shabrawy and Mahmoud (1993) selected fourteen PHC centres randomly to represent various geographic areas of Riyadh. Data were collected through questionnaires conducted by thirty final year medical students. The choice of interviewees was completed through systematic random sampling procedures of family files and the household head was interviewed. Nine hundred respondents were interviewed concerning their satisfaction with the services delivered. It was found that 60% of the respondents were satisfied while 40% were dissatisfied. One third of this dissatisfied group stated that the PHC centre was too far from them. Almost two thirds (63.9%) of the dissatisfied group complained about the waiting time in the centre; 38.9% complained of the absence of specialty clinics; 19.4% complained that the working hours of the centre were not suitable; 19.4% had language barriers with the physicians; 16.7% of the satisfied and 38.9% of the dissatisfied complained that the physicians did not satisfactorily explain their health problems and treatments. Physicians' explanations were neither clear nor understandable in 22.7% of the dissatisfied category. Among the satisfied, 74.6% said that PHC centre was the first choice if they felt sick; 61.1% of the dissatisfied category gave this response.

Alaiban, et al. (2003) conducted a study to investigate patient satisfaction and to discover if there were any correlations with the type of the facility and the satisfaction level of the patient. The relationships between the level of satisfaction, patient characteristics and previous history with the facility were analysed. Patients were

selected from two Ministries of Health (MOH), five private hospitals and five PHC centres in Riyadh. A stratified random sampling technique was used to select respondents. Only in-patients with at least a 3-day stay were included. 500 copies of a structured questionnaire were distributed to hospitals (78.4% were returned and used in the analysis) and 500 to PHC centres (81.6% were returned). Satisfaction was assessed by the four-point Likert scale. Satisfaction measures used to assess patients' views include the availability of services, accessibility of the facilities to patients, cleanliness and appearance of the facilities, the quality of facility personnel, the quality of the accommodation, affordability, including doctors, nurses and other staff. It was found that the source of payment for patients' care, and patients' level of education were the factors that most significantly impacted on satisfaction with the various aspects of care investigated in the study. Patients attending primary care clinics were more likely than those attending hospitals to be satisfied with the availability of providers and services and their ease of access to the facility. In particular, clinic patients were significantly satisfied with the availability of specialists, felt the facility was sufficiently high tech, appreciated the presence of Saudi doctors and were satisfied with the quality of the non-physician and nurse staff. They did not think their facility was located sufficiently close to their residence. They were dissatisfied with the scheduling of appointments, felt costs were too high. Patients who attended private institutions were also dissatisfied with most of the factors in the survey. They were satisfied with the availability of providers of the same sex, the ease to get to the facility, the length of waiting time, the ease of registration and scheduling of appointments, and the presence of Saudi doctors. Educated patients tended to be more satisfied with factors such as the availability of entertainment at their facility, the facility's proximity to their residence, shorter waiting times, cost of care, quality of the doctors, the cleanliness of the facility and the nationality of the staff. Older patients tended to be more satisfied with the availability

of entertainment in the facility they attended. Married patients tended to be dissatisfied with the availability of providers of the same sex, and the proximity of the facility to their residence. Patients coming from large families tended to be more satisfied with the appropriateness of appointments to the facility they attended. Employed patients were more satisfied with how close their facility was to family living nearby, the technological sophistication of the facility, the presence of Saudi doctors, the quality of the nursing staff, and felt the cost of care was appropriate. Patients with higher salaries were more likely to be satisfied with the quality of the nursing staff. However, patients with second incomes were significantly dissatisfied with the amount of time they had to wait for service, the ease with registering and felt the cost of care was not appropriate.

Mawajdeh et al. (2001) conducted a study to examine the relationship between patient satisfaction and patient expectations and to identify factors contributing to patients' satisfaction. 360 patients were randomly drawn from the outpatients' practice of a university and governmental health centres in Irbid, Jordan. A 5-point Likert self-administered questionnaire was used to measure patients' satisfaction ranging from strongly disagree to strongly agree. Patients were exposed to a series of video clips showing pre-tested patient provider encounters for the purpose of assessing their expectations. The video clips reflected six dimensions of health service quality including physician-patient contentment, patient-provider relationship, technical quality, access to care, continuity of care and availability of health services presented in a positive patient-provider behaviour, positive and negative behaviour in sequential order and mixed negative and positive in random order. The study findings showed that users of the Community Health Centre had lower expectation levels and higher satisfaction means when compared to users of the University Health Centre. The study results also showed that patient satisfaction was mainly influenced by patient expectation of received care even after adjustment for socio-demographic variables. It was concluded

that while assessment of patient satisfaction is useful as a monitoring indicator for overall health care delivery performance, interventions are still required to improve the delivered care.

Hsieh et al. (1991) studied the relationship between satisfaction and patient's expectations, health status, and personal characteristics. They measured patient's expectation on a six-dimensional anticipation scale. They defined expectation as 'the patient's practical, rather than realised, anticipation of future health care'; while patient's satisfaction was defined as 'patient's attitudes toward health care received' and they used a similar scale with which to measure it. Their study involved 401 faculty and staff members of a large Midwestern university. Their questionnaire was divided into 1) health information, 2) anticipation scale, 3) satisfaction scale, 4) importance scale, and 5) demographic information. They found that patient expectation was the best predictor of satisfaction, while health status, personal characteristics, and health system characteristics were not strong predictors. Their findings suggested that patients may base their evaluations on sophisticated expectations and that those expectations vary from one socio-demographic group to another. Patients' expectations are usually derived from many sources that may include social and religious beliefs, like confidence in specific doctors due to their gender, age, or even ethnicity. They can also be derived by a prior knowledge of health personnel that may be either positive or negative.

### 5.4 Perceptions of service experience

Swan (1992) has suggested that the formation of patient satisfaction perceptions is based on a reciprocal process that is influenced by both the consumer and provider of medical services. He contended that *"patient expectations and standards for performance are negotiated as health care providers attempt to change unrealistic patient expectations/ performance standards"*.

In his PhD dissertation, Al-Shawairkh (2006) conducted a research to study the perceptions of the Saudi Students attending American Universities towards the CHIS. The study objectives were: 1) to analyse the components of CHIS by comparing it with the American health system, and 2) to investigate the perceptions of Saudi students attending American universities towards the CHIS, based on the students' experiences with the American health care system. A descriptive approach was employed to compare components of the CHIS with similar components of the American health care system. A survey method was used to investigate the perceptions of Saudi students toward the CHIS. Scales were constructed to measure the students' expectations of the CHIS with respect to cost, quality, and access of health care. Additional scales were used to measure the students' knowledge of the CHIS, knowledge of the American health system, and total health insurance knowledge. An electronic survey was posted on the VCU SERL Web page, and a link was e-mailed to 2,210 Saudi students using a list provided by the Saudi Arabian Cultural Mission (SACM). The survey response rate was 40.6%. The comparison indicated that the American health insurance model may not be an ideal approach for the Saudi health system. In addition, the results indicated that students expected CHIS implementation to increase total health costs, improve quality of health care, and increase access to health care in Saudi Arabia. The students' total knowledge of health insurance had a significant effect on students' perceptions of cost and a non-significant effect on their perceptions of quality and access to health care.

In his study to assess physicians' views on health insurance and its application in the health care system, Alnaif (2006) carried out a cross-sectional study in two major hospitals in Riyadh, Saudi Arabia. Data were gathered from a sample of 400 physicians through the use of self-administered questionnaires which were distributed from January to December 2002. The instrument consisted of 28 items that focused on

assessing physicians' perceptions towards health insurance and its effect on health services. Descriptive statistics and analysis of variance were performed using SPSS. 151 physicians (38%) completed the survey. The findings revealed that access to health care services is a major concern; more than 94% of the respondents agreed that "everyone in the Kingdom should have access to health care services". Physicians also believed that health insurance would lead to more regulations and utilisation of review of services, create more competition between health care providers, and create new jobs in the health care sector. It was found that physicians in this survey believed that accessibility is a major policy concern, and that health insurance will have a positive effect on access to the health care system. Yet, accessibility is an elusive term with many aspects that go beyond the identification of need for health care to the actual delivery of health care services and the organisational structures to match the needs of society.

In her study to determine perceived satisfaction with access to medical care among clients in the Medicaid managed care (MMC) programme, Hastings (1999) examined various levels of access as they related to client satisfaction. Access includes availability, accessibility, accommodation, and acceptability. A questionnaire was mailed to 400 MMC clients in New York State between the ages of 18 and 64. There were 24 questions included in the survey. The response rate to the survey was 26.5%. King's (1981) nursing theory was utilised as the framework for the study. This theory emphasises personal, interpersonal, and social systems. The process of interaction within these systems involves perception, action, judgment, and reaction. These interactions relate to clients in MMC as they experience accessing medical care. The results indicated that clients were satisfied with access to medical care. In addition, it was concluded that King's (1981) conceptual framework was supported by the study. MMC clients experienced interactions and transactions as they accessed medical services within this new Medicaid health insurance model.

In a PhD thesis, Al-Shekh (2003) conducted a study regarding patients' and doctors' perceptions of services provided by public and private hospitals in Riyadh City. The study compared the quality of services using a variation of SERVQUAL. This study included 531 patients and 172 doctors selected from two MOH and two private hospitals. The findings showed that hospitals owned by the MOH perform worse than private hospitals, as perceived by their patients. This may explain why those who can afford it have been seeking health care services in the private sector even though they are eligible for the free-of-charge public services. Moreover, patients of both sectors have the same priorities and expectations. What differentiates patients of the two sectors is their perceptions of the actualisations of aspects related to those dimensions, and their satisfaction with the delivery of these important dimensions by their hospitals. Significant differences were detected between patients who propose to stay and those who propose to switch, and between patients who intend to recommend and those who intend not to do so. In addition, significant differences in service quality perceptions exist between patients who reported complaints and patients who did not and between patients whose complaints were resolved and those whose complaints were not. Also, significant negative relationships were found between the reporting of complaints by patients and future behavioural intentions to reuse and recommend their current hospital. Significant relationships were also found between the resolving of complaints by hospitals and patients' future behavioural intentions to reuse and recommend their current hospital.

In their report, Burton et al. (2005) investigated how the ratings of health plans, doctors, and overall health care are affected by individual characteristics and personal experiences with plans and providers in a MMC population. The responses to the 2000 Ohio MMC Consumer Satisfaction survey which is based on the CAHPS survey were used for the analyses. Only beneficiaries who had personal doctors and who had visited

a doctor's office or clinic in the past six months were included in the analyses and separate analyses for adults and children were conducted. Ratings were grouped as "High" (10), "Medium" (7-9) and "Low" (0-6) and were used as dependent variables. The independent variables were demographic characteristics and four personal experience indicator variables: experiences with (1) Getting Needed Care (Access), (2) Getting Care Quickly (Timeliness), (3) Communicating with Doctors (Communication), and (4) Courteousness of Office Staff (Courtesy). The findings revealed that personal experiences directly influence how Medicaid beneficiaries rate health plans, personal doctors and overall health care. Almost every personal experiences indicator is highly significant in the analyses, which tested how these scales affect the three ratings.

### 5.5 The perceived importance of a service

In their study to examine what people say is important to them in choosing a health plan and the effect that giving health plan information has on what people say is important to them, Booske et al. (1999) selected a random sample of 201 Wisconsin state employees who participated in a health plan choice experiment during the 1995 open enrolment period. A computer system was designed to guide subjects through the review of information regarding health plan options. The system began by eliciting the stated preferences of the subjects before they viewed the information, at time 0. Subjects were given the opportunity to revise their preference structures first after viewing summary information about four health plans (time 1) and then after viewing more extensive, detailed information about the same options (time 2). At time 2, these individuals were also asked to rate relative importance of predefined lists of health plan features presented to them. Data were collected on the number of attributes listed at each point in time and the importance weightings assigned to each attribute. In addition, each item on the attribute list was content analysed. The study found that the provision of information changes the preference structures of individuals. Cost (price) and coverage

dominated the attributes cited both before and after looking at health plan information. When presented with information on cost, quality, and how plans work, many of these relatively well educated consumers revised their preference structures; yet coverage and cost remained the primary cited attributes. It was concluded that although efforts to provide health plan information should continue, decisions on the information to provide and on making it available are not enough. Individuals need help in understanding, processing, and using the information to construct their preferences and make better decisions.

### 5.6 Priorities for improvement

It is vital that the government decides how best it should ensure that priority services are delivered to the population. In his PhD dissertation, Al-Jarallah (2005) investigated the impact of the implementation of health insurance programmes on the quality dimension within the private hospitals in KSA. The researcher used the "JAR" metaphor's components ((Body (Jassad), Mind (Aqel), and Soul (Rouh)) as a theoretical framework, along with a quality model composed of 33 quality elements divided into three groups: performance dimensions, care dimensions and organisational dimensions. A multiple methods approach was used to conduct the study. 150 questionnaires were distributed to doctors, 200 questionnaires for outpatients and 50 for inpatients at Al-Hammadi Hospital, Riyadh. The returned responses of the survey data collection process were 66.7% among doctors. 84% for in-patients, and 70% for outpatients. The SPSS software was utilised for data analysis. The main result of the data analysis is that there is a general significant agreement among the study groups that the impact of insurance on private hospitals is positive. The most important result of the case study was that 35% of the impact on quality in general accounted for by elements related to medical technology. The coefficient analysis results show that the best combined model

was one of medical technology, patient respect and caring, and nutrition care, accounting for 50% of the influence on quality in general.

In her study to increase customer satisfaction, Scott (2001) suggested six strategies for continuous improvement. These strategies include:

1. Raise awareness though making sure that everyone in the organisation understands why the system is focused on improvement.
2. Set service expectations and standards of behaviour.
3. Identify and eliminate barriers and obstacles.
4. Learn and develop skills.
5. Listen to your customer. Measurement of customer satisfaction can be a powerful tool to improve service.
6. Support continues quality improvement.

### 5.7 Satisfaction with health care in general

Researchers who empirically examined consumer satisfaction with health care in general have suggested that satisfaction is influenced by aspects of care that are specific to the health care experience and that consumers are able to form summary measures of their satisfaction based on their satisfaction with components of care. Some researchers have focused specifically on the process of health care delivery (distinct from the physical outcome) as being a major influence on consumer perceptions of satisfaction with medical services (Kolodinsky, 1999).

Al-Sakkak et al. (2008) conducted a study to assess the level of patients' satisfaction with PHC services in health centres affiliated to Riyadh Military Hospital (RMH), Riyadh. A cross-sectional study was conducted over a 2 months period in 2006. Data was collected using a self-administered questionnaire to assess patients' overall

satisfaction with PHC services and their level of satisfaction with: reception services, accessibility, continuity of care, communication, and enablement. 700 questionnaires were distributed yielding a 86.6% response rate. The domain with the highest level of reported satisfaction was enablement (70.6%). The poorest level of satisfaction was continuity of care (56.3%). The mean score of satisfaction with reception was 70.0%, communication 69.2%, and accessibility to care was 62.4%. The overall satisfaction level was 64.2%. Patients of older age were more satisfied with PHC services than their younger counterparts (*p*-value <0.001) and patients with lower education level were more satisfied (*p*-value<0.001). Patients' satisfaction was inversely related to their average annual visit frequency to PHC centres (*p*-value=0.015). There was no relation found between patients' satisfaction and their gender, marital status, occupational status, and their average monthly income. It was concluded that the level of satisfaction with PHC services in health centres affiliated to RMH is relatively low. Results identified areas in which quality improvement is required, mainly accessibility and continuity of care.

In a PhD dissertation entitled " Patient satisfaction with PHC services in Saudi Arabia: A case study of Alriyadh city", Albaz (1992) examined satisfaction among patients of the public PHC system. The sample was composed of 280 adult patients (18 years or older) who received health care services prior to the study. Patients were chosen randomly from four PHC centres in Riyadh city before they visited physicians. The study was based on a survey design using a schedule-standardised interview. Eleven variables were selected to test their relationship to patient satisfaction using multiple regression. These variables were composed of two groups. The first group was features of the service delivery system; and the second group was patient socio-demographic characteristics. The service delivery system included the following variables: transportation problems, physical environment, waiting time, length of visit, physicians'

cooperation, and patient participation. Patient socio-demographic characteristics included marital status, age, education, and health status. The study found that seven out of eleven studied variables were statistically related to patient satisfaction at the 0.05 level of significance. These variables included physical environment, waiting time, length of visit, patient participation, physicians' cooperation, marital status, and health status. Also, the study found that service delivery system variables were more important in explaining patient satisfaction than the socio-demographic variables.

Al-Shamekh (1996), in a study of patient satisfaction in six PHC centres in Riyadh, assessed patient satisfaction as a dependent variable using four dimensions: access to health care, provider-patient interaction, perceived quality of health care, and physical interaction. 313 subjects were interviewed. Their results showed that patient socio-demographic factors contributed significantly to prediction of patient general satisfaction. Among these factors, nationality, and education were the best set of predictors. Access to health care contributed even more significantly to the prediction of patients' general satisfaction. Waiting time, distance, and signs and directions to the health centres were the best predictors among the access to care variables. Provider-patient interaction variables were also found to have a statistically significant relationship with patients' general satisfaction. Of these variables, consideration, continuity of health care, and respect shown by nurses, were found to be the best set of predictors. Variables of the perceived quality of health care also significantly influenced patients' general satisfaction. All quality of care variables (usefulness of visit, thoroughness, clinic facilities, and unnecessary risks) were included in the best set of predictors. Physical environment variables also influenced patient satisfaction. The best set of predictors, among these variables, were waiting area and building design. Results of stepwise regression analysis, considering all these variables as independent variables and patient satisfaction as the dependent variable, show that the determinants of patient

general satisfaction among the four health dimensions were, in ranked order: (l) accessibility to PHC, (2) provider-patient interaction, (3) perceived quality of care, and (4) physical environment.

Al-Juhani (1994) investigated patient satisfaction and dissatisfaction along seven dimensions: general satisfaction scale, communication, technical quality, art of care, continuity of care, time spent with the doctor, and access, convenience and availability. Using a self-administered questionnaire, a cross-sectional survey of selected users of the Royal Commission health care facilities in Yanbu Al-Sinaiyah (Saudi Arabia) was conducted between April 1, 1994 and May 31, 1994. The study measures the satisfaction level of 1,352 systematically selected patients receiving care in the outpatient clinic of the Royal Commission Medical Centre (hospital), Al-nawa and Radwa primary care centres. The results indicate that patients seen in one primary care centre were more satisfied with care than patients seen in the hospital, who in turn, were more satisfied than those seen in another primary care centre. Non-Saudi patients were more satisfied than the Saudi patients, across all three facilities and scales. Female patients were more satisfied than male patients across all three facilities and scales as well.

Mansour and AL-Osimy (1996) conducted a study to evaluate the resources available in three large health centres in Saudi Arabia, and determine consumers' satisfaction with the services provided. The study included two subsamples. The first subsample consisted of the three largest health centres in Riyadh chosen purposefully. The centres were studied as to their resources (manpower, equipment and facilities). The second subsample consisted of 300 consumers chosen randomly from the three chosen centres. Two instruments were used to collect the data. The first instrument was an assessment sheet of the centres' resources in terms of availability and quality. Data was collected

using instrument one by direct observation and checking the centres' records. The second instrument was a 4-point Likert scale measuring consumers' satisfaction with regard to accessibility of services, continuity, humaneness, thoroughness, informativeness and effectiveness. Data was collected using instrument two through the interview method. The results showed that the three centres' resources are less than adequate. In terms of manpower available, the centres exceeded the MOH requirements with respect to physicians, nurses and clerks, and did not meet the requirements with respect to laboratory and x-ray technicians, pharmacists, community health workers, physiotherapists and social workers and health inspectors. Most importantly, though, is that besides the centres' deficiencies in certain manpower categories, most of the personnel (60-80%) were not fluent in the language of the Saudi consumers (Arabic).

Arishi (2000) conducted a study to measure patient satisfaction with the medical services offered by the Royal Commission's hospital in Jubail industrial City (Saudi Arabia). Most of the questions in the instrument used were derived from the SERVQUAL scale. He used a 5-point Likert-type questionnaire ranging from 'strongly disagree' (1) to 'strongly agree' (5). Respondents were asked to report their ratings of the actual service received in the hospital. His sample included 478 respondents, among whom 260 were patients. His findings revealed that most variables associated with the medical care services were found, statistically, to make a significant contribution to patient general satisfaction. Factors like accessibility, provider-patient interaction, physical environment, interpersonal aspects of care, security and nutrition were found to be the most significant. Socio-demographic variables, on the other hand, were found to be statistically insignificant for the prediction of patient satisfaction.

In a study aimed at identifying the determinants of patient satisfaction with public, private and foreign hospitals, Andaleeb, et al. (2007) conducted a survey involving

inpatients in public and private hospitals in Dhaka City and patients who had experienced hospital services in a foreign country. Their views were obtained through exit polls using probability and non-probability (for foreign hospital patients) sampling procedures. Regression models were derived to identify key factors influencing patient satisfaction in the different types of hospitals. It was found that Doctors' service orientation, a composite of 13 measures, was the most important factor explaining patient satisfaction**.**

Choi, et al. (2004) studied the relationships among quality, value, satisfaction and behavioural intention in health care provider choice in the context of the South Korean health care market. Results based on the data collected from 537 consumers corroborated the causal sequence among these constructs suggested by the multiattribute attitude model framework, i.e., cognition (service quality and value) →affect (satisfaction) →conation (behavioural intention). Between the two cognitive constructs, service quality emerged as a more important determinant of patient satisfaction than value. The measurement scope of service quality in this study was limited to the process aspect of services. Results also showed that both service quality and value have a significant direct impact on behavioural intention, while value assessment was influenced by perceived service quality.

In a Taiwanese study, Lee et al., (2007) conducted a case study research to evaluate the image of service quality and customer satisfaction from the perspective of health care services. The researchers explored levels of customer attributes by integrating qualitative research and Kano's model of how customer satisfaction or dissatisfaction behaves and analysing the relationship between customer satisfaction and the quality of health care services. The research was conducted in two phases. In phase one, a quantitative approach was used to collect and analyse the customer attributes based on Kano's

model, service quality introduced into health care services and the statistical results of the data analysis. Phase two consisted of four personal interviews on health care service quality and satisfaction. This was undertaken to identify the types of service quality available and satisfaction with quality in the health care services. Based on the logic of multi-attribute attitude models, the satisfaction index (satisfaction with quality, perceived importance, experiences) was used as the theoretical theorem of measures. The results revealed that patients pay most attention to "physician care", and have less concern with "hospital costs". Health care managers need strategies to train physicians' and nurses' communication skills in order to enhance customer satisfaction. It has been asserted that general patient satisfaction is related to perceived interpersonal and communication skills (Cleary and McNeil, 1988).

Gnardellis and Niakas (2005) conducted a study to determine the level of satisfaction and the factors that influence inpatient satisfaction in the Greek National Health System. A survey questionnaire was conducted to examine patient views on all aspects of hospital care. Data was collected via mail after patients' discharge from hospital. A total of 4,209 questionnaires were received from inpatients who had at least a one day hospital stay. Inpatient satisfaction level analysis was assessed in terms of medical, accommodation, nursing and administrative services provided in relation to specific patient clinical and socio-demographic characteristics. Cluster analysis and multiple correspondence analysis showed that the level of satisfaction was articulated in association with insurance coverage, age of patients, educational level, length of stay and prior hospitalisations.

### 5.8 Satisfaction with health insurance

Kolodinsky (1999) conducted a study to examine consumer satisfaction with managed care. The study estimates the effects of four categories of variables hypothesised to

influence patient satisfaction with a managed care health benefits plan. The population included 2,955 employees eligible for health care benefits at a medium-sized university. The health benefits choices for these employees had changed in mid-1993, and employees were interviewed in late 1994. Thus, all respondents had experienced the new plan for fifteen months. Previous to that time, employees chose between two plans: a FFS plan where any physician or specialist could be chosen and there was no copayment, and a traditional HMO. Under the new plan, employees could choose among three different plans: an in-network managed care plan where a $2 copayment is required for office visits, an out-of-network plan where the individual can choose any physician and pay 10% of the cost, and the previously offered HMO that also requires a $2 copayment per office visit. All premiums for the plans are deducted from employee payrolls. After one follow-up attempt, the researcher received 1,238 completed mail questionnaires from employees for an overall response rate of 42%. The responses received were representative of actual enrolments in the three plans, with the majority (86.5%) of respondents enrolled in the in-network plan, 5% in the out-of-network plan, and 8.5% in the HMO. In addition, the respondents resembled the population of employees with respect to gender and earnings, the two variables for which statistics about the population were available. The final number of respondents who were enrolled in either the in- or out-of-network plan and had complete information on all the variables included in this analysis is 1,177. Pearson correlation coefficients showed that dissatisfaction with a visit is not highly correlated with the total number of problems experienced (these ranged from - 0.01 to 0.04). Five variables negatively affected satisfaction with managed health benefits: increasing age, having a salient unsatisfactory experience with the administrators of the plan or primary care physicians, having a large total number of unsatisfactory experiences with administrators, and believing the managed care plan limits access to care. Results indicated that personal

experience, expectations, and judgments regarding services covered influence overall satisfaction with the plan. Individual differences have little effect on satisfaction. The results indicated that, with the exception of the age of the enrolee, demographic variables do not influence whether or not individuals are satisfied with their health benefits plan. Conversely, how consumers perceive the quality, access, and convenience of using various services covered by the plan do influence satisfaction. Personal experience with managed care influences satisfaction in the form of salient unsatisfactory experience with administrators of the plan and physicians. Judgments that consumers make about the services covered under managed care influence satisfaction most. Expectations of a managed care plan also influence overall satisfaction. Factor analysis was used to create the variables used to measure judgments about individual aspects of a managed care plan. Identified factors include quality and availability of resources related to primary care physicians, physical health benefits in general, prescription drug services, and the administration of benefits by the benefit office. Access to care in general also revealed itself as a factor. The six factors explain 65% of the variance.

Jang et al. (2005) assessed predictive models of subjective perception of health, health care utilisation (hospital visits), and satisfaction with health care service using a sample of 230 older Korean Americans. Predisposing characteristics (age, sex, and education), health needs (chronic conditions, functional disability, and number of sick days), and a variety of enabling factors (health insurance, English speaking ability, transportation, living arrangement, trust in Western medicine, and reported experience of disrespect in medical settings) were considered. After controlling for predisposing and need factors, health insurance coverage was found to be a significant enabling factor for hospital visits. Subjective perception of health was found to be significant not only for health care utilisation, but also for satisfaction with service. A greater likelihood of satisfaction

was also observed in individuals with health insurance, better English-speaking ability, and greater trust in Western medical care. The reported experience of disrespect or discrimination in medical settings significantly reduced the odds of satisfaction with service.

Mainous et al. (1999) conducted a study to examine patient satisfaction across a variety of public and private health insurance programmes for low-income individuals. The data was collected using a survey of randomly selected adults in Kentucky who had visited the outpatient department in the past year (683 Medicaid recipients, 616 with private insurance, 287 in private sector charity program for uninsured indigents). Patient satisfaction with eight dimensions was assessed. The dimensions were 1) the overall visit; 2) the personal manner of the person seen; 3) the length of wait to get an appointment; 4) the convenience of the office location; 5) getting through to the office by phone; 6) the length of time spent waiting at the office; 7) the time spent with the person seen; and 8) the explanation of what was done to him or her. The functional health status was measured according to the Medical Outcomes Study 12-item Short-Form Health Survey (SF-12). The SF-12 was computed into a physical health index and a mental health index. Both of these scales were standardised to a range of 0± 100 with higher scores indicating better functional status. Demographic variables collected were sex, age, race/ethnicity, formal education, residence (Metropolitan Statistical Area) and annual income. All insurance groups were satisfied with the care received in their most recent visit. For all eight dimensions of patient satisfaction, the private insurance group was significantly higher than other groups. In a model controlling for health status variables and standard demographic, higher overall satisfaction with the visit was positively related to higher mental health functional status and higher income. The insurance class variable had no significant relationship to overall satisfaction with the visit. Patients receiving health care through health insurance programmes for low-

income individuals were satisfied with the services. It was found that there is an indication that low-income individuals are less satisfied with the care they receive regardless of their insurance type.

### 5.9 Utilisation of and access to health care

Hidayat et al. (2004) examined the effects of mandatory health insurance on access and equity in access to public and private outpatient care in Indonesia. Data from the second round of the 1997 Indonesian Family Life Survey were used. The researchers adopted the concentration index as a measure of equity. The study found that a mandatory insurance scheme for civil servants (Askes) had a strongly positive impact on access to public outpatient care, while a mandatory insurance scheme for private employees (Jamsostek) had a positive impact on access to both public and private outpatient care. The greatest effects of Jamsostek were observed amongst poor beneficiaries. It was concluded that a substantial increase in access would be gained by expanding insurance to the whole population. However, neither Askes nor Jamsostek had a positive impact on equity.

In another study by Mitchell et al. (2002) to evaluate the effects of the Oregon Health Plan (OHP) on beneficiary access and satisfaction, two groups of adults (OHP enrolees and Food Stamp recipients not enrolled in OHP) were surveyed using telephone survey (using computer-assisted telephone interviewing techniques) of nondisabled adults in 1998. The Food Stamp sample included both privately insured and uninsured recipients to allow the researchers to disentangle the insurance effects of OHP from other effects such as its reliance on managed care and the priority list. A total of 1,205 OHP beneficiaries and 316 Food Stamp recipients responded to the survey, with response rates of 70 and 33%, respectively. Among the Food Stamp recipients, just over one half (160) had private health insurance, almost always through an employer. The remaining

156 recipients were uninsured, and most of them reported they simply could not afford health insurance. OHP and Food Stamp adults were compared along the following measures: usual source of care, utilisation of health care services, unmet need, and satisfaction with care. It was found that much of OHP's impact had been realised by its extension of health insurance coverage to Oregon's low-income residents. The availability of health insurance significantly increased the utilisation of many health care services and reduced unmet need for care. OHP was associated within a higher percentage of enrolees having a usual source of care and higher rates of Pap test screening among women compared with Food Stamp recipients. OHP enrolees also reported significantly higher use of dental care and prescription drugs. At the same time, OHP enrolees reported a greater unmet need for prescription drugs. Drug treatment for below-the-line conditions was one reason for this unmet need, but often the specific drug simply was not in the plan's formulary. OHP enrolees were as satisfied with their health care as were the Food Stamp recipients with private health insurance. OHP adults appeared to enjoy access equal to or better than that of low-income persons with private health insurance and had far greater access than the uninsured.

In his dissertation entitled "The effect of health insurance on health care utilisation in Mexico", Gonzalez (2005) identified three aims of the study: (1) to examine the effect of insurance on health care utilisation including preventive, curative and hospital care, (2) to study the effect of insurance on diagnosis and control of two chronic diseases, diabetes and hypertension, and (3) to examine the pathway through which insurance affects diagnosis and control of chronic disease. The 2000 wave of the Mexican National Survey of Health, a cross-sectional, nationally representative data set, was used for this analysis. This analysis includes the use of linear probability models. Two stage least squares was used to address the potential endogeneity of insurance. The author found that insurance consistently increases the use of health care for curative,

preventive and hospital care. Insurance significantly increases the likelihood of being screened for diabetes and hypertension in the past year; however, this translates to a significant effect of insurance on diagnosis only for hypertension. Specifically, insurance does not have a significant effect on chronic disease control for either hypertension or diabetes; however, insurance significantly increases the probability of receiving medicines if treated for hypertension.

In his PhD thesis entitled "Health insurance and the demand for medical care in Indonesia", Hasbullah (1995) studied the research question of how much health insurance increases the demand for medical care after the legislature passed Acts mandating employers with 10 or more employees to provide health coverage, permitting private insurance companies to offer health insurance; and the Health Act of 1992 providing a legal basis for the development of prepaid health care called Jaminan Pemeliharaan Kesehatan Masyarakat (JPKM). The study used data from the 1992 National Socioeconomic Survey composed of 295,345 individuals representing 66,450 households. Maximum likelihood estimation models were performed to estimate the probabilities and odds ratios of using health centres, private doctors, public hospitals, and private hospitals. Analyses were conducted on the use of outpatient and inpatient care with those providers by three groups: civil-servants (insured), private employees, and non-wage earners. The health insurance variable was derived from civil-servant employment; the reference group was non-wage earners. The findings showed that civil-servants had 35% better access to outpatient care with public providers than non-wage earners, while private employees had about the same access as non-wage earners. More specifically, civil-servants had 26% better access to health centres and 56% better access to outpatient care in public hospitals than non-wage earners. The usage rates for health centres in the month showed that for every 1,000 people there were 83 visits by civil-servants, 80 visits by private employees, and 87 visits by non-wage earners. The

use rates for outpatient public hospitals per 1,000 people in the month were 31 visits by civil-servants, 17 visits by private employees, and 14 visits by non-wage earners. The probability of having inpatient care was 85% higher among the insured as compared with private employees or non-wage earners. The insured consumed about 2.5 times more inpatient care in public hospitals than the other two groups. For every 1,000 people there were 22 inpatient days in public hospitals in the month among the insured, while there were only 9 inpatient days among the other two groups. The inpatient use in private hospitals was about the same for the three groups.

Reschovsky, et al. (2000) conducted a study to examine how different types of private insurance-indemnity insurance, PPOs, open model HMOs, and closed model HMOs-affect the use of health services and consumer assessments of care in the US. Data were collected by using the 1996-1997 Community Tracking Study Household Survey, a nationally representative telephone survey of households, and the Community Tracking Study Insurance Followback Survey, a supplement to the Household Survey, which asks insurance organisations to match household respondents to specific insurance products. The analysis sample includes 27,257 non-elderly individuals covered by private insurance. Based on insurer reports, individuals were grouped into one of the four insurance product types. Measures of service use included ambulatory visits, preventive care use, hospital use, surgeries, specialist use, and whether there is a usual source of care. Consumer assessments of care include unmet or delayed care needs, satisfaction with health care, ratings of the last physician visit, and trust in physicians. Estimates were adjusted to control for differences in individual characteristics and location. It was found that as one moves from indemnity insurance to PPOs to open model HMOs to closed model HMOs, use of primary care increases modestly but use of specialists is reduced. Few differences were observed in other areas of service use, such as preventive care, hospital use, and surgeries. The likelihood of having unmet or delayed care does

not vary by insurance type, but the reasons that underlie such access problems do vary: enrolees in more managed products were less likely to cite financial barriers to care but were more likely to perceive problems in provider access, convenience, and organisational factors. Consumer assessments of care-including satisfaction with care, ratings of the last physician visit, and trust in physicians, were generally lower under more managed products, particularly closed model HMOs. It was concluded that the type of insurance that people have - not just whether it is managed care but the type of managed care - affects their use of services and their assessments of the care they receive.

In his PhD dissertation, Mayindo (2006) assessed the impact of Community Based Health Insurance (CBHI) which was implemented in 1999 in Rwanda on the utilisation of health services and on financial sustainability. In this retrospective longitudinal study, data on health services utilisation and cost recovery was collected from all health centres and CBHI schemes in pilot and control health districts from 1998 to 2002, including the period before the introduction of CBHI. The findings show that the CBHI significantly improved utilisation of health services by increasing visits of members four-fold to 1.74 visits per member per year, while the non member utilisation remained unchanged at 0.4 visits over the same period. Results from multivariate regression models indicate that an increase of one percentage point in CBHI enrolment was associated with a reduction in visits by 0.026 points. The majority of health mutuals participants were not able to cover operating costs from the revenues collected from members. Only 25% of the participants were financially self-sufficient; some of these were even able to generate a substantial and sustainable amount of money for health centres. The study found that in general a minimum membership of 30% of enrolment was required for CBHI to be financially sustainable.

In his PhD dissertation, Orasa (1997) studied the association between insurance status and health service utilisation among Thai workers and the impact of health status and other factors on this relationship. The study setting was in the province of Pattani, Thailand. A double cohort study design was used. A representative sample of 455 insured workers were matched with 455 uninsured workers based on age and gender. Trained interviewers used a standardised questionnaire which included demographic and socio-economic variables; health status (measured by the SF-36 Health Survey questionnaire); as well as the use of health care services. Multivariate analysis was used to predict utilisation (as a binomial outcome variable) incorporating other predictor variables. Focus groups were organised to generate qualitative information on health status and patterns of utilisation. The results showed that 61.3% of insured workers made at least one visit to a health facility during the six-month period prior to the interview in comparison with 41.0% of uninsured workers. In multivariate analysis, insurance status, health status, income, gender, marital status, self-medication, and an income-insurance status interaction were statistically significant independent predictors of utilisation but age, religion and educational level were not. Uninsured, male, single, with low income used health services the least. Results from the focus groups confirmed the health status and health service utilisation patterns found in the sample survey. The implementation of health insurance has had an impact on health service utilisation among workers. Finally, Noor (1989) in his study of utilisation of PHC centres among women in Saudi Arabia reports that under-utilisation of health care is related to patient dissatisfaction with accessibility of service, such as distance and unavailability of transportation. Ali (1984:3) stated that

> *"improving access requires examining the location of facilities, because location affects the cost, efficiency and utilisation of the system. The best locations provide the best access to essential resources and services, and these sites are found through sound spatial organisation of the entire system".*

## 5.10 Previous studies

The literature review reveals that there are shortcomings and inconsistencies in selecting and labelling dimensions of satisfaction with health care services. Lin (1996:209) stated that *"It is apparent that the construct of patient satisfaction is not consistently and clearly conceptualised"*. Hagedoorn et al. (2003:250) stated that *"There is not much agreement on the number of dimensions needed to describe satisfaction with health care"*. Furthermore, studies differ in how they operationalise each dimensions. Researchers use different items to present a dimension. Whereas some studies use one item to operationalise a dimension, others use several items. The following tables present the studies conducted relevant to dimensions of satisfaction with the services provided under the CHIS. The studies were conducted in the US, UK, KSA and other countries concerning the dimensions of satisfaction with health in general and health insurance in particular.

## Table 5.2 Previous studies in personal characteristics

| No. | Variable | Authors |
|---|---|---|
| 1.1 | Age | (Newacheck et al, 1998), (Gao et al., 2007) (Temkin-Greener and Winchell, 1991), (Becker and Zweifel, 2008), (Houts et al., 1986), (Blanchard et al., 1990), (Zahr et al.,1991), (Salvage et a., 1988), (Cartwright and Anderson, 1981), (Hopton et al., 1993) (Khayat and Salter,1994), (Williams and Calnan, 1991), (Rahmqvist, 2001), (Carlson et al., 2000), (Liddell and Locker, 1992), (Stege et al.,1986), (Dolinski and Caputo, 1990), (Gnardellis and Niakas, 2005), (Kolodinsky, 1999), (Mihaila, 1998), (Jang et al., 2005), (Hamilton, 2001), (Hausdorf et al., 2008), (Al shahrani, 1999). |
| 1.2 | Sex | (Mitchell and Schlesinger, 2005), (Gao et al., 2007), (Ahluwalia et al., 2007), (Rahmqvist, 2001), (Carlson et al., 2000), (Mihaila, 1998), (Jang et al., 2005), (Hamilton, 2001), (Al shahrani, 1999). |
| 1.3 | Nationality | (David et a., 2008), (Myburgh et al., 2005), (Carlson et al., 2000), (Ware et. al., 1978), (Handelman et al., 1990), (Mansour and Al-Osimy, 1993a), (Al-Shamekh, 1996), (Al-Juhani, 1994), (Mihaila, 1998), (Al shahrani, 1999). |
| 1.4 | Marital status | (Brown, 1994), (Alaiban et al., 2003), (Albaz, 1992), (Mihaila, 1998). |
| 1.5 | Number of family members | (Boxerman and Stuart, 1983), (Dolinski and Caputo, 1990), (Alaiban et al., 2003). |
| 1.6 | Educational level | (Kim et al., 2005), (Lech and Petryka, 2002), (Hall, and Dornan, 1990), (Anderson and Zimmerman, 1993), (Schutz et al., 1994), (Carlson et al., 2000), (Dolinski and Caputo, 1990), (Alaiban et al., 2003), (Al-Shamekh, 1996), (Gnardellis and Niakas, 2005), (Jang et al., 2005), (Al shahrani, 1999). |
| 1.7 | Occupation | (Kinard, 2000), (Alaiban et al., 2003) |
| 1.8 | Monthly income | (Donelan et al., 2000), (Mainous et al., 1999), (Valdez et al., 1993), (Weil, 2007), (Carlson et al., 2000), (Reifel et al., 1997), (Alaiban et al., 2003), (Kolodinsky, 1999), (Mihaila, 1998), (Panopoulou, 2002), (Dror et al., 2006), (Hamilton, 2001), (Al shahrani, 1999). |
| 1.9 | Past experience in the last 12 months | (Donelan et al., 2000), (Temkin-Greener and Winchell, 1991), (Wickizer et al., 2004), (Gnardellis and Niakas, 2005), (Kolodinsky, 1999), (Mihaila, 1998). |
| 1.10 | Insurance type | (Cooper and Vistnes, 2003), (Akinci and Sinay, 2003), (Mihaila, 1998), (Reschovsky et al., 2000). |

**Table 5.3 Previous studies in service delivery**

| No. | Variable | Authors |
|---|---|---|
| 2.1 | Number of visits required to receive the treatment for each case | (Weber et al., 2005), (Kikano et al., 2002), (Della Valle et al., 1995), (Reschovsky et al., 2002), (Hamilton, 2001). |
| 2.2 | The waiting time to receive the health service | (Goldstein and Fyock, 2001), (Probst et al., 1997), (Temkin-Greener and Winchell, 1991), (Dolinski and Caputo, 1990), (El Shabrawy and Mahmoud, 1993), (Alaiban et al., 2003), (Albaz, 1992), (Al-Shamekh, 1996), (Al-Juhani, 1994). |
| 2.3 | Number of people dealt with to get health service | (Anderson 1975), (Honea, 2001), (Brady, 1989), (Green, 2006), (Al-Juhani, 1994), (Mansour and AL-Osimy, 1996b). |
| 2.4 | Fairness in the provision of health services | (El-Mahalli and Abdel-Aziz, 2005), (Reinhardt, 1992), (Jang et al., 2005), (Mitchell et al., 2002), (Dror et al., 2006), (Hidayat et al., 2004). |
| 2.5 | Courtesy of service staff | (Gary et al., 2005), (Liddell and Locker, 1992). |
| 2.6 | Service staff were Competent | (Alaiban et al., 2003), (Al-Sakkak et al., 2008). |
| 2.7 | Service staff respect to patients | (Liddell and Locker, 1992), (Al-Jarallah, 2005), (Al-Shamekh, 1996), (Jang et al., 2005). |
| 2.8 | Met your safety and security needs | (Arishi, 2000) |
| 2.9 | Protected your privacy/ confidentiality | (O'Brien and Yasnoff, 1999). |
| 2.10 | Accuracy in filling medical reports for the purpose of requesting approval for treatment | (Ydreborg, et al., 2007). |
| 2.11 | Comprehensiveness of covered health services | (De Allegri et al., 2006), (Sofaer et al., 1992), (Booske, et al., 1999), (Gnardellis and Niakas, 2005), (Jang et al., 2005). |
| 2.12 | Prescription drug benefits coverage | (Motheral and Heinle, 2004), (Saleh et al., 2003), (Kolodinsky, 1999), (Mitchell et al., 2002), (Penkarn, 2005). |

**Table 5.4 Previous studies in access and availability of facilities for the provision of health services**

| No. | Variable | Authors |
|---|---|---|
| 3.1 | Was easily accessible by telephone | (Hastings, 1999). |
| 3.2 | Was conveniently located | (Lech and Petryka, 2002), (Akinci and Sinay, 2003), (Anderson, 1975), (El Shabrawy and Mahmoud, 1993), (Alaiban et al., 2003), (Al-Shamekh, 1996), (Mihaila, 1998), (Hausdorf et al., 2008). |
| 3.3 | Had adequate parking | (Gamble et al., 2000). |
| 3.4 | Had waiting areas that were comfortable | (Tsai et al., 2007), (Al-Shamekh, 1996). |
| 3.5 | Had signs that were easy to understand | (Al-Shamekh, 1996). |
| 3.6 | Ease of scheduling appointments | (Alaiban et al., 2003), (Hastings, 1999), (Kleiser, 2003). |
| 3.7 | Had health information system | (Gehrke et al., 2003), (Alaiban et al., 2003), (Al-Jarallah, 2005), (Kleiser, 2003) |
| 3.8 | Offered other methods of access (i.e., fax, internet, e-mail) | (Alaiban et al., 2003). |
| 3.9 | Suitability of the regular working hours | (El Shabrawy and Mahmoud, 1993) |
| 3.10 | Had all medical specialties | (Hill et al., 2006), (Goldstein and Fyock, 2001), (Polluste et al., 2007), (Temkin-Greener and Winchell, 1991), (Dolinski and Caputo, 1990), (El Shabrawy and Mahmoud, 1993), (Alaiban et al., 2003), (Hastings, 1999), (Kleiser, 2003), (Reschovsky et al., 2000). |

**Table 5.5 Previous studies in communication while receiving health care service**

| No. | Variable | Authors |
|---|---|---|
| 4.1 | My questions were answered | (Goldstein and Fyock, 2001), (Jones et al., 2003), (El Shabrawy and Mahmoud, 1993). |
| 4.2 | The information that I needed was available | (Bostan et al., 2007), (Shimbo et al., 2004), (Goldstein and Fyock, 2001), (Yajima and Takayanagi, 1998), (Sofaer et al., 1992), (El Shabrawy and Mahmoud, 1993), (Al-Shawairkh, 2006), (Booske, et al., 1999). |
| 4.3 | Written and verbal language was clear (e.g., not complicated). | (Elnekave and Gross, 2004), (Valdez et al., 1993), (Ku, 2007), (Mansour and AL-Osimy, 1996b). |
| 4.4 | Documents and other information were easy to understand. | (Walker, 2008), (Jones et al., 2003). |
| 4.5 | Forms were easy to understand and fill out. | (Jones et al., 2003), (Booske, et al., 1999). |
| 4.6 | Procedures were straight forward and easy to understand | (Shaul et al., 2001), (Alaiban et al., 2003). |
| 4.7 | Health care providers were responsive to my complaint and comments | (Harold, 2006), (Fitzpatrick et al., 2004), (Natangelo, 2007), (Al-Shekh, 2003). |

**Table 5.6 Previous studies in cost of health care**

| No. | Variable | Authors |
|---|---|---|
| 5.1 | The method of payment was convenient | (Reschovsky et al., 2006), (Huang et al., 2006), (Carlson et al., 2000). |
| 5.2 | The copayment (percentage of the fee) for physician care you pay at each visit | (Parekh, 2008), (Kerssens and Groenewegen, 2005), (Goldman et al., 2004), (Lan et al., 1992), (Nyman, 2007), (Akinci and Sinay, 2003), (Thrall, 2007), (Kolodinsky, 1999). |
| 5.3 | The copayment you pay for medicines | (Motheral and Heinle, 2004), (Steiber, 1988), (Grapes and Brown, 1976), (Olson et al., 2005) |
| 5.4 | The copayment you pay for laboratory tests and radiography (X-rays and ultrasound) | (Mori, 1995). |
| 5.5 | The cost of health care uncovered by insurance | (Dolinski and Caputo, 1990), (Alaiban et al., 2003), (Al-Shawairkh, 2006), (Booske, et al., 1999), (Mihaila, 1998). |

**Table 5.7 Previous studies in employer role**

| No. | Variable | Authors |
|---|---|---|
| 6.4.1 | I have been denied access to health care services under cooperative health insurance | (Abel-Smith and Rawal, 1994), (Kleiser, 2003). |
| 6.4.2 | I have been supplied with a list of available providers | (Harris, 2002), (Feldman et al., 2000), (Simonet, 2005), (Casey and Wellever, 1998). |
| 6.4.3 | I have been informed about coverage limits | (Whiddon, 2008), (Jones et al., 2003), (Bostan, et al., 2007). |
| 6.4.4 | I have the freedom to choose health care provider | (Enthoven, 2003), (Marquis et al., 1983), (Lambrew, 2005), (Kolodinsky, 1999). |

**Table 5.8 Previous studies in insurance company role**

| No. | Variable | Authors |
|---|---|---|
| 6.5.1 | The insurance company was responsive to my complaints and comments | (Natangelo, 2007). |
| 6.5.2 | If preauthorization was requested, the waiting time for the insurance company answer was appropriate | (Shaul, et al., 2001). |
| 6.5.3 | The insurance company has competent and qualified staff able to manage the insurance processes | (Olson et al., 2005). |
| 6.5.4 | The health insurance representatives were courteous | (Choong, 2001). |
| 6.5.5 | I am satisfied with the way the insurance company processed my claims | (Waldhauser, 1973), (Lewis et al., 1993). |

## 5.11 Conceptual Framework

The theoretical framework is the foundation on which the entire research project is based. It is a logically developed, described and elaborated network of associations among the variables deemed relevant to the problem situation and identified through such processes as interviews, observations and literature survey. Experience and intuition also guide in developing the theoretical framework (Sekaran, 2003). Calnan (1984) suggested that any investigation of lay evaluation of health care should be carried out within a conceptual framework including: (1) the goals of those seeking health care in each specific instance; (2) the level of experience of use of health care; (3) the socio-political values upon which the particular health care system is based; and (4) the images of health held by the lay population. A theoretical framework is important to understand beneficiaries' satisfaction with the CHIS. It is surprising that more attention has not been paid in the research literature to developing a theoretical and conceptual model of satisfaction with health insurance. There is no consensus in the health services literature regarding a particular theoretical framework on which patient satisfaction may be assessed (Pascoe, 1983; Aharony and Strasser, 1993; Lin, 1996). No theorists have hypothesised and predicted the mechanism for forming patient satisfaction judgment and subsequent reaction (Aharony and Strasser, 1993). However, the literature was used as a theoretical base for the hypotheses set forth in this study**.** To understand how personal characteristics and services provided under the CHIS are affected by beneficiaries' satisfaction, a model linking the seven independent variables with the dependent variable (satisfaction with the CHIS) was developed as presented in Figure 5.2.

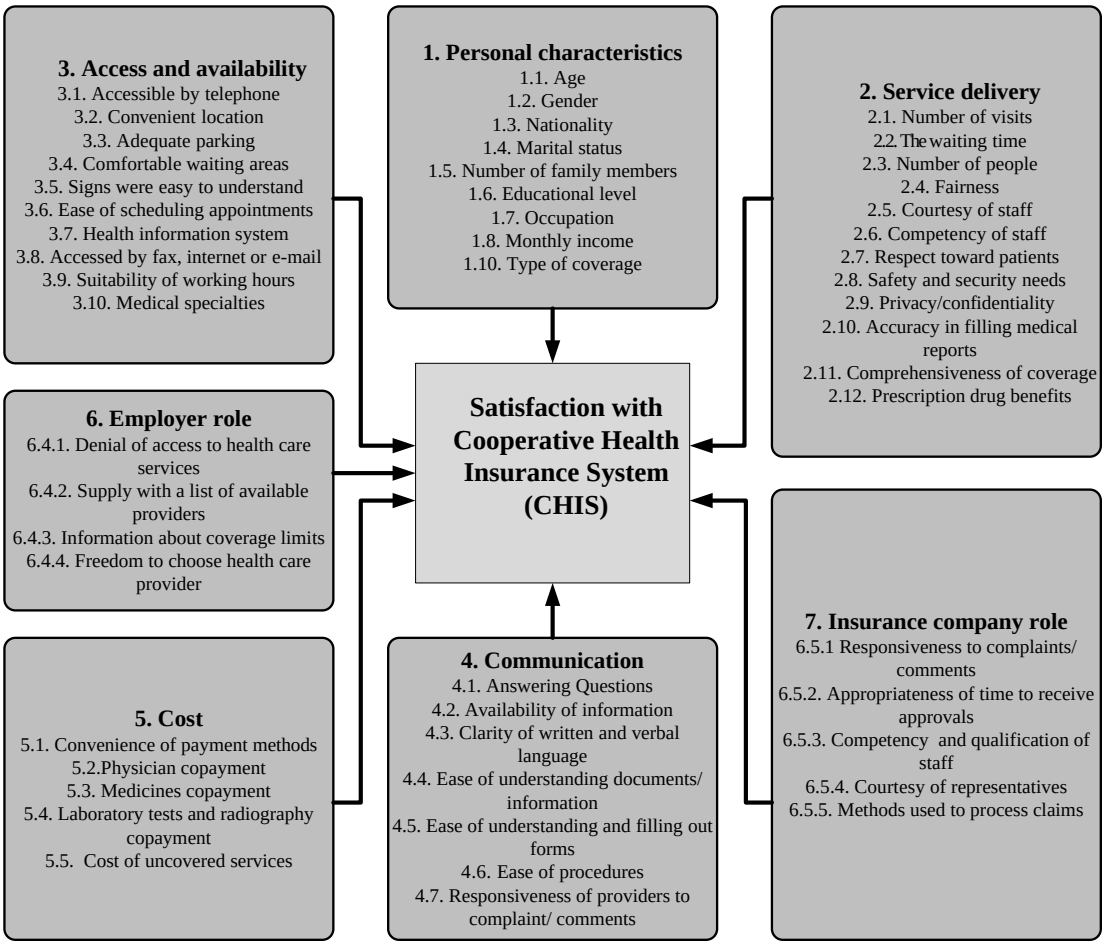



**Figure 5.2 Conceptual Framework**

The literature on the aggregate relationships between customer satisfaction (dependent variable) and service dimensions (independent variables) is quite rich but this is not the case when the individual dimensions of the constructs are taken into account. On this basis it was decided that the study would better contribute to the existing knowledge base if the model included additional dimensions that may impact beneficiaries' satisfaction with the CHIS, such as the employer's role and the insurance company's role, as these were described in the literature. They were therefore measured by the sixth section of the questionnaire that was used for data collection. The methods used and the instrument developed are explained in the next chapter.

# CHAPTER SIX

# Research Methodology

# 6. Research Methodology

## 6.1 Introduction

This chapter aims to provide an understanding of the research design and methodology used to achieve the research objectives discussed in chapter one. The methods used in carrying out the research will be discussed including the research strategy, approach, and design. This research incorporates quantitative and qualitative methods to arrive at a better understanding of beneficiaries' satisfaction with the CHIS. The first phase of the study used survey research and employed quantitative methods in order to achieve the research objectives. The survey was suitable for studying beneficiaries' opinions with regard to the services provided to them under the CHIS. The second phase of the study used case study and employed qualitative methods to investigate beneficiaries' satisfaction with service provided under the CHIS.

Each methodology is underpinned by a particular epistemology, where the researcher subscribes to a distinctive epistemological position. An epistemological issue means "a matter which has to do with the question of what is to pass as warrantable, and hence acceptable, knowledge" (Bryman, 1996:104). A brief explanation of the Canadian Common Measurement Tool (CMT) is also provided for reference purposes.

## 6.2 Research Design

Research design is a plan for a study, used as a guide in collecting and analysing data (Churchill and Gilbert, 1995, Nachmias and Nachmias, 1996). The choice of methodology is the most important choice in the research design. Gibbs (2002:4) pointed out that quantitative methods are seen as reflecting an empiricist and realist view of the world and using a deductive logic of inquiry. In contrast, qualitative approaches tend more often to be idealist and to use an inductive logic of inquiry. Deduction describes logic of argument that moves from the general to the particular. In

contrast, induction is the argument for general statements based upon particular observations or facts (Gibbs, 2002:7). In theory, the selection of methods depends on the nature of the research problem. In practice, there are some constraints, such as funding and time that influence the researcher's choice (Boyd et al., 1985). The relationship between theory and research in a cross-sectional design is a deductive one. The research design and data collection are guided by specific research questions obtained from theoretical concerns. However, when a qualitative research strategy is employed within a cross-sectional design, the approach tends to be inductive (Bryman and Bell, 2007:63).

Cook (2004:65) advised that "to measure customer service effectively, a holistic approach is needed. Do not rely on one methodology alone to gather data, rather use and combine different techniques". Therefore, in formulating this research I considered two main methodologies of research: quantitative and qualitative research methods. Both methods are useful in customer research. Mixing quantitative and qualitative methods provides a more comprehensive picture about the study (Neuman, 2006:150). According to Creswell (2003:18) "a mixed methods approach is one in which the researcher tends to base knowledge claims on pragmatic grounds". It employs strategies of inquiry that involve the collection of both quantitative and qualitative data sequentially to best understand research problems. Creswell (2003:22) stated that "a mixed method design is useful to capture the best of both quantitative and qualitative approaches". A combination of methods is recommended to emphasise the findings of the research.

Quantitative research is used to develop, statistically, information from sample data that can be generalised to a larger population (Dutka, 1994). Qualitative methods allow the researcher to understand customers` perceptions and experiences (Cook, 2004:29).

Turner and Pol (1995:52) stated that "qualitative data can and should be used to provide additional insight to understanding why certain responses are given and how the interaction of several care dimensions drive the formulation of specific opinions and attitudes". Bryman and Bell (2003:28) argue that if the researchers "are interested in the world views of members of a certain social group, a qualitative research strategy that is sensitive to how participants interpret their social world may be the direction to choose". Table 6.1 shows the main features of the positivistic (quantitative) and phenomenological (qualitative) paradigms.

**Table 6.1: The Features of the Quantitative and the Qualitative Paradigms**

| Positivistic paradigm (Quantitative) | Phenomenological paradigm (Qualitative) |
|---|---|
| • Tends to produce quantitative data. | • Tends to produce qualitative data. |
| • Uses large sample | • Uses small sample. |
| • Concerned with hypothesis testing. | • Concerned with generating theories. |
| • Data is highly specific and precise. | • Data is rich and subjective. |
| • The location is artificial. | • The location is natural. |
| • Reliability is high. | • Reliability is low. |
| • Validity is low. | • Validity is high. |
| • Generalises from sample to population. | • Generalises from one setting to another. |

Source: Hussey and Hussey (1997:54)

The study employed a triangulation research strategy in which both quantitative and qualitative research techniques were implemented at different phases of the research. Bryman and Bell (2007:413) stated that *"triangulation can be used to cross-check findings deriving from both quantitative and qualitative research"*. Jick (1979:610) contends that "triangulation has vital strengths and encourages productive research". One of the main arguments in favour of triangulation is that greater accuracy and more understanding of the problem under study could be gained. This becomes feasible when the two methods are mixed in a complementary way, at the same time avoiding the bias of a single method (Hakim, 1992; Sechrest and Sidani, 1995). The first step in triangulation is to determine whether the research problem is mainly quantitative or

qualitative. In this study, the research problem is primarily quantitative since a theoretical framework of the study has been created from the literature on consumer satisfaction as discussed in Chapter four (section 4.7.5). In addition, the beneficiaries satisfaction with services provided under the CHIS is measured using the CMT (Institute for Citizen Centered Service, 2005; Van Ryzin and Immerwamhr, 2007; Verdegem and Verleye, 2009) which is a quantitative scale and will be highlighted in this chapter. The key advantages and disadvantages of the main approaches to research design are presented in the following table.

**Table 6.2: Advantages and Disadvantages of the Main Approaches to Research Design**

| | **Positivism** | **Phenomenology** |
|---|---|---|
| **Advantages** | • Economical collection of large amounts of data.<br>• Clear theoretical focus for the research at the outset.<br>• Greater opportunity for researcher to retain control of research process.<br>• Easily comparable data. | • Facilitates understanding of how and why.<br>• Enables researcher to be alive to changes which occurs during the research process.<br>• Good at understanding social process. |
| **Disadvantages** | • Inflexible-direction often cannot be changed once data collection has started.<br>• Weak at understanding social processes.<br>• Often doesn't discover the meanings people attach to social phenomena. | • Data collection can be time consuming.<br>• Data analysis is difficult.<br>• Researcher has to live with the uncertainty that clear patterns may not emerge.<br>• Generally perceived as less credible by 'non-researchers'. |

Source: Saunders et al. (1997: 74)

### 6.2.1 The epistemology of Quantitative Methods

The positivistic approach seeks the facts or causes of social phenomena. Positivists explanation consists of establishing causal relationships between the variables by establishing causal laws and linking them to a deductive or integrated theory (Collis and Hussey, 2003). According to Nardi (2006:8) objectivity in science is *"those views of the*

*world that come to be agreed upon by the community at any one point in time"*. The idea that objectivity, along with generalisation and explanation are fundamental characteristics of a science comes from the natural science model, which some social scientists argue is an inappropriate model for studying people (Bryman, 1996). In the complex world of social science it has been found that the assumption of a single 'objective' reality does not accord with observation. A reality is constructed by the individuals involved in the research situation and thus multiple realities may exist in any given situation (Creswell, 1994). According to Collis and Hussey (2003:52), positivism *"is based on the assumption that social reality is independent of us and exists regardless of whether we are aware of it. Therefore, the ontological debate of 'What is reality?' can be kept distinct from the epistemological question of 'How do we obtain knowledge of that reality?' The act of investigating reality has no effect on that reality"*. The view from the "positivist" approach, the key idea of positivism, is that "The Social World exists externally; and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intention" (Smith, 1997). This approach contains two assumptions: firstly, that "reality is external and objective" and secondly, that "knowledge is only of significance if it is based on observations of this external reality" (Smith, 1997). Therefore, the relationship between researcher and subject is fairly short lived or may require no contact with subjects at all (Bryman, 1996).

### 6.2.2 The epistemology of Qualitative Research

The qualitative approach "stresses the subjective aspects of human activity by focusing on the meaning, rather than the measurement, of social phenomena" (Hussey and Hussey, 1997). Qualitative research is often introduced in terms of the way in which it differs from quantitative research: it does not rely on theory (McQueen and Knussen, 2002) and it is difficult or impossible to make generalisations. Most qualitative research

has preferred to describe and illuminate the meaningful social world as prescribed by the interpretivist paradigm. Interpretive social science focuses on the 'individual' (Silverman, 1997). In this framework, 'truth' is a much more elusive concept. Individuals and groups construct their own version of reality (Gilbert, 2001). Interpretivism is predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action (Bryman and Bell, 2003). The flexibility of qualitative methods helps the researcher to change their methods of conducting research in response to the changing nature of the context, and this "enhances the opportunity of coming across entirely unexpected issues which may be of interest to the researcher" (Cassell, 1994).

Qualitative research involves obtaining a great deal of information from a small number of customers. From qualitative research, a large amount of information is gathered, and gains a large amount of understanding, but since it involves only small numbers of customers it will not be statistically reliable. Qualitative research has been criticised for the limitation in generalising findings; small sample size and the lack of specific hypotheses, control groups and predetermined questions, which can lead to the false assumption that the proposed study is not sufficiently rigorous (Darlington and Scott, 2002). The responses of participants to qualitative researchers is likely to be affected by the characteristics of the researcher (personality, age, gender, and so on); and because of the unstructured nature of qualitative data, interpretation will be profoundly influenced by the subjective leanings of a researcher. Because of such factors it is difficult - not to say impossible - to replicate qualitative findings (Bryman, 2004).

## 6.3 Selected Methodology

Most patient satisfaction studies are based on methods that measure quantitative outcomes. As such studies are restricted to readily measured static constructs they neglect aspects of the cultural environment, social interaction and values that could affect the outcomes and the constructs under study (Kaplan and Duchon, 1988). The quantitative survey has been complemented with qualitative research in order to highlight in-depth information concerning the real expectations and needs of beneficiaries. Following the implementation of health insurance in Saudi Arabia qualitative research offers the researcher an in-depth view into complex social phenomena associated with beneficiaries' satisfaction with heath care services that, potentially, would be incompletely captured by using only quantitative methods. The researcher was able, through the use of observation and interviews, to gain insights into the satisfaction/dissatisfaction of beneficiaries with services provided under the CHIS; and to gain in-depth information concerning their real expectations and needs. The researcher collected detailed information from which to advocate for change in the Saudi Arabian health insurance policy. Using a variety of methods to study patient satisfaction enhances the credibility of research results (Greene and McClintock, 1985). It is argued, based on the context of this study, that qualitative methods would be more beneficial. Qualitative methods are particularly appropriate when trying to understand the opinions and behaviours of beneficiaries (Etter and Perneger, 1997) and when the focus of inquiry concerns complex human emotions and interactions in a social context incompletely explained with quantitative measures (Cobb Ann and Forbes, 2002).

Research questions directing qualitative studies often inquire into processes associated with change or individuals' meaning-making, seeking knowledge in variation and diverse perspectives, while quantitative studies are typically geared towards revealing relationships between variables, as measured by central tendencies in a data set

(Gerhardt, 2004). The study questions required an in-depth exploration of beneficiaries' opinions with regard to services provided under the CHIS within a real situation. The research reflected a preference for naturally occurring data, in the form of observation and unstructured interviews through words spoken by beneficiaries themselves, as a qualitative approach seemed more closely bound to the reality of beneficiaries' experience. Human understandings and perceptions are recorded in qualitative studies to show situations as participants perceive them (Miles and Huberman, 1994). The provision of health services is concerned with an experience of services and the interactions with the health insurance system; the natures of these experiences are important to beneficiaries. The inadequacy of quantitative methods is based on a variety of factors such as the reluctance of beneficiaries' to speak of their own experiences in their own words; the holistic view of the attributes rather than the specific attributes of health services provided under the CHIS; the limitation of the time period of measurement; and the questions being dependent on the beneficiary's desire and ability to rationalise and express thoughts and sometimes feelings literately and honestly. The weaknesses of quantitative satisfaction research can be confronted by qualitative research. The beneficiaries' voices were the key foundations of the whole technique and were more prone to a natural, unforced, honest and detailed evaluation of beneficiaries' satisfaction with health care services they receive under the CHIS.

The research strategy was based on the combination of two approaches. In the first phase, the survey method was used to establish levels of understanding the beneficiaries views with regard to their satisfaction with services provided under the CHIS. In the second phase, the case study method was employed to investigate quite complex phenomena such as beneficiaries' satisfaction with service provided under the CHIS. A more detailed explanation will be given in the next section.

### 6.3.1 Phase one: Survey strategy

In social science the principal quantitative approach to research is the questionnaire survey, where researchers are committed to a "positivist" epistemology in the study of society. The survey is the most widely used data gathering method of researchers in collecting primary data (Aaker et al., 1995). Surveys are appropriate for research questions about behaviours, attitudes/beliefs/opinions, knowledge, characteristics, expectations, and self-classification. Survey research samples many respondents who respond to the same questions. It measures many variables, tests multiple hypotheses, and infers a temporal order of questions about past experiences (Neuman, 1997). Surveys gather information by specifically asking participants about their experiences, attitudes, or knowledge. They not only seek the current status of population characteristics, but also try to discover relationships among variables (Graziano and Raulin, 2004). Survey research involves looking at the relationships between sociological and psychological variables and relies on various methods of data collection. The survey is defined by Bowling (1997:173) as:

> *... a method of collecting information, from a sample of the population of interest, usually by personal interviews (face to face or telephone), postal or other self-completion questionnaire methods, or diaries.*

The major advantage of surveys is that they are carried out in natural settings, and random probability sampling is often easier to conduct than experimental studies. Statistical inferences can then be made in relation to the broader population of interest and thus allows generalisations to be made. This procedure increases the external validity of the study (Bowling, 1997). Survey research uses a deductive approach. It starts with a theoretical or applied research problem and ends with empirical measurement and data analysis. Two phases make up the survey method. They are the research design phase and the data collection phase. During the research design phase, an instrument is developed. The questions of this instrument must be clear and

complete, taking into consideration the recording and presentation of data for the analysis. The second phase includes locating the respondents, giving instructions on how to answer the questions, recording the answers and thanking the respondents afterwards (Neuman, 1997).

Designing questionnaires for respondents to complete on their own is one of the most common methods. Questionnaires can be distributed to large groups of people in one location at one time. Oppenheim (1992) emphasised that questionnaires are efficient and practical since they allow for the use of a large and representative sample. Thus the researcher can obtain the required data within a relatively short time and at a reasonably low cost per subject surveyed. Questionnaires are ideally suited to assess what people report they believe because feelings and opinions are not readily observed and easily measured with other research methods (Nardi, 2006). Moreover, Ary et al. (1990) suggested, they tend to be used to explore attitudes and opinions concerning certain issues, objects and situations. Oppenheim (1992) points out that questionnaires can be self-administered or used with groups, though because the written questionnaire involves reading, it can only be used with literate respondents. The questionnaire can be made fairly simple to be answered by people with various backgrounds and levels of education.

### 6.3.2 Phase two: Case Study Research Strategy

In the second phase of the study, a case study approach was used as a strategy of inquiry. The researcher collected open-ended, emerging data with the primary intent of developing themes from the data to inform the results obtained in the first phase. Bryman and Bell (2007:646) stated that:

> *"The in-depth knowledge of social contexts acquired through qualitative research can be used to inform the design of survey questions for structured interviewing and self-completion questionnaires"*

The researcher wanted to use the results from the case study to cross-check the results from the survey as suggested by Jankowicz (2005:224). Case study has no agreed definition, often depending on the researcher's understanding and purpose. Case study research is becoming increasingly accepted as a scientific tool in management research (Gummesson, 2000). Case study design answer questions such as how and why (Yin, 1994). Yin (1994:23) defines a case study as *"an empirical inquiry that: (1) investigates a contemporary phenomenon within its real-life context when (2) the boundaries between phenomenon and context are not clearly evident and in which (3) multiple sources of evidence are used"*. An important advantage of case study research is the opportunity for a *holistic view* of a process:

> *The detailed observations entailed in the case study method enable us to study many different aspects, examine them in relation to each other and view the process within its total environment. Consequently, case study research provides us with a greater opportunity than other available methods to obtain a holistic view of a specific research project* (Gummesson, 2000:86)

The case-study method allows the researcher flexibility to shift attention to whatever behaviours seem most interesting and relevant at the time (Grazinao and Raulin, 2004). Case studies provide one of the chief arenas in which quantitative and qualitative research can be combined. The data in the case study approach was obtained through a number of techniques such as participant observation, interviewing and other methods for data collection (Bryman, 1989). According to Yin (2002:231), "one might choose to use the case study method to test theory and its applicability following a theory which specifies a particular set of outcomes in particular circumstances". Also, case study can be used to compare and contrast particular situations. Although a case study approach can be a very satisfying methodology, there are some weaknesses. Collis and Hussey (2003:70) stated that:

> *"access to a suitable organisation is often difficult to negotiate and the process of the research can be very time consuming. It is also difficult to decide on the delimitations of your study; in other words, where you are going to place the boundaries".*

Deciding the "boundaries" of a case - how it might be constrained in terms of processes, and time - may be difficult. Some case studies may not have clean beginning and ending points, and the researcher will need to work with artificial boundaries (Cresswell, 1998). Another of the standard criticisms of the case study is that findings deriving from it cannot be generalised (Bryman, 2004:52). Case studies take too long and result in massive unreadable documents. Gathering data in a case study is a time-consuming job, and it is generally not possible to carry out more than one or a very limited number of in-depth case studies in a research project (Yin, 2003).

This study, of beneficiaries' satisfaction with the CHIS in Saudi Arabia, can be regarded as a case study because it is investigating in depth a contemporary theme, within multiple fields. The researcher was concerned about the specific features of the case. The researcher was able to probe deeply in some social contexts on the beneficiaries' views with regards to the CHIS. Although bounded within Riyadh City, it still allows comparisons within and outside of Saudi Arabia; the latter with insurance schemes in modern industrial societies such as the United States and the United Kingdom as discussed in section 3.1 of chapter 3. The case study strategy, which I used in the study, is appropriate because it allows the use of a number of methods, systematic and non-systematic. Bryman and Bell (2007:63) stated that "the case study provides a vehicle through which several qualitative methods can be combined, thereby avoiding too great a reliance on one single approach". The case study approach entails the collection and examination of as much data as possible so that the most comprehensive possible description and explanation of the many components of the problem or phenomenon under investigation is presented in a logical sequence. Seven organisations were

selected to represent participating organisations in the CHIS. These organisations were selected as they are representative of more general trends in the private sector. The cases were: Saudi Electricity Co. Altayar International Transportation Agency, Aljomaih Car limited Co., Commercial Bank, Alothiam Stores Co., Samba Financial Group and Almawared Food Limited Co. Each organisation is critically examined in terms of its employees' components, health care coverage prior to the implementation of the CHIS, and the role of the organisation in covering its employees with the CHIS. In each organisation approximately three face to face unstructured interviews were conducted with employees who had experienced health insurance for the year 2007. The unit of analysis is the individual CHIS beneficiary. Twenty one beneficiaries were selected by the researcher to be studied, twelve non-Saudis and nine Saudis. The non-Saudis were studied because they were the focus of the CHIS Act and also they had experienced other health care systems. I selected the case study beneficiaries from the sample in phase one.

### 6.4 Explanatory design

A sequential explanatory design was adopted in this study, this being the most straightforward of the designs (Creswell, 2003:215). Creswell (2003:25) stated that the sequential explanatory strategy is:

> *"characterised by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. The purpose of the sequential explanatory design, typically, is to use qualitative results to assist in explaining and interpreting the findings of a primarily quantitative study"*

This design involves collecting and analysing quantitative data then collecting and analysing qualitative data. It is easy to implement because the steps fall into clear, separate phases. However, the main weakness of this design is the length of time involved in data collection, with the two separate phases. Both methods are integrated when interpreting the results of the study (Creswell, 2003:215). Survey was used first

to collect data about beneficiaries' views; the SPSS statistical computer program was used to present and interpret results. After that, qualitative data collection and analysis was used. Interviews were conducted with beneficiaries and data collected were analysed using a general analytical approach. The results of these interviews have enhanced and explained the findings obtained from the quantitative approach. Therefore, the sequential explanatory design provided a comprehensive understanding concerning beneficiaries views regarding their satisfaction with health services provided under the CHIS. This is the first time - to the best of my knowledge - that this kind of design has been used to investigate beneficiaries' satisfaction with health insurance in Saudi Arabia. The focus was on quantitative methods and interviews were not used in these studies. Hence, this study will provide deeper understanding of the research problem.

## 6.5 Reflexivity of the Researcher

In this thesis, my feelings, doubts and judgment are on continuous display. In the social sciences, researchers are much "closer" to their social setting and it is more likely that they have their impact on the outcome of the research. My involvement in reforming the health care sector in the Kingdom as a consultant and member of the Ministerial Committee for Reforming Governmental Agencies played a major role in attracting me to the area of consumer satisfaction with health care services and gave me an opportunity to manage and interact with related parties. This experience has enabled me to carry out participant observations and interact with consumers of health care services, providers and insurance companies. These were natural observations undertaken during my daily activities. My personal experience in the field has been the most interesting and satisfying part of the research. It has also provided me with access to a number of secondary sources and official publications regarding health services in the country. For the purpose of this thesis I will reemphasise the view adopted by Steier (1991).

According to Steier (1991:2), "the research process must be seen as socially constructing a world or worlds, with the researchers included in, rather than outside, the body of their research". I believe that this study will improve my knowledge of the health care system, my understanding of the interaction between theory and practice and my communication skills (written and verbal) with interested parties.

### 6.6 Selected Research Methods

A mixed methods approach was employed to achieve research objectives. Focus group was not considered because it would be difficult to recruit respondents. In the Saudi Arabian context, the discussion of women's matters is very sensitive. Such matters cannot be discussed with strangers. Women could not be included, as they cannot participate in a mixed group with unknown men, nor could an all-female group be arranged, unless a female moderator could also be recruited (Albishry, 2007; Dossary, 1991; Alshammasi, 1986). The following diagram is a schematic description of the entire research process adopted for this project:

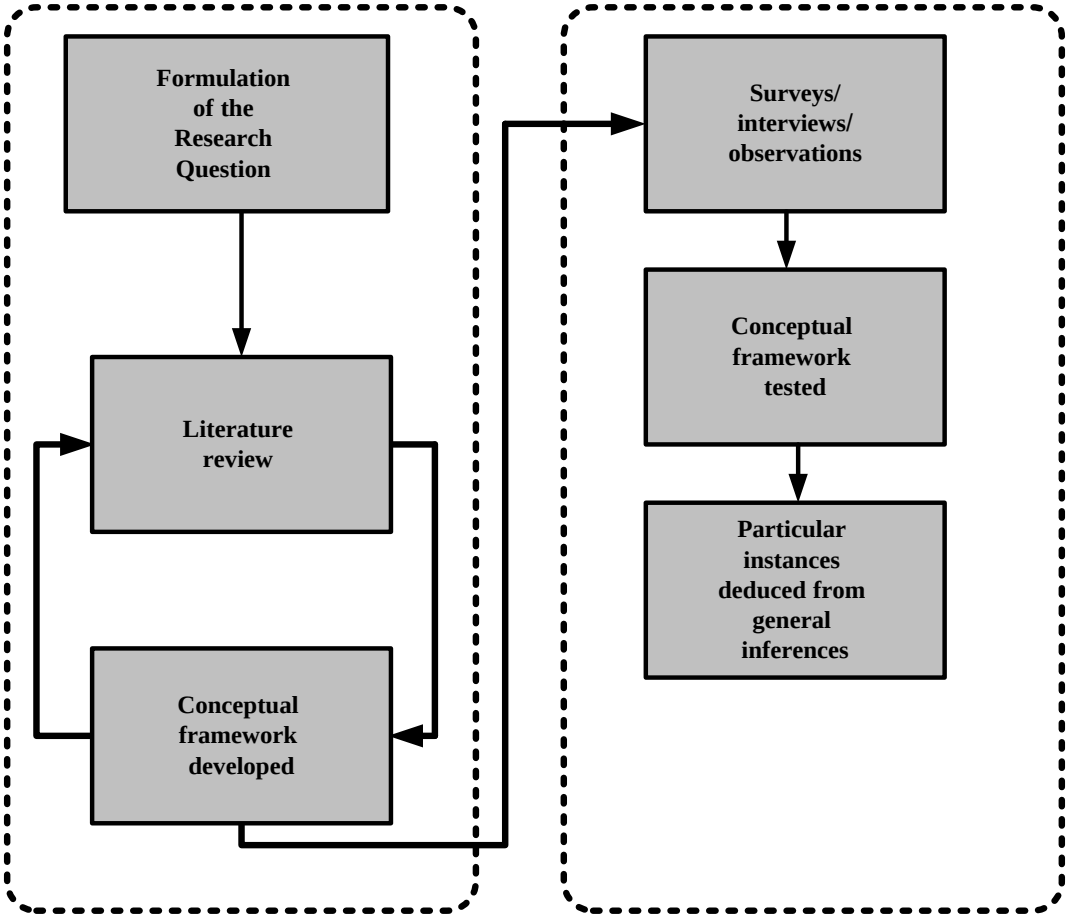



**Figure 6.1: Schematic description of the research process**

The literature informs the generation of research questions in relation to what the authors perceive to be a neglected topic (Brayman and Bell, 2003). Verma and Mallick (1999) advised that when constructing the questionnaire, a review should be undertaken to identify clearly the general information needed and the objectives of the study, to give a criterion against which the first draft of the questionnaire can be tested. It is expected that research questions and methods evolve and change during the course of the investigation.

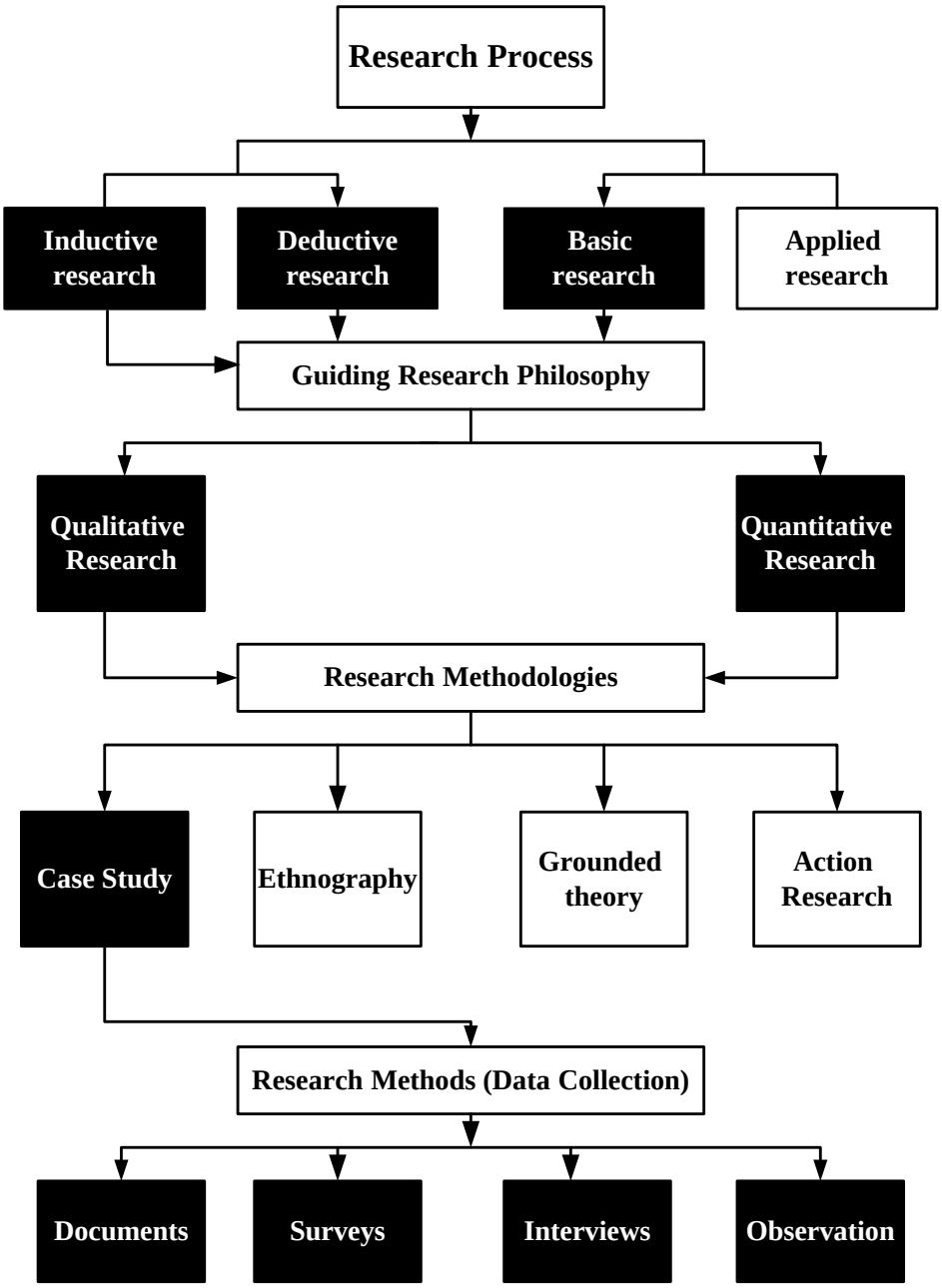



**Figure 6.2: Research Philosophy**

The following diagram represents the time-line and the stages in the entire research process pilot study, main study (quantitative and qualitative data collection).

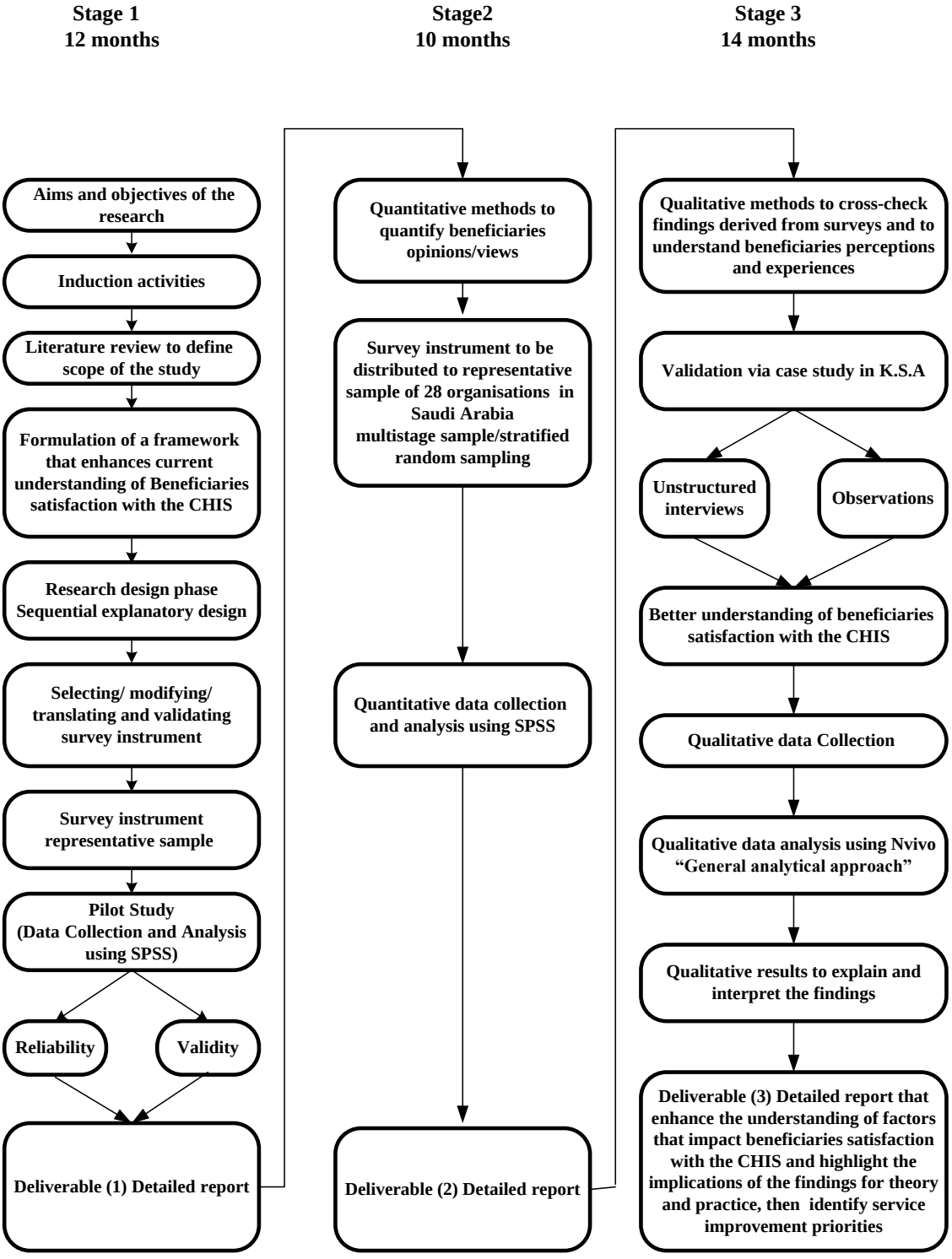


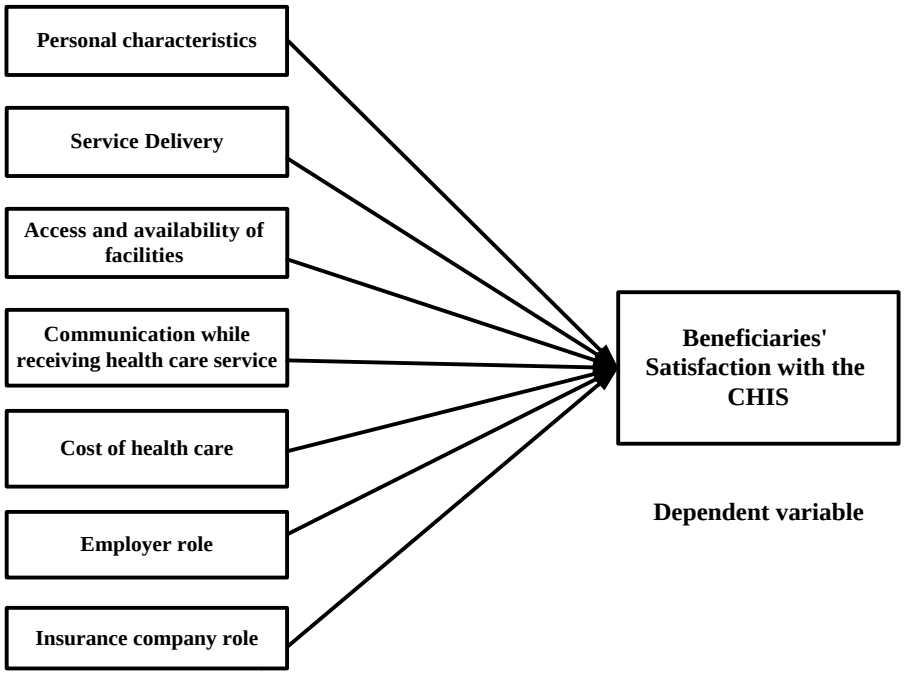

**Figure 6.3: The research stages**

## 6.7 Variables Measured

Measurement of variables in the theoretical framework is an integral part of research and an important aspect of research design (Sekaran, 2003). Operational definitions are necessary to measure abstract concepts such as those that usually fall into the subjective areas of feelings and attitudes. More objective variables such as age or educational level are easily measured through simple straightforward questions and do not have to be operationally defined (Sekaran, 2003). The marketing literature originally saw consumer satisfaction as being an outcome resulting from the consumption experience (Newsome and Wright, 1999; Vavra, 1997, Donabedian, 1980, 1988; Westaway et al., 2003; Corah et al., 1984). Studies conducted to measure consumer satisfaction with the health insurance plan have used satisfaction as a dependent variable (Davies and Ware, 1982; Kolodinsky, 1999; Carlson et al., 2000; Mawajdeh, et al., 2001).

For this study, beneficiaries' satisfaction was conceptualised to be a multi-dimensional construct and defined as an individual's evaluations of distinct dimensions of the services provided under the CHIS. The dependent variable is general satisfaction with the CHIS, created from an ordinal five-point Likert scale. Independent variables include measures related to the seven categories of variables outlined in Figure 6.4: personal characteristics, service delivery under the CHIS, access and availability of facilities for the provision of health services, communication while receiving health care service, cost of health care, employer role and insurance company role.

**Figure 6.4: The relationship between independent and dependent variables.**




Measures of personal characteristics include the demographic variables, age, sex, nationality, marital status, number of family members, educational level, occupation, monthly income, personal experience with the CHIS in the last 12 months and type of health insurance coverage. Educational status is a key variable for recognising and understanding the complexity of health insurance (Altassan, 2003). Personal experience with CHIS includes a variable that measures whether the respondent was a relatively heavy user of the health care services under the CHIS. Because satisfaction with CHIS was assessed fifteen months after inception, those with heavier use of the plan may have had different experiences than others. Other measures of personal experience include the number of problems actually experienced with various components of the health insurance plan during the previous months. The measures of the number of unsatisfactory experiences include assessments of services delivery under the CHIS, insurance company representatives and the role of the employer. The same components are used to measure the dissatisfaction with the most recent experience. The selection of

dimensions and items was based on the CMT instrument to comprehensively investigate satisfaction with health care services provided under the CHIS. Appendix (A) shows the elements under the main dimensions.

### 6.8 Data collection

The first stage of this research included a series of logical steps that dealt with: a) selecting a suitable research instrument and data collecting, b) identifying the dimensionality of the scale for measuring beneficiaries' satisfaction with the CHIS and assessing the validity and the reliability of the instrument, c) assessing the replicability of the instrument. Data can be obtained from primary or secondary sources. Primary data refers to the information obtained firsthand by the researcher on the variables of interest for the specific purpose of the study. Secondary data refers to information gathered from sources already existing (Sekaran, 2003).

#### 6.8.1 Research instrument

A fundamental problem in selecting measures for inclusion in this study was that there are almost as many instruments or scales as there are studies of customer satisfaction. Table 6.3 shows a comparison of patient satisfaction measures. Although the general content of scales and questionnaires used to gather satisfaction data appear to be somewhat similar, the various parameters or dimensions studied and the methods employed are not standardised or even comparable across investigations. In part, non-comparability of focus and methods may result from the specific needs of each study. On the other hand, the published uses of these data suggest that the study goals are often more comparable than the variation in measurement techniques would suggest. An additional factor accounting for differences in satisfaction measures may be that researchers and evaluators rarely have the time, resources, or interest required to address the problem of developing and validating standardised scales (Al-Juhani, 1994).

**Table 6.3: Comparison of patient satisfaction measures**

| | Scale | Number of Items | Number of dimensions | Design | Reliability | Validity | Balance (+) & (-) questions | Administration and time | Acceptability |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Patient Satisfaction Questionnaire (PSQIII) (Ware and colleagues, 1976) | 51 | 7 | Self administered or interviews. Uses direct and indirect approach | Established | Established | Yes | Easy 10 min | Good |
| 2 | Scale for Measurement of satisfaction with medical care (Hulka and colleagues, 1974) | 42 | 3 | Self administered or interviews. Uses indirect approach | Equivocal | Equivocal | Yes | Easy 10 min | No evidence |
| 3 | Evaluation Ranking Scale (ERS) (Pascoe and Attkisson, 1979) | 22 | 6 | A visual analogue scale. Uses direct approach | Inadequate | Inadequate | Nor Clear | Difficult 5-7 min | Good |
| 4 | Client Satisfaction Questionnaire (CSQ) (Attkisson and colleagues, 1979) | 18 | 1 | Self administered. Uses direct approach | Established | Established | No | Easy 3-8 min | Good |
| 5 | Medical Interview Satisfaction Scale (MISS) (Wolf,1981) | 29 | 3 | Self administered. Uses direct approach | Limited | Limited | Yes | Difficult Not reported | No evidence |
| 6 | Patient Satisfaction Scale (PSS) (DiMatteo, 1980) | 25 | 4 | Self administered or interviews. Uses direct approach | Limited | Inadequate | Yes | Difficult Few min | Questionable |

Acceptability was assessed in terms of four indicators:

1. Amount of missing data
2. Instances of refusal to complete the measure.
3. Frequency of failure to understand the procedure.
4. Estimated average time for completion.

Satisfaction surveys can be utilised to identify performance problems and to help improve it and make administrative decisions. There have been criticisms of the use of satisfaction measures in shaping policy. These criticisms are generally of two kinds. Firstly, consumer satisfaction is considered a "soft" measure, the reliability and validity of which is difficult to establish. A second criticism is more substantive. It is sometimes argued that consumers are not an appropriate source of judgments regarding such important and technical issues as access to medical care (Al-Juhani, 1994:24-25).

The CAHPS survey instrument which was designed to assess consumer evaluation of health care was not selected to measure beneficiaries' satisfaction with the CHIS because the "fundamental assumptions underlying the development of the instrument have not been demonstrated". In addition, there has been no evaluation of the factor structure of the instrument at the level of the individual. Thus, the multifactorial structure of the CAHPS has been assumed but not demonstrated (Marshall et al., 2001:217). However, after reviewing the literature and previous studies related to customer satisfaction with the service delivery, the researcher decided to use the Canadian Common Measurement Tool (CMT). The Institute of Citizen-Centred Services (ICCS) serves as the custodian of the CMT and makes the tool available through its website and also maintains its benchmarking. The ICCS is a not-for-profit organisation sponsored through the collaborative, inter-jurisdictional efforts of all three levels of the government within Canada. The mission of the ICCS is to promote high levels of citizen satisfaction with public-sector service delivery by undertaking research (Morrison, 2007). The CMT was originally developed by the Canadian Centre for Management Development's Citizen-Centred Service Network in 2001 to improve the measurement of client satisfaction (http://www.tbs-sct.gc.ca/si-as/tools-outils/tools-outilstb_e.asp, ICCS, 2003). The CMT builds on the intellectual foundations of Citizens First, a national survey of Canadians, which identified the drivers of satisfaction, namely timeliness, knowledge/competence,

fairness, courtesy/comfort, and outcome. It was designed to assist in the measurement of existing service delivery and performance, as well as to aid in the determination of future priorities for service improvement. The CMT is, in essence, a question bank of statistically validated questions and response scales to be used in client and citizen surveys on the measurement of service delivery satisfaction (Morrison, 2007). Most questions are quantitative in nature, using a five point scale. CMT is conceived around five key elements: 1) beneficiary expectations, 2) perceptions of the service experience, 3) satisfaction levels, 4) importance and 5) priorities for improvements (http://www.tbs-sct.gc.ca/si-as/tools-outils/tools-outilstb_e.asp). CMT highlights the differences between expectations and experiences. In addition, CMT also considers the role of surrounding factors (experience, intensity of use, etc.) as they can be used in order to introduce process improvements (Verdegem and Verleye, 2009:490). The CMT combines standardisation and customisation, thus allowing the comparison of disparate types of service provision. Respondents were provided with a statement concerning the service and were asked to provide a satisfaction rating on a five-point scale, as well as providing a rating of the individual item's importance to them. Respondents were then asked to indicate the items within a given section which they wish the service provider to improve upon. Questions on perceptions of experience and expectations are suited to descriptive responses and are included in each section where appropriate. CMT surveys may be administered over the phone, in person, or through the Internet (Morrison, 2007). CMT should ideally supplement other approaches such as focus groups, programme evaluations, interviews and open-ended survey (http://www.iccs-isac.org/).*

***Note to Readers**

For editorial purposes, the terms 'respondents' and 'beneficiaries' are used interchangeably in this research to denote survey participants. Each section also requires overall satisfaction ratings and allows the respondent to add qualitative comments. The CMT also offers paired questions of agreement and importance (Morrison, 2007). There is a commentary section at the end of the survey for broad service feedback (Schmidt and Strickland, 1998).

### 6.8.2 Reasons for selecting the instrument

The CMT has been selected to measure beneficiaries' satisfaction for the following reasons. First, it is the most comprehensive measure. Second, it has also been used in a wide variety of governmental empirical studies in Saudi Arabia which provide a valuable comparative database. Third, it is applicable in general population studies and is intended to measure customer satisfaction across different systems of care in different settings. Fourth, it has a sound theoretical foundation and is known to be the best developed and most extensively tested measure available. The researcher used a modified version of the instrument due to the lack of an instrument which can measure the experience of complex services such as the provision of health care under the CHIS. The decision was taken to use the CMT in order to avoid the possibility of producing another instrument which would probably reflect the researcher's own prejudices, and to allow, where necessary, cross comparison with other studies. Using the CMT to measure beneficiaries' satisfaction with the CHIS can help in:

- Identifying opportunities for service improvement.
- Identifying what beneficiaries want.
- Allocating resources more effectively to meet beneficiaries' priorities by targeting high service priorities and reducing or eliminating services that beneficiaries' do not value.
- Developing proactive responses to emerging beneficiaries demands, reducing crises and stress for staff and beneficiaries.
- Providing feedback to front-line staff, management and political leaders regarding the CHIS effectiveness.
- Strengthening the strategic planning process.
- Validating requests for increased resources to areas in need of improvement.

The CMT was well suited for this study of beneficiaries' satisfaction with the CHIS as it provides a useful tool to measure where service delivery exceeds, meets, or lags behind customer expectations. CMT is adaptable to customisation yet provides a basis for comparative information stemming from consistent survey inquiry in many service areas (Schmidt, 1998); therefore, it is useful for future comparative studies of satisfaction with health insurance between countries.

### 6.9 Questionnaire Development

As the health care industry shifts toward a consumer orientation in the delivery of care, patient evaluation surveys become a more important tool in measuring consumer satisfaction with health care (Reifel et. al, 1997). To the best of the researcher's knowledge, adapting CMT to the heath care services provided under health insurance has not been previously undertaken. Cella et al. (1998) advised that the use of existing questionnaires - in English - requires a rigorous adaptation process to guarantee the questionnaire's linguistic and cultural appropriateness. Several modifications were necessary to apply CMT to such an environment and to the Saudi Culture. For example, the original word 'customer' was changed to 'beneficiary'. This is in accord with the recommendation made by the Canadian Centre for Management Development. Among the many statements added to the CMT, to make it applicable to the health care services provided under the CHIS in this study, are statements 2.10, 2.11 and 2.12 in section II , which are related to service delivery under the CHIS, statements 3.7 and 3.10 in section III, which are related to access and availability of facilities for the provision of health services, statement 4.7 in section IV, which is related to communication while receiving health care service, statements 5.2, 5.3,5.4 and 5.5, which are related to the cost dimension (see appendix E).

Demographic variables were also studied to measure their interaction with satisfaction. The questionnaire was designed to be completed in 10 minutes. In the light of the nature of the investigation, closed questions were appropriate for the collection of quantitative data. Closed ended questions were developed because it is a more efficient method and it allows for fewer variations in people's responses. In addition, it is easier and quicker for the respondents to complete; coding the responses is simpler for the researcher and more efficient than with open-ended items. Respondents were asked to assess the services provided under the CHIS and to offer their opinions on the importance of each item. The basic socio-demographic questions were of a closed ended type, while the nationality question was contingency type. According to Sarantakos (1998:236) *"Likert scales are widely used, particularly as a means for studying attitudes"*; therefore, the rest of the questions were constructed to measure beneficiaries` opinions on a five point Likert scale that runs from "very unimportant (1)" to "very important (5)" for the importance of each item. Also, beneficiaries were asked to rate their level of satisfaction with various aspects of the service received under the CHIS using the 5-point Likert, ranging from "very dissatisfied (1)" to "very Satisfied (5)". Another 5-point scale (5 = strongly agree; 1 = strongly disagree) was used in section VI of the survey, respondents were asked to express their level of agreement with statements related to employer and insurance company role in their satisfaction with the CHIS. The questionnaire was designed specifically to answer the research questions posed by this study.

A covering letter was placed on the front page of the instrument; in this letter the researcher explains the purpose of the study and gives instructions to the respondent, in a way to convince the respondent to participate in the research, in order to increase the response rate (Saunders, et al.,1997). Respondents were given a point of contact (researcher's name, mobile number and e-mail address) should they have any questions.

The research instrument consisted of seven sections to elicit respondents' views on their satisfaction with the CHIS and the importance of the items for service improvement. The questions then fall into two main categories: demographic and content questions. The questionnaire comprised 56 items. The demographic questions seek information on the respondents, such as age, gender, nationality, marital status, number of family members currently living with the insured, educational level, occupation, monthly income in Saudi Riyals and type of health insurance coverage. These are factual items, and they can be verified independently. Most of the items are content items, dealing with the participant being surveyed. Content items ask about the respondents' opinions, attitudes, knowledge, and behaviour. People's opinions and attitudes are subjective, vary among individuals, and are not evaluated as right or wrong (Graziano and Raulin, 2004). After a series of demographic questions in the first section, beneficiaries were requested to provide a score for their level of satisfaction with and importance of service delivery under the CHIS. This section consisted of twelve items. In the third section customers were requested to provide a score for their level of satisfaction with, and importance of, access and availability of facilities for the provision of health services. This section consisted of the 10 items. In the fourth section customers were requested to provide a score for their level of satisfaction with, and importance of, communication while receiving health care service through the CHIS. This section consisted of the 7 items. In the fifth section customers were requested to provide a score for their level of satisfaction with, and importance of, the cost of health services under the CHIS. This section consisted of the 5 items. Previous studies of patient satisfaction in Saudi Arabia have neglected the cost dimension because it was not relevant to the medical care system as the services were provided free of charge. The inconsistency of results obtained from previous satisfaction studies is possibly due in part to the different types of respondents or differences in the frequency of service use. Therefore, two

questions were asked in the sixth section, the first concerning the number of times the beneficiary had visited a clinic or a hospital to receive health care over the last year, the second question concerned the last time the beneficiary had received health care services under the CHIS. In addition, the sixth section included questions about problems encountered. In the final section, respondents were asked to comment on topics that might not have been covered fully or adequately. All participants were given the opportunity to participate in the interview. They were asked to write their contact names, telephone numbers and the suitable time to call them to arrange for the interview (see appendices D "Arabic version" and E "English version").

### 6.9.1 Translation of the CMT

CMT, originally written in English, was intended to be used in an English speaking society. The use of CMT, in any other non-English speaking society, necessitates the translation of the instrument into the language of the intended society. Prior to its use for data collection, the instrument was translated from English to Arabic to ensure functional equivalence of its items in the two languages. Thus the first step of validation was to review the English version of the instrument where all questions were carefully reviewed for linguistic structure and design. The instrument was translated by the researcher into Arabic and double checked for accurate translation, grammar, spelling, and homogeneity, i.e. questions phrased in similar fashion. The researcher also obtained permission from the Institute of Public Administration (IPA) to use their Arabic translation of the CMT (see appendix H). Once the questions were formulated and translated into Arabic, their wordings were reviewed so that ambiguities and difficult terms or phrases could be corrected. The English copy of the instrument and its translation into Arabic was reviewed by colleagues from the English Language Department at the IPA in Riyadh, Saudi Arabia to check the accuracy of the translation. The use of one Arabic word for the English word 'staff' for example, was not considered

sufficient or clear for beneficiaries. Therefore, the word was clarified for beneficiaries in parentheses as (doctors, nurses, employees).

### 6.10 The Validity and Reliability of the survey instrument

The customised CMT was subjected to tests of validity and reliability which are overlapping and interrelated. If a measure is valid, it must be reliable, although the opposite is not necessarily true (Oppenheim, 1992; Sarantakos, 1998). Reliability is concerned with findings; the findings can be reliable if someone else can repeat the research and obtain the same results, while validity is concerned with the extent to which the data collected is a true picture of the whole population (Collis and Hussey, 2003). Consistency of a measure has one main aspect, internal reliability (Oppenheim, 1992; de Vaus, 1996; Sarantakos, 1998).

#### 6.10.1 Validity of the Study Instrument

Validity refers to the ability of a research instrument to actually test what it is supposed to test (Nunnally, 1978; Carmines and Zeller, 1979; de Vaus, 1996, Nardi, 2006). Al-Juhani (1994:20) stated that "Measures of satisfaction are largely content oriented. Reliabilities are reported, but validity is usually assumed". The lack of an appropriate theoretical framework of patient satisfaction introduces difficulties in testing validity. It is even more difficult to generate validity for survey questionnaires (Nardi, 2006). The lack of valid and consistent instruments is a common problem when measuring consumer satisfaction (Crow et al., 2002; Etter and Perneger, 1997), in particular in non-English speaking countries. Thompson (1986) pointed out that patient satisfaction measurement generally lacks methodological as well as conceptual soundness, which makes examining validity of instruments problematic. As a result, only face and content validity were mentioned by researchers (Lin, 1996:210, Baker, 1991:172). Validity can be divided into four main varieties:

#### 6.10.1.1 Face Validity

Face validity is the most obvious, simple, and straightforward type of validity. It is a method used to see if the measure seems to be obtaining the desired results. The measure has this type of validity if it appears to measure what it is supposed to measure (Nunnally, 1978; Oppenheim, 1992; Nardi, 2006). Consulting experts is the most widely given advice to check face validity (Oppenheim, 1992; Gutteling et al., 2008). Obviously, such a check is highly subjective and relies heavily upon the expertise of experts (Sarantakos, 1998). Face validity seeks to acquire judgments concerning the measure after being constructed. Thus, some consider face validity as one aspect of the content validity (Nunnally, 1978).

#### 6.10.1.2 Content Validity

The assessment of content validity is most common (Wilson and Butterworth, 2000:42). Content validity means that the survey instrument makes sense and reflects appropriately the domain under investigation (Etter and Perneger, 1997; Carmines and Zeller, 1979; de Vaus, 1996). Content validity examines the instrument to make sure it contains questions on each factor that is important to the beneficiary's decision about satisfaction (Baker, 1991; Nardi, 2006). It is argued that to ensure this sort of validation, it is necessary to meet two standards: (1) the items should be representative of the concept under investigation; and (2) the items should be well constructed (Nunnally, 1978). But given that there is no absolute agreement upon the concepts in the social sciences, it is difficult to develop measures that have satisfactory content validity (Carmines and Zeller, 1979; de Vaus, 1996).

#### 6.10.1.3 Criterion validity

Criterion validity considers whether scores on the instrument agree with a definitive, "gold standard" measurement of the same theme. McDowell (2006:31) stated that "this

option for validating a measure typically occurs when a new instrument is being developed as a simpler, more convenient alternative to an accepted measurement". The new and established approaches are applied to a suitable sample of people and the results are compared using an appropriate indicator of agreement. The comparison may be used in a summative manner to indicate the validity of the measure as a whole, or it may be used in a formative manner during the development of the new measure to guide the selection of items by identifying those that correlate best with the criteria (McDowell, 2006:32). The researcher checks the performance of the operationalisation against several criteria. The researcher makes a prediction regarding how the operationalisation will perform based on theory of the construct. Differences among the different criterion-related validity types are in the criteria researchers use as the standard for judging the measure (Sitzia, 1999; Sekaran, 2003). Scores on the instrument are correlated with those on a valid and reliable measure of the same attribute (the criterion measure) and validity coefficients are calculated (Wilson and Butterworth, 2000:42).

#### 6.10.1.4 Construct validity

Embretson (2007:449) stated that *"Construct validity has always been the most problematic type of validity because it involves theory and the relationship of data to theory"*. Construct validity is the degree to which an instrument measures the theoretical construct it is intended to measure (Gutteling et al., 2008; Sitzia, 1999; Etter and Perneger, 1997). To establish the construct validity of a satisfaction questionnaire, a series of hypotheses are formulated regarding the characteristics of the questionnaire. Satisfaction is assumed to be measured correctly if the hypotheses are supported by data (Etter and Perneger, 1997). Construct validation confronts the researcher with the difficulty that while it is fairly easy to hypothesise the direction of an association between satisfaction and another variable, specifying the expected strength of the association is far more difficult (Etter and Perneger, 1997:884).

One possible solution proposed by Sekaran (2003) to test the validity of patient satisfaction measurement is the use of the multitrait-multimethod process, which can provide strong evidence of construct validity. The multitrait-multimethod process was first developed by Campbell and Fiske (1956) and designed to judge the adequacy of a test as a measure of a construct. The basic idea of multitrait-multimethod validity is that a construct should be related to certain traits and unrelated to other traits. The researcher specified a priori a list of multiple ways to measure the construct and some distinctly different constructs that can be measured by the same methods. Convergent validity can be established when there is a high degree of correlation between two different sources responding to the same measure (Sekaran, 2003)

Divergent validity coefficients are correlations between measures of different constructs using the same method or correlations between different constructs using different methods. To establish validity, convergent validities should be substantially higher than divergent validities. This method has been used in psychological research and has been accepted as an adequate evidence for validity. Therefore, researchers need to incorporate multiple and different data-gathering methodologies to more rigorously validate the measurement of patient satisfaction. The Mann–Whitney test for construct validity can be used to identify any significant differences pre- and post-test between the groups (Traverso et al., 2007).

#### 6.10.1.5 Instrument validation procedures

Several validation procedures were performed to establish the validity of the instrument:

- A group of professionals with content and methodological expertise reviewed the instrument for face validity; it was pretested on a convenience sample of 4 experts to explore their opinions on its components. They were asked to assess their understanding of item appropriateness. Experts indicated that the items

appeared to be clearly phrased, understandable and relevant to the purpose and scope of the study as they understood it. Some revisions were made according to their feedback. To assess the content validity, the instrument items were compared with the items identified in the literature review. In addition, to confirm the content validity of the items of the customised instrument in its initial format, the instrument was independently reviewed and evaluated by four bilingual experts with different specialisms (health care management, statistics and research methodology) to check whether a specific set of items reflects a content domain. The instrument was reviewed by Dr. Abdullah Al-Sharif (The General Secretary of Cooperative Council of Health Insurance), Dr. Fahad Al-Ateeg (General Director of Operations at King Fahad Medical City), Dr. Mohammed Awadh Othman (Health Services Sector at the IPA) and Professor Mohamad Shamel (IPA). The experts were asked to assess the scale dimensions and comment on whether these would sufficiently capture all aspects of satisfaction with the CHIS. They were asked about their opinions on the demographic section and the use of a Likert scale in the study and whether the questions were yielding a range of responses. They were also asked to comment on the appropriateness and inclusiveness of the questions in the CMT instrument in respect of the following:

a) the suitability and clarity of the wording of each item included in the instrument.
b) whether content of the instrument sufficiently reflected the items of interest in this study.
c) whether certain items should be reassigned between dimensions or removed from the scale.
d) whether some of the original items should be replaced by others.
e) whether new items should be added to the scale.

In addition, the instrument was submitted to four fellow PhD colleagues to obtain their opinions on the face validity of the scales. They were asked to express their opinions, raise issues for discussion and provide comment/critiques and recommendations on what they considered important for the tool. Opportunity was given to everyone to express his/her opinion, to prioritise the importance and weight of the questions. All of the referees were interviewed after they completed the questionnaire and asked to give extended comments about the variables and content of the questionnaire. The following alterations, as suggested by the experts, were made: With regard to aims and objectives of study, all the items in this instrument were considered relevant and understandable. No suggestions were made for alteration and so the items were retained as originally drafted. The experts proposed that although the CMT dimensions could cover the various aspects of satisfaction with the CHIS in Saudi Arabia, two additional dimensions should be considered, namely, the role of the insurance company and the role of the employer in the delivery of health insurance services. In addition, they suggested additional items be added such as comprehensiveness of coverage and delays in claims settlement. Some amendments and modifications based upon their comments and feedback were carried out, as reported above. PhD colleagues made no suggestions for any addition, removal or amendment of items. In order to comprehensively investigate satisfaction with services provided under the CHIS, two new dimensions, not used by the original CMT or other similar studies, were added i.e. questions concerning agreement/disagreement with regard to employer role (4 items) and insurance company role (5 items) in health insurance coverage. The new dimensions are believed to have an impact on the level of beneficiaries` satisfaction with the CHIS. Items in the cost dimension were rephrased to tackle

questions concerning financial aspects of health insurance. The following table shows the dimensions and items added during content validation.

**Table 6.4 Dimensions and items added during content validation**

| Dimensions | # | Items |
|---|---|---|
| **Employer role** | 1 | I have been denied access to health care services under cooperative health insurance |
| | 2 | I have been supplied with a list of available providers |
| | 3 | I have been informed about coverage limits |
| | 4 | I have the freedom to choose health care provider |
| **Insurance company role** | 1 | The insurance company was responsive to my complaints and comments |
| | 2 | If preauthorization was requested, the waiting time for the insurance company answer was appropriate |
| | 3 | The insurance company has competent and qualified staff able to manage the insurance processes |
| | 4 | The health insurance representatives were courteous |
| | 5 | I am satisfied with the way the insurance company used to process my claims |
| **Cost** | 1 | The method of payment was convenient |
| | 2 | The copayment (percentage of the fee) for physician care you pay at each visit |
| | 3 | The copayment you pay for medicines |
| | 4 | The copayment you pay for laboratory tests and radiography (X-rays and ultrasound) |
| | 5 | The cost of health care uncovered by insurance |

- Factor analysis (a multivariate technique) was used to establish the factorial validity of the CMT instrument as suggested by Sekaran (20003:308). Exploratory factor analysis was used to (1) explore factors within the modified CMT instrument; (2) confirm whether or not the theorised dimensions emerge and whether the dimensions are indeed tapped by the items in the measure; and (3) identify the most important dimension of beneficiaries' satisfaction with the CHIS. According to Andy Field (2005:617), factor analysis statistical technique can be used to (1) understand the structure of a set of variables; (2) construct a questionnaire to measure an underlying variable; (3) reduce a data set to a more manageable size while retaining as much of the original information as possible.

Factor analysis can provide information about the validity of the hypothesised grouping of items in dimensions (Traverso et al., 2007:219). Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Tests were used to identify any correlation between the items of the survey dimensions. Table 6.5 shows that the value of KMO is above (0.75) and the value of Bartlett's test is (p-value <0.000).

**Table 6.5 KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | Bartlett's Test of Sphericity | | |
|---|---|---|---|
| | Approx. Chi-Square | d.f | Sig. |
| 0.939 | 8259.252 | 903 | 0.000 |

This means that there is a significant high correlation between the items of the survey dimensions which justifies the use of factor analysis (Hair et al., 2003). Principal components analysis (PCA) with varimax rotation and Kaiser normalisation were used to identify the components or factors that determine beneficiaries satisfaction with the CHIS and were being addressed by the questions. Six factors were extracted.

Table 6.6 shows that all items loaded perfectly high on the factors to which they theoretically belong, with the exception of item X6.4.1 (I have been denied access to health care services under the CHIS) which belongs to "employer role" dimension in the CMT instrument. The table shows that this item has loaded low on factor four "communication while receiving services". This is may be attributed to the difficulties in understanding the procedures of obtaining care under the CHIS or it may be justified due to the lack of information regarding the health insurance benefits.

**Table 6.6 Rotated factor matrix for CMT instrument (general satisfaction questions excluded)**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| x2.4 | 0.754 | | | | | |
| x2.6 | 0.748 | | | | | |
| x2.5 | 0.745 | | | | | |
| x2.8 | 0.707 | | | | | |
| x2.7 | 0.680 | | | | | |
| x2.9 | 0.623 | | | | | |
| x2.3 | 0.622 | | | | | |
| x2.1 | 0.611 | | | | | |
| x2.2 | 0.566 | | | | | |
| x2.10 | 0.517 | | | | | |
| x2.12 | 0.465 | | | | | |
| x2.11 | 0.450 | | | | | |
| x3.4 | | 0.767 | | | | |
| x3.5 | | 0.732 | | | | |
| x3.3 | | 0.661 | | | | |
| x3.2 | | 0.644 | | | | |
| x3.6 | | 0.644 | | | | |
| x3.8 | | 0.620 | | | | |
| x3.7 | | 0.619 | | | | |
| x3.10 | | 0.598 | | | | |
| x3.9 | | 0.585 | | | | |
| x3.1 | | 0.524 | | | | |
| x6.5.5 | | | 0.746 | | | |
| x6.5.3 | | | 0.736 | | | |
| x6.5.1 | | | 0.733 | | | |
| x6.5.2 | | | 0.714 | | | |
| x6.5.4 | | | 0.703 | | | |
| x4.4 | | | | 0.741 | | |
| x4.5 | | | | 0.712 | | |
| x4.3 | | | | 0.706 | | |
| x4.6 | | | | 0.701 | | |
| x4.2 | | | | 0.615 | | |
| x4.1 | | | | 0.582 | | |
| x4.7 | | | | 0.575 | | |
| x6.4.1 | | | | 0.134 | | |
| x5.3 | | | | | 0.908 | |
| x5.2 | | | | | 0.899 | |
| x5.4 | | | | | 0.869 | |
| x5.1 | | | | | 0.778 | |
| x5.5 | | | | | 0.684 | |
| x6.4.2 | | | | | | 0.865 |
| x6.4.3 | | | | | | 0.813 |
| x6.4.4 | | | | | | 0.498 |
| Eigenvalue | 17.656 | 2.999 | 2.039 | 1.796 | 1.613 | 1.468 |
| % of variance | 41.061 | 6.975 | 4.743 | 4.177 | 3.752 | 3.414 |
| Cumulative % | 41.061 | 48.036 | 52.779 | 56.955 | 60.707 | 64.121 |

In order to be retained on a scale an item must meet the following criteria: factor loadings higher than 0.30 and no higher loading on another factor (Streiner and Norman, 1995; Lewis-Beck, 1994). Exploratory factor analysis shows that all items had high loadings (from 0.450 to 0.754) on the first factor "service delivery under the CHIS" which explained 41% of the cumulative variance (Eigenvalue-17.656). A Principal Components Analysis over six factors explained 64.1% of the total variance.

This study has not addressed the question of construct validity. Construct validity is based on actual results; sometimes it is not achieved until after the data have been collected and statistically analysed (Nadi.2006). The construct of beneficiaries' satisfaction with the CHIS, the theory that proposes an explanation for it, its determinants and consequences, remains to be fully investigated in future studies. It can be concluded that the modified version of the CMT instrument is successful in measuring what it was designed to measure, i.e. beneficiaries' satisfaction with services provided under the CHIS.

### 6.10.2 Reliability

Carmines and Zeller (1979) refer to the reliability of a measuring procedure as "the tendency toward consistency found in repeated measurements of the same phenomenon". In surveys where all measures attempt to measure the same construct, internal consistency tests are used for assessing the reliability of measurement scales. Many techniques have been suggested to assess internal reliability. Among these techniques are split half and Cronbach's alpha. The split half approach measures the internal consistency within a multiple indicator measure by dividing the items into halves based on a specific method. Cronbach's coefficient (Cronbach, 1951) is more popular and more advisable, since in effect it calculates the average of all possible split-half reliability coefficients (Carmines and Zeller, 1979; Bryman, 1988).

Coefficient alpha is a test of how well related with each other are the items in a questionnaire or a section of a questionnaire (Evangelos, 2007). Coefficient alpha is usually positive, taking on values from 0 to 1.0, where larger values indicate higher levels of internal consistency. DeVellis (2003); Nunnally (1978); Nunnally and Bernstein (1994) and Traverso et al. (2007) recommended that alpha should be at least 0.70 for a scale to demonstrate internal consistency. Values of alpha between 0.70 and 0.90 are preferred. Other authors suggest that an alpha score of 0.60 is generally acceptable (Moss et al., 1998). The coefficient alpha reliability was used to test the reliability of the instrument used for this study.

The Cronbach's alpha reliability coefficients were calculated for the dimensions by using SPSS statistical software. The alpha coefficients were (0.817) for service delivery, (0.857) for access and availability of service, (0.849) for communication while receiving health care service, (0.714) for the cost dimension and (0.760) for insurance company role. The alpha coefficient was below the benchmark of 0.70 for employer role dimension (0.637). The low value of alpha coefficient may be attributed to the fewer number of items in the scale (Etter and Perneger, 1997). The obtained coefficients imply that the customised CMT was indeed reliable, stable, consistent, dependable and accurate in measuring beneficiaries' satisfaction with the CHIS. Table 6.7 illustrates the average scores and the reliability of the scale.

As a result of the analyses conducted so far regarding the reliability, internal consistency, validity and stability of the CMT scale, it was concluded that the scale is reliable, valid and stable and can be used to assess beneficiaries` satisfaction with the CHIS.

**Table 6.7: Reliability statistics for the study instrument dimensions utilising Cronbach's Alpha**

| # | Dimension | No. of Items | No. of cases | Cronbach`s Alpha |
|---|---|---|---|---|
| 1 | Service delivery | | | |
| | - Level of importance statements | 12 | 30 | 0.907 |
| | - Level of satisfaction statements | 12 | 30 | 0.905 |
| | Dimension in general | 24 | 30 | 0.817 |
| 2 | Access and availability of service | | | |
| | - Level of importance statements | 10 | 30 | 0.908 |
| | - Level of satisfaction statements | 10 | 30 | 0.903 |
| | Dimension in general | 20 | 30 | 0.857 |
| 3 | Communication while receiving care | | | |
| | - Level of importance statements | 7 | 30 | 0.900 |
| | - Level of satisfaction statements | 7 | 30 | 0.819 |
| | Dimension in general | 14 | 30 | 0.849 |
| 4 | Cost | | | |
| | - Level of importance statements | 5 | 30 | 0.908 |
| | - Level of satisfaction statements | 5 | 30 | 0.894 |
| | Dimension in general | 10 | 30 | 0.714 |
| 5 | Employer role | 4 | 30 | 0.65 |
| 6 | Insurance company role | 5 | 30 | 0.76 |

## 6.11 Pilot study

The researcher was now left with a set of problems to be solved before the general administration of the instrument. The purpose of a pilot study is to try out the study instruments and to test out the feasibility of the data collection process (Reid and Boore, 1990). Isaac and Michaels (1985) list seven advantages to conducting a pilot test before administering the actual survey to the participants. Briefly, they include: a) a chance to test research hypotheses; b) insight into fresh ideas and approaches; c) a check on statistical and analytical procedures; d) elimination of errors; e) savings to the researcher in time and/or money; f) a source of feedback; and g) a means of

experimenting with alternative approaches to conducting the survey. There were two major concerns in the development of the instrument used in this survey. First, it was important that the statements were relevant to the research questions posed in the study. Second, it was necessary that the clear, concise wording of the items as written in English be duplicated in the Arabic translation. For these reasons, it was decided to conduct a pilot test.

A pre-testing of the survey was conducted to ensure that any problems with the survey, such as sequence of questions or wording of questions, were identified and corrected. The researcher tried the questionnaire on a small number of respondents who had the same characteristics as the target population with the aim of ensuring that there were no difficulties in answering the questions and no problems in recording the data (Bryman and Bell, 2003). Oppenheim (1992) indicated that the pilot study is expensive and time consuming, but avoids waste of resources in the main study. The pilot study was carried out for the following purposes:

a) To ensure the intelligibility of wording of statements from the respondents' point of view, including the accuracy of the translation.
b) To test the reliability of the instruments that would be used in the main study, and if necessary to increase reliability by identifying and removing any weak items.
c) To obtain an accurate estimate of the time needed for participants to complete the questionnaire.
d) To explore any difficulties and problems of administration and finances.
e) To elicit any suggestions which may be put forward by the participants through responses to questionnaire.
f) To consider what statistical tests may be appropriate for use on the data intended to be collected.

The pilot study was carried out from 20-01-2008 to 30-01-2008 during a visit to Saudi Arabia. The questionnaires were given to 30 beneficiaries who had the same characteristics as the target population to obtain their view point with regards to the clarity, relevance and quality of the questions. They were asked to read each item, select a response, and then verbalise what their response meant to them. It was then possible to assess the extent to which the items were interpreted and responded, as intended. Instructions were given to people participating in the pilot test to write their comments on the draft questionnaire (Nardi, 2006). Respondents were asked to a) offer advice on whether items were comprehensibly worded for the average beneficiary and suggest any appropriate alterations; and b) propose the addition of new items if necessary or the removal of items they would consider as meaningless. The respondents completed the questionnaires independently and were then asked their interpretation of the questions. This test allowed for assessment of the suitability of the questionnaire. It enabled the researcher to decide on the difficulty of answers, length of time required to complete the questionnaire, enrolment problems and difficult questions scores. Effort was made to ensure that the questions were very clear, simple and unambiguous in order to increase the reliability of the instrument.

The returned questionnaires were checked for incorrect answers or marks left on the page by the respondents. Despite the fact that simple language was used, the least educated respondents had more difficulty in filling the questionnaire than the more educated. This result stresses the importance of clear and unequivocal wording of survey items. Pre-test feedback was used to refine the questionnaire until it was ready for data collection. While no proposals for adding or removing items were made at this stage, certain items had to be reworded to become comprehensible in Arabic. Three of these had to be considerably rephrased. Administration of this pilot test showed that the items were relevant to the research questions and that they had lost none of their

meaning in the translation from English to Arabic. Thus, this test yielded two of the advantages cited by Isaac and Michaels (1985): a chance to eliminate errors and a valuable source of feedback concerning the validity of the survey instrument. All comments were taken into consideration. The last product of the pre-testing and modification task was the production of the final survey. The final form of the translated instrument may be seen in Appendix E.

### 6.12 Target population

The CHIS Rules as per Article 120 are applicable to employers (companies and sole establishments) whose foreign labour exceeds five hundred persons; therefore, the target populations are all CHIS beneficiaries (Saudis and non-Saudis) residing in Riyadh city who have been covered by health insurance for the year 2007. 2.2M beneficiaries (27.5% of the expatriates) have been covered by CHIS since 19/6/2006. A list of all private sector organisations (employing 500 individuals or more) participating in the CHIS and operating in Riyadh city was obtained from Riyadh Chamber of Commerce (see appendix B). It was found that the total number of participating companies /establishments was 191 and that the total number of beneficiaries working for these companies/establishments was 375,186. Beneficiaries were asked to respond to questions with reference to their last visit to a health care facility to receive health care under the CHIS. The focus on beneficiaries living in Riyadh city is appropriate as Riyadh city has the greatest number of foreign workers as mentioned earlier.

### 6.13 Sampling methods

The heart of survey research is the selection of representative samples (Graziano and Raulin, 2004). A sample is a subset of a larger population (Zikmund, 2000). A good sample is one which accurately reflects its population (De Vaus, 1996). Hill et al.

(1999:4) stated that *"three things decide the accuracy of a sample. It must be representative, it must be randomly selected and it must be large enough"*. Many authors such as Hussey and Hussey (1997) and Bryman (2001) argued that sampling falls into two groups, namely probability sampling which includes simple random sample, systematic, stratified, and cluster sampling; and non-probability sampling which includes quota, convenience, purposive, snowball, and judgment sampling. A sampling unit is that element or set of elements considered for selection in some stage of sampling (Babbie, 1992). The sampling unit for this study was the individual beneficiary covered by the CHIS in Riyadh City. Each beneficiary had an equal probability of being selected in this study.

### 6.13.1 Sampling frame

A sampling frame is the actual list of sampling units from which the sample or some stage of the sample is selected (Babbie, 1992), that is, the list of beneficiaries that the researcher will sample from. The accuracy of a sample depends on the sampling frame. Every aspect of the sample design, the population covered and the stages of sampling and the actual selection process is influenced by the sampling frame (Nachmias and Nachmias, 1996). In this study, the sampling frame is the body of all CHIS beneficiaries who were employed by private sector organisations (over 500 employees) and who have been covered for the year 2007.

### 6.13.2 Sample size

The size of the beneficiaries` sample was determined using the following formulae (Kish, 1995; Cochran, 1977 and Abu Shaar, 1997):

$$n = \frac{z^2 * p * (1 - p)}{d^2}$$

Where,

(n) represents the minimum sample size that must be withdrawn.

(P) represents the rate of occurence of the phenomenon, which is the rate of the beneficaries' satisfaction with the CHIS in Riyadh city. The value of (P) is unknown. Therefore, the rate can be estimated from previous exploratory samples or it can be estimated by 0.05 value which gives the largest sample size. In this study the researcher has assumed this rate to be 0.05 (p=0.05).

(d) represents the largest allowed error margin when estimating occurence of a phenomenon (the required accuracy). It is estimated between 0.05 and 0.01.

(Z) represents the z value (1.96 for 95% confidence level)

$$n = \frac{1.96^2 * 0.50 * 0.5}{(0.04)^2} = 600$$

Based on the previous formula the appropriate sample size was 600 beneficiaries. Roscoe (1975) proposes that sample sizes larger than 30 and less than 500 are appropriate for most research. A larger sample will always be more reliable than a smaller sample, whatever the size of the total population (Hill et al., 1999). Bryman (2001; 2004) argued that sample size is affected by considerations such as time and cost, sampling error, non-response, kind of analysis and heterogeneity of the population. He also emphasised the factors of time and cost, because these factors are very important for every researcher.

### 6.13.3 Study Sample

The size of the sample needed to represent a population adequately depends on the degree of homogeneity in the population (Graziano and Raulin, 2004). Given certain time and cost constraints it was decided that a relatively more simple procedure would produce an acceptable sample. The researcher decided to use the multistage sampling approach because of the difficulty in obtaining a list with the names of all beneficiaries.

A multistage random sample was conducted by taking simple random samples in two stages as follows:

**In the first stage**, a random sample of 15% was withdrawn from the 191 companies/establishments participating in the CHIS, which means that a simple random sample of 28 companies/establishments was collected (See appendix C which shows a list of the selected organisations and the total number of beneficiaries).

**In the second stage**, the researcher has divided the sample size, 600 beneficiaries, by the number of selected companies/establishments withdrawn from the first stage, 28, which yields 25 surveys per company/establishment. It was decided to distribute the surveys as follows: 15 surveys for non Saudis and 10 surveys for Saudis.

Initial telephone contacts were made to inquire about the possibility of meeting with Human Resources Directors at each respective company/establishment to obtain permission to distribute the survey to their employees. When approval was granted, a stratified random sampling technique was used to select the participants. Stratified random sampling procedures are used when it is important to ensure that subgroups within a population are adequately represented in the sample. In essence, the researcher divides the population into subgroups or strata, and a random sample is taken from each stratum (Graziano and Raulin, 2004). Stratified sampling is really feasible only when the relevant information is available, in other words, when data are available that allow the ready identification of members of the population in terms of the stratifying criteria, it is sensible to employ this sampling method (Bryman and Bell, 2003). A disproportional stratified random sampling was utilised to select representative subjects from each stratum. The researcher used disproportional stratified random sampling to ensure that specific elements that exist in small numbers are represented in sufficient numbers to allow meaningful statistical analysis (Black and Champion, 1996; Wilson and Butterworth, 2000). Black and Champion (1996:290) stated that:

> *If there are too few elements included in some substratum in the population, the researcher may simply elect to use all elements from that particular substratum. In effect, this is attaching greater weight to some substratum compared with its original contribution in the population distribution.*

The reason for selecting a stratified sample was to have a more efficient sample than could be taken on the basis of simple random sampling. Another reason for taking a stratified sample was the assurance that the sample would accurately reflect the population on the basis of the criteria used for stratification.

### 6.14 Survey administration procedures

In the field most of the time was devoted to the collection of data using three main methodological techniques: participant observation, interview and questionnaire survey. In the first phase of the research data was obtained from the participants through the use of self-administered questionnaire. Supporting letters were obtained from the University of Hull and from the IPA, 'the researcher sponsor', to facilitate the data collection (see appendix H). The letters were delivered by the researcher to each company/establishment so they would provide the necessary help and cooperation to the researcher. Human Resources Directors at each company/ establishment were instructed to distribute the surveys to their employees, taking into account the stratified approach according to departments and organisational level. The fieldwork was carried out from 15-02-2008 to 14-05-2008 in Riyadh city. The selection of this time period to conduct the study was very appropriate because most expatriates leave the Kingdom to visit their families during the summer which starts in July of each year. Rubin (1990) suggests that several factors could influence patients' judgments of their satisfaction including timing of survey, response format, and non-response.

The data collection process in Saudi Arabia was a challenging task. The Saudi society is not used to participating in research. Alshammasi (1986:71) stated that "the process of

collecting data about developing countries including Saudi Arabia is usually difficult". Unlike Western countries, there are no arrangements for conducting surveys such as General Household Surveys and no consumer or public opinion surveys about health insurance have been carried out. Cook (2004:18) stated that "further difficulty could be that some cultures are not familiar with giving feedback and may need encouragement to do so". Therefore, to have opinions elicited is a totally different experience. Most studies reporting on patient satisfaction with general services used a cross-sectional sample of patients (Pradnya, 2009). A cross-sectional study was conducted to collect the data. A cross-sectional design involves administering the survey once to a sample, yielding data on the measured characteristics as they exist at the time of the survey (Graziano and Raulin, 2004). Self-administered questionnaires were distributed to beneficiaries in their respective organisations, to avoid obtaining false responses from beneficiaries if the survey were distributed in a health care setting, when they might have unstable thoughts and feelings. Women are considered very frequent users of the health services, not only for themselves, but also for the health care needs of their children; therefore, their opinion with regard to the satisfaction with the CHIS is very important. "Women visit their GPs almost twice as often as men, consume more drugs and medicines than men, occupy acute hospital beds slightly more than men and are admitted to psychiatric units more than men" (Hogg, 1999:6).

In Saudi Arabian culture, a male interviewer is not allowed to meet a female patient. Segregation between men and women is prevalent and intimate interaction between men and women can take place only within the family (www.gmid.euromonitor.com). Islam allows the relaxation of segregation when it is necessary, and necessity is defined as when there is harm to oneself. For example, patients would be harmed if they did not get treatment from health professionals of the opposite sex when there was no other alternative, so it is permitted (Alshammasi, 1986). In order to overcome the obstacle to

surveying women, the resarcher sought help from his wife, who holds a bachelor degree in information technology and a certificate in English as a Foreign Language from Wyke College, Hull, U.K. She visited women branches to distribute and collect surveys. In a self-administered questionnaire, the respondents read the instructions and write or mark their answers to the questions (Graziano and Raulin, 2004). Beneficiaries were asked to fill in the questionnaires and to return them to the human resources department at each respective organisation. Every effort was made to improve the response rate in order to obtain the greatest possible number of completed surveys necessary to improve the validity, reliability and generalisability of the results. The researcher has contacted and visited each company/establishment for the purpose of accelerating the data collection process. The respondents returned their completed questionnaires to the Directors of HR to be forwarded to the investigator. The researcher was able to retrieve 571 surveys; however, only 462 surveys (77% response rate) were considered usable because 109 respondents out of the 571 indicated that they had not received treatment through the CHIS in the year 2007 and they had not experienced the services provided under the CHIS. The following sections will discuss the criteria used to include and exclude beneficiaries in the study.

### 6.14.1 Beneficiaries' Inclusion Criteria

This study included all beneficiaries working for large size private sector organisations (500 employees and above) who were receiving treatment by health care providers under the CHIS in Riyadh city. The main reason behind the inclusion of beneficiaries who had experienced health care services under the CHIS is the fact that those beneficiaries are more capable of evaluating the different aspects of health care services provided under the CHIS. Many first-time beneficiaries use the service, and their expectations will not be well-formed. People may vary in their satisfaction with health care services because some people have based their evaluation on a real experience with

the health care system, whereas others have based their evaluation on an assumption. The second criterion involves the area covered by this study. Only organisations located in Riyadh City were included in this study. The exclusion of other cities and regions was due to the limitations of the time and resources available to the researcher. The researcher accepts that including all health insurance beneficiaries in all regions of the country could generate more accurate results that might be generalised with more confidence. However, such an exercise would be too expensive and lengthy and would require a level of accessibility not available to the researcher. This limitation has influenced all other similar research in this field. The third criterion was the age; only beneficiaries' aged 15 years old or more were included because this is the minimum work age in Saudi Arabia, according to the labour law (http://www.mol.gov.sa /mol_site/labor_law.pdf ).

### 6.14.2 Exclusion criteria

Governmental organisations were excluded because their employees can be treated in governmental hospitals free of charge according to the CHIS Act. The exclusion of governmental organisations, as well as some of the following issues, imposed limitations upon the researcher in his choice of the study sites. However, these limitations are expected to help generate better results. Also, companies and establishments administering their own health care facilities were excluded as per Article 13 of the Council of Ministers Decision No.71 dated 11.08.1999 EC, which states that "*Health Insurance Council exempts employees who work with companies which administer their own health care services"*. Beneficiaries who had received emergency care were excluded from this study. Reidenbach and Sandifer-Smallwood (1990) found that patients of the emergency departments are often in an agitated and emotional state which may render their participation a difficult, if not impossible task. Moreover, some beneficiaries were excluded because of their inability to understand the

questionnaire, such as those under18 years of age. Others were excluded because they could understand neither Arabic nor English. Most of those were workers, with low levels of skill, who came from countries with underdeveloped health care systems. These exclusions imposed more restrictions on the researcher and increased the length of the data collection stage.

### 6.15 Interviews

The interview is a kind of conversation (Robson, 2000). It is one of the main data collection tools in qualitative research. It is a very good way of accessing people's perceptions, meanings, and definitions of situations and constructions of reality. The interview takes seriously the notion that people are experts on their own experience and so best able to report how they experienced a particular event or phenomenon (Bryman and Bell, 2003). It is also one of the most powerful ways used to understand others. As Jones (1985:46) puts it:

> *In order to understand other persons' constructions of reality, we would do well to ask them. . . and to ask them in such a way that they can tell us in their terms (rather than those imposed rigidly and a priori by ourselves) and in a depth which addresses the rich context that is the substance of their meanings.*

Burgess (1980) contended that interview gives greater depth than other research techniques. This is because, Burgess claims, it is based on 'a sustained relationship between the interviewee and the researcher'. Interviews must be viewed, then, as social events in which the interviewer (and for that matter the interviewee) is a participant observer. Interview data, like any other, must be interpreted against the background of the context in which they were produced (Hammersley and Atkinson, 1983). The qualitative research interview is an effective way of ‘getting inside’ the thoughts of a number of subjects and so examining how they each see the reality under discussion and the meaning that they construe around that perceived reality (Guba and Lincoln, 1994). The purpose of the in-depth interview was to come to understand customers, to clarify

the things that are important to them, to draw out the things that make them satisfied or dissatisfied as customers. In order to understand the situation in its totality, the researcher interviewed employees at several levels and from different backgrounds. In qualitative studies, only small samples of individuals, groups, or even invariably chosen, in view of the in-depth nature of the study (Sekaran, 2003). Hill et al. (1999:12) stated that *"A typical number of in-depth interviews that would be carried out in a business market are twelve"*. The simplest form of non-probability sample is a convenience sample. It would be quick, easy and cheap, but it would not be very representative (Hill et al., 1999).

### 6.15.1 Criteria for selecting the interviewees

A convenience sample of 21 male beneficiaries who had agreed to participate in the interview in this phase of the research was selected to explore their views due to the limitation of time and resources available to the researcher. The in-depth interviews were limited to men because it was not possible for a man to interview women as a result of the sex segregation practised in Saudi Arabia. In addition, the majority of beneficiaries working in the private sector were men. Therefore, it was decided to interview men only, since men have more of the required information. All beneficiaries who were contacted agreed to participate in the interview, giving an excellent response rate of 100%.

### 6.15.2 Interview piloting

Piloting has been done for the purpose of knowing if the proposed methods of collecting data 'work' in terms of achieving the goals. Pilot interviews were carried out with people representative of the beneficiaries. Four interviews were carried out to gain a feel for the issues which were important to the beneficiaries. Following the pilot study the data were manually analysed and at the end of this process it was decided that it would be

necessary to use a software package for the full study. This decision was initially made on the basis of volume of data.

### 6.15.3 Conducting the Interviews

In-depth unstructured face-to-face interviews were conducted during a visit to Saudi Arabia with 21 beneficiaries who had completed the survey and covered by CHIS with the purpose of bringing some issues to the surface so that the researcher could cover all matters which have not been covered in the survey. The researcher was interested in understanding beneficiaries' points of view with regard to their satisfaction with services provided under the CHIS.

In Saudi Arabia shops, offices and other activities close when the faithful are called to prayer. Friday prayers are of special significance. Related to the pervasiveness of Islamic culture; therefore, interviews were scheduled around the benchmarks of daily prayers. In addition, the researcher tried to collect data at a time convenient to the respondents. Sekaran (2003:231) stated that "Biased data will be obtained when respondents are interviewed while they are extremely busy or are not in good humour". Also, managers may be unwilling to grant lower level employees the time away from productive activity that is needed to conduct an interview; therefore, the researcher has coordinated the interviews with the human resources department at each company/ establishment via telephone calls followed by letters in order to obtain authorisation to conduct the interview with the employees. Healey and Rawlinson (1993) recommended that a dual approach: first make a telephone call, 'fishing' for a named person who is most likely to be appropriate for the interview, then follow this up with an introductory letter. Most of the interviewees preferred to be interviewed at their natural work places but at a time convenient to each one of them. Bryman and Bell (2003:347) indicated that interviewing within organisations *"involves encroaching on an individual's work*

*time and in some cases it may not be possible to take people away from their work during the hours of their employment"*.

The difficulty of one-to-one interviews was finding a time when everybody was free. A timetable for interviewing was planned and the researcher contacted the interviewees to explain the purpose of the interview. The interviewees were told about the content of the interview and the time it was likely to last. Also the researcher negotiated a place in which to interview them. For this purpose, the researcher asked the public relations departments to allocate a quiet, private space in which to conduct the interviews.

Each interviewee was identified by number only. At the beginning of the interview, the researcher introduced himself to the interviewee and explained the purpose and importance of interview. The interviewee was told that the interview would take from 30 to 90 minutes to complete. The researcher assured all participants that their responses would remain confidential and anonymous. The interviewees were given the opportunity to terminate the interview at any point. Permission to record the interview was obtained from the interviewees; however, some interviewees refused to audio record the interviews. If any interviewee refused to be recorded then note taking would be the alternative to use. Bryman and Bell (2003:353) contended that "when faced with refusal, you should still go ahead with the interview, as it is highly likely that useful information will still be forthcoming". In these cases, the interviewees` responses were recorded on paper during the interview. While this is less intrusive on the one hand, it affected the interview process, since the researcher had to interrupt eye contact occasionally (McQueen and Knussen, 2002).

The interviews were conducted after the analysis of quantitative data; therefore, the underpinning of the interview questions was the result of the quantitative analysis. In addition; other topics related to satisfaction with services provided under health

insurance as identified in the literature were addressed in the interviews. Open questions were asked to obtain the required data. Freedom was retained to choose the phrasing and question order that seemed most appropriate to the circumstances of each interview, and to use prompts and probes as appropriate to maintain the discussion and follow up interesting points as they emerged. The interview consisted of questions which related to the selected service areas. The first question elicited personal information about the beneficiary such as age, nationality, marital status, educational level, monthly income and type of health insurance coverage, in order to obtain a profile of interviewees and identify factors which might aid in the interpretation of their responses. In the initial stages, only broad, open ended questions were asked, and the replies to them informed the researcher of the perceptions of the individuals (Sekaran, 2003). The researcher introduced the topic in general terms and then followed the lead of the interviewee.

The broad point which has been emphasised in each interview was:

> *"the CHIS has been enforced on all employees two years ago. Many things had changed with regard to the provision of health services to beneficiaries and this has been associated with satisfaction and dissatisfaction. I would like you to highlight these issues based on your experience and interaction with the health care system last year".*

The unstructured interview does not involve a detailed interview guide. Instead, the interviewer asks questions that gradually lead the respondent to give the desired information. This type directly involves the researcher as a subject and participant in the data collection process and provides qualitative depth by allowing interviewees to talk about the subject in terms of their own frames of reference (May, 1997). Questions expressed perspectives and views, for example: What is your point of view regarding this issue? Why do you think that to be the case? Did you expect that to be the case? The number of questions varied among interviewees based on their past experiences with the CHIS.

Respondents were encouraged to talk and respond to questions freely. While the respondent is talking through this process, it is useful to make two sets of notes on separate pieces of paper (Hill et. al., 1999:13). Sometimes the type of information sought was difficult for the respondent to express. For this reason the interviewer tried to adapt continuously to the respondent's state of mind. This format is highly subjective and time-consuming (AL-Buraidi, 2006). The interviews were driven by the beneficiaries and focused on respondents' experiences with health care services when interacting with the health care system under the CHIS. The researcher elicited the beneficiaries' views about how well the health care services provided under the CHIS met their expectations. The aim of the researcher was to discover what is important to the beneficiaries when using the services. The researcher observed that there were *"individual differences in the ability to recall past events and to communicate them to the researcher"* (Dean and Sharp, 2006:13). At the end of the interview, the researcher addressed any issue that had arisen and allowed the interviewee to ask questions.

### 6.16 Observation

Observational data were used to complement the interviews. Observational data are precisely of value because they focus on naturally occurring activities. Observation is the pre-eminent method for gathering data about social processes in 'naturally occurring contexts', examining how people act in particular situations (Silverman, 1993). Observational methods were selected because they facilitate a close-up view of the actions of particular groups and allow for a degree of understanding to be built up about their perspectives (Gilbert, 2001). Atkinson and Hammersley (1994:249) stated that:

> *all social research is a form of participant observation, because we cannot study the social world without being part of it. From this point of view, participant observation is not a particular research technique but a mode of being-in-the-world characteristic of researchers.*

My former experience as a patient services manager at different hospitals in Saudi Arabia and as a member of the society under investigation and familiarity with its

customs have enabled me to observe the dynamic changes in the Saudi Health Care System and the changes made in the provision of health care after the implementation of the CHIS. As noted previously, observation techniques or roles can be classified into several types, according to the degree of involvement of the researcher, and whether or not his/ her researcher status is disclosed to those being observed. In this study, I did not confine myself to a single role or method, moving between the various types referred to by Remenyi et al. (1998) as appropriate to the circumstances. When I used hospital facilities, tried to book hospital appointment, or wait in the waiting area of the hospital, for instance, my role was that of a complete participant. At other times, for example, when having informal conversations with the professionals who knew of my status, the role was more one of participant-as-observer. During one - visit - interviews with respondents, the balance sometimes shifted more to observer as participant. The "complete observer" role was adopted rarely, if at all; some observations were made when I was waiting in the waiting area to see a physician.

I did not adopt a formal check-list of what to observe, as I was reluctant to impose "prior and possibly inappropriate frames of reference" (Silverman, 2006: 68) on the people under study, but wished to be open to the possibility of unexpected issues. Nevertheless, in order to provide a degree of formality and ensure contextualisation of the incidents observed, I followed the procedure recommended by Woodruff and Gardial (1996:170-171), as follows:

1. Determine the type of observation to be used, i.e. covert or overt (all observations were personal, due to the cultural unacceptability of videotaping).
2. Determine the relevant situation, e.g. post-consumption of insurance service (complaint etc).
3. Record observations within the relevant situation.

Field research is essentially a matter of immersing oneself in a naturally occurring set of events in order to gain firsthand knowledge of the situation. Field research can be used 'when one knows relatively little about the subject under investigation' (Silverman, 1997). Field notes, or extended transcripts, are very helpful in order to allow the reader to formulate his or her own hunches about the perspective of the people who have been studied (Silverman, 1997). Lofland and Lofland (1995 in Darlington and Scott, 2002) stress the necessity of recording as soon as possible after observing and suggest a practical process for dealing with the often impractical task of writing copious notes while in the field, whether through the risk of missing something else that is important or through concern for how those being observed will respond to one's writing. Their suggestion is to jot down brief notes during the observation and to write these up as full field notes after leaving the field. Field notes should include the following:

1. Breakdown of the various behaviours that the user displayed during the service interaction.
2. For each behaviour, a description of what was going on, including
    - Which particular aspects of the service played an important role.
    - Any problems or frustrations the user seemed to have.
    - Any positive outcomes of the interaction with the service.
    - Displays of emotion by the user when using the service.
    - The amount of time expended.
    - Any other situational factors that significantly contributed to the users' interaction with the service (e.g., the involvement of other individuals and/ or factors related to the physical environment).

## 6.17 Ethical Implications

Ethics are moral principles and values that influence the way a researcher or a group of researchers conduct their research activities (Ghauri and Gronhaug, 2005). One of the main concerns when conducting research lies with the ethical issues that arise in relations between research participants and researchers in the course of an investigation (Bryman, 2004). Ghauri and Gronhaug (2005) present ethical concerns on eight areas of the researcher-participant relationship (see table 6.8):

**Table 6.8 Ethical issues in the researcher-participant relationship**

| | |
|---|---|
| 1. | Preserving Participant's anonymity |
| 2. | Exposing participant to mental stress |
| 3. | Asking participants questions detrimental to their self-interest |
| 4. | Use of special equipment and techniques, e.g. tape recorder, video or health-hazardous equipment |
| 5. | Involving participants in research without their consent |
| 6. | Use of deception |
| 7. | Use of coercion to get information |
| 8. | Depriving participant's of their rights, e.g. of self-determination |

Source: Ghauri and Gronhaug (2005:21)

Despite the lack of a research committee in Saudi Arabia as in the UK, I did not research outside 'ethical guidelines'. I tried to follow the principles of 'beneficence' - doing good for others and doing no harm and assuming respondents have the same rights as I have myself; acting in the best interests of the respondents. Ethical principles governing research require that respondents should not be harmed as a result of participating and that they should give their informed consent (Bowling, 2004). Informed consent is generally taken to mean that those who are researched should have the right to know that they are being researched (Nardi, 2006). Although qualitative research methods such as in-depth interviews and observation "are the best ways of determining the range of customer experiences" (Cook, 2004:29), they can be highly

intrusive. Secret participant observation is also frequently an invasion of privacy (Gilbert, 2001).

The researcher complied with the University of Hull ethical requirements. Participants were informed of the purpose of the research and that the survey/interview was conducted as a requirement for a degree. Participants were assured that their names would not be recognised in this study. Complete confidentiality was guaranteed, the right of refusal to answer specific questions, and contact information were provided to the respondents.

### 6.18 Summary

This chapter has presented the research methods that were applied to achieve the research objectives. Quantitative and qualitative methods have been discussed and the choice of sequential explanatory triangulation design has been explained, the construction of a CMT questionnaire has also been described. The validity and reliability of the study instrument have been discussed. The final section in the discussion of quantitative methods described the sources of information, population and sample of this study. As regards qualitative methods, unstructured interviews were discussed. The researcher conducted 21 interviews with health insurance beneficiaries. The interview questions were in accordance with the results of the quantitative data analysis. The purpose of these questions was to enhance our understanding concerning the findings of the questionnaire. The use of observational data to complement the interviews was discussed. Ethical issues in this study were highlighted. Finally, the following chapters will discuss the data analysis techniques employed in this study and will report on the results of the quantitative data from the survey then the qualitative findings will be presented.

# CHAPTER SEVEN

## Analysis and Results of Quantitative Data

# 7. Analysis and Results of Quantitative Data

## 7.1 Introduction

This chapter reports on the data analysis and research findings of the questionnaire. Research is a systematic process of inquiry proceeding from initial ideas to final communication. At each phase, the researcher makes important decisions. One decision made in the design phase before data collection is determining what statistical procedures to use in analysing the results (Graziano and Raulin, 2004). The process of analysing the quantitative data begins after the data have been collected. This chapter provides a statistical description of the whole sample developed through the use of the demographic data collected in this study and analysis of data related to measurement of beneficiaries` satisfaction (CMT) attributes. Data is presented from the participants who answered the questionnaire.

## 7.2 Parametric versus Non-parametric Tests

Inferential statistical tests are divided into parametric and non-parametric tests. Field (2005:63) defines a parametric test as "one that requires data from one of the large catalogue of distributions that statisticians have described and for data to be parametric certain assumptions must be true". Parametric tests are more powerful than non parametric tests (Collis and Hussey, 2003:196). However, parametric tests can only be applied to populations which have normally-distributed data (Collis and Hussey, 2003:196). Other assumptions (i.e. homogeneity of variance, interval data and independence) also should be met in order to apply parametric tests (Field, 2005:64). However, as Field (2005:65) pointed out, the normality assumption is the most important.

For non-parametric tests, no assumption is required to be made regarding the distribution of the data. Therefore, they can be applied to data which are not normally

distributed (Kanji, 1999:3; Wilson and Butterworth, 2000:22). Pallant (2001:255) pointed out that the major disadvantage of non-parametric tests is that they tend to be less sensitive than parametric ones, since they may not be able to detect differences between groups that actually do exist. "However, because they are less discriminating, the results are correspondingly less reliable" (Collis and Hussey, 2003:196). Non-parametric tests can be used when the data are measured on nominal and ordinal scales and they are appropriate for small samples (Pallant, 2001:255). The major decision between using parametric or non-parametric tests depends on the assumptions of parametric tests, specifically the assumption of normal distribution. However, a review of the previous studies in Table 7.3 revealed that many researchers used both parametric and non parametric tests.

To assess the normality problem in this study, Kolmogorov-Smirnov (K-S) tests were undertaken to see whether the distribution as a whole deviates from normal (Field, 2005:93). K-S test was used to compare the scores in the sample to a normality distributed set of scores with the same mean and standard deviation (Field, 2005:93). The results of these tests revealed that the data set adhered to normality. Hence, parametric tests were used in this study.

**Table 7.1 Examination of normality**

| Variable | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | d.f | Sig. | Statistic | d.f | Sig. |
| Service delivery | 0.085 | 369 | 0.000 | 0.975 | 369 | 0.000 |
| Access and availability | 0.066 | 369 | 0.001 | 0.983 | 369 | 0.000 |
| Communication | 0.144 | 369 | 0.000 | 0.940 | 369 | 0.000 |
| cost | 0.093 | 369 | 0.000 | 0.964 | 369 | 0.000 |
| Employer role | 0.100 | 369 | 0.000 | 0.974 | 369 | 0.000 |
| Insurance company role | 0.099 | 369 | 0.000 | 0.970 | 369 | 0.000 |

## 7.3 Selection of statistical technique

Data analysis in satisfaction studies can range from examining percentage changes to applying sophisticated statistical techniques. The techniques are summarised in Table 7.2.

**Table 7.2 Customer Satisfaction Data Analysis Techniques**

| **Relatively Simple Statistics** |
|---|
| Averages, standard deviations, and statistical significance of trends |
| Gap between expectations and performance |
| **More Complex Statistical Techniques** |
| Correlation analysis |
| Multiple regression analysis |
| Discriminant analysis |
| Factor analysis |
| Correspondence analysis |
| Conjoint analysis |

Source: Dutka (1994:129)

Different approaches were used by many researchers in order to examine the association between satisfaction in general and the independent variables, as shown in Table 7.3.

**Table 7.3 Statistical techniques used in previous related studies**

| Author | Year | Country | Aims of research | Classification of research | Statistical test (s) |
|---|---|---|---|---|---|
| Al-Sakkak et al. | 2008 | K.S.A | To assess the level of patients' satisfaction with primary health care (PHC) services in health centres affiliated to Riyadh Military Hospital | Exploratory | - ANOVA<br>- Multiple Regression |
| Andaleeb, et al. | 2007 | Bangladesh | To identify the determinants of patient satisfaction with public, private and foreign hospitals | Exploratory | - Descriptive statistics<br>- Regression models<br>-Principal components factor analysis |
| Bostan, et al. | 2007 | Turkey | To measure the patients' expectations, based on Patient's Rights, to develop a scale that measures Patient Expectations and to assess the results in terms of Patient Rights, Patient Satisfaction and quality. | Exploratory | - Factor analysis<br>- Standard deviations<br>-Independent T-test for variables (sex and marriage)<br>-ANOVA<br>-Post hoc-Bonferroni |
| Alnaif | 2006 | K.S.A | To assess physicians' views on health insurance and its application in the health care system | Cross-sectional | -Descriptive statistics<br>-ANOVA |
| Gonzalez | 2005 | Mexico | (1) to examine the effect of insurance on health care utilization, (2) to study the effect of insurance on diagnosis and control of two chronic diseases, diabetes and hypertension, and (3) to examine the pathway through which insurance affects diagnosis and control of chronic disease | Cross-sectional | -Linear probability models<br>-Two stage least squares<br>-Propensity score analysis |
| Alaiban, et al. | 2003 | K.S.A | To investigate patient satisfaction and to find out if there were any correlations with the type of the facility and the satisfaction level of the patient | - | - Logistic regression analysis |

**Table 7.3 Statistical techniques used in previous related studies (cont)**

| Author | Year | Country | Aims of research | Classification of research | Statistical test(s) |
|---|---|---|---|---|---|
| Mawajdeh et al. | 2001 | Jordan | To examine the relationship between patient satisfaction and patient expectations and to identify factors contributing to patients satisfaction | - | - Descriptive analysis<br>- P-value<br>- Multiple regression |
| Hamilton | 2001 | U.S.A | To examine the benefit of using subsidized insurance when provided and changes in health access, utilisation, health status and satisfaction with care | - | -Bi-variate<br>-Multiple regression |
| Marshall et al. | 2001 | U.S.A | To confirm (a) the individual level factor structure of the CAHPS adult survey, (b) the invariance of factor structure across persons of different ethnic groups, and (c) the concordance between judgment about health care derived from consumer reports of specific health experience and their global ratings of care. | Confirmatory | -Descriptive analysis<br>-Confirmatory factor analysis using EQS structural equation<br>- Chi-square test<br>-Post hoc tests |
| Carlson et al. | 2000 | U.S.A | To determine whether socioeconomic status was associated with managed care enrollee dissatisfaction | - | -Descriptive analysis<br>- Multivariate logistic regression model<br>- Chi-square test |
| Grogan et al. | 2000 | U.S.A | To assess the construct validity and internal reliability of the previously developed Patient Satisfaction Questionnaire (PSQ). | Confirmatory | - Confirmatory factor analysis<br>- Cronbach's α |
| Al Shahrani | 1999 | K.S.A | To assess the effectiveness and quality of health care services through the measurement of patient satisfaction at the Security Forces Hospital, Riyadh | Cross-sectional | - Descriptive analysis<br>-Chi-square test<br>- ANOVA<br>-T-test |
| Kolodinsky | 1999 | U.S.A | To examine consumer satisfaction with managed care plan | Exploratory | -Factor analysis<br>-Pearson correlation coefficients |

**Table 7.3 Statistical techniques used in previous related studies (cont)**

| Author | Year | Country | Aims of research | Classification of research | Statistical test(s) |
|---|---|---|---|---|---|
| Hastings | 1999 | U.S.A | To determine perceived satisfaction with access to medical care among clients in the Medicaid managed care programme | - | -Descriptive statistics |
| Asefzadeh | 1999 | Iran | To describe demographic characteristics, morbidity, the use of treatment services and the satisfaction with Health Services Insurance under the affiliation of the Ministry of Health in order to improve the present delivery of the health insurance system | - | $C^2$ test of independence c<br>- Cramer's V(V)<br>- Kaplan-Meier analysis<br>- Cox regression analysis<br>- ANOVA<br>- Post hoc multiple comparison (Scheffe's technique) was used to assess differences in the means for quantitative variables)<br>- Wilcoxan-Gehan statistics |
| Reifel et al. | 1997 | U.S.A | To examine the relationship among patient satisfaction, age, ethnicity, and personal patient characteristics | Exploratory | -Principal-components factor analysis<br>- Descriptive statistics<br>- Multivariate regression<br>-Bonferroni's multiple means comparison<br>- Pairwise t-test<br>- SUDAAN |
| Mansour and Al-Osimy | 1993 | K.S.A | To determine patients' level of satisfaction with the Primary Health Care services in Riyadh | - | -ANOVA<br>-Least significant difference (LSD)<br>-T-test |

**Table 7.3 Statistical techniques used in previous related studies (cont)**

| Author | Year | Country | Aims of research | Classification of research | Statistical test(s) |
|---|---|---|---|---|---|
| El Shabrawy and Mahmoud | 1993 | K.S.A | To estimate patient satisfaction with respect to primary health care services in Riyadh City and to explore the physician - patient relationship | - | - Descriptive statistics |
| Albaz | 1992 | K.S.A | To examine satisfaction among patients of the public primary health care system in Saudi Arabia | - | - Descriptive statistics<br>- ANOVA (F-test)<br>- Simple regression analysis<br>- Multiple regression analysis |
| Tungi and Chang | 2009 | Taiwan | To identify whether attributes of perceived clinic quality and patient education are associated with patient satisfaction and recommendation of a primary care provider | Confirmatory | - Descriptive statistics<br>-P-value<br>- structural equation measurement<br>- Confirmatory factor analysis<br>- chi-square test |
| Burton et al. | 2005 | U.S.A | To investigate how the ratings of health plans, doctors, and overall health care<br>are affected by individual characteristics and personal experiences with plans and providers in a Medicaid Managed Care population | Confirmatory | -Descriptive statistics<br>- Ordered Logit Regression Models<br>- Chi-square test |

Table 7.3 indicates that different statistical techniques were used to test the relationship between the dependent variable (customer satisfaction) and the independent variables (personal characteristics and service provision dimensions). Many studies of patient satisfaction have used univariate or bivariate statistics in analysing data. Univariate analysis is used to assess the relationship between the dependent and independent variables. Bivariate correlation measures the association between two continuous variables without establishing directional causality (Tabachnick and Fidel, 2001). It was used to examine hypotheses on the relationships between the dimensions of beneficiaries' satisfaction with the CHIS**.** In univariate analysis, the correlation coefficient assesses the strength of the relationship between two variables, but it does not tell us how much of the variance of the dependent variable will be explained by several independent variables (Sekaran, 1992:268). Several studies indicate that satisfaction is complex and multi-dimensional; therefore, the complexity of satisfaction cannot be captured by analysing two variables (Albaz, 1992:20). Most studies as shown in the previous table used the multiple regression technique. These include Al-Sakkak et al. (2008); Rahmqvist (2001); Hamilton (2001), Mihaila (1998); Albaz (1992); Al-Shamekh (1996); Hasbullah (1995); Reifel et al. (1997) and Carlson et al. (2000). Some studies used analysis of variance (Al-Sakkak et al., 2008, Alnaif, 2006; Asefzadeh, 1999 and Albaz, 1992). Various regression techniques have been used in satisfaction studies. The research steps related to processing and quantitative analysis are presented in figure 7.1 (Zikmund, 2000).

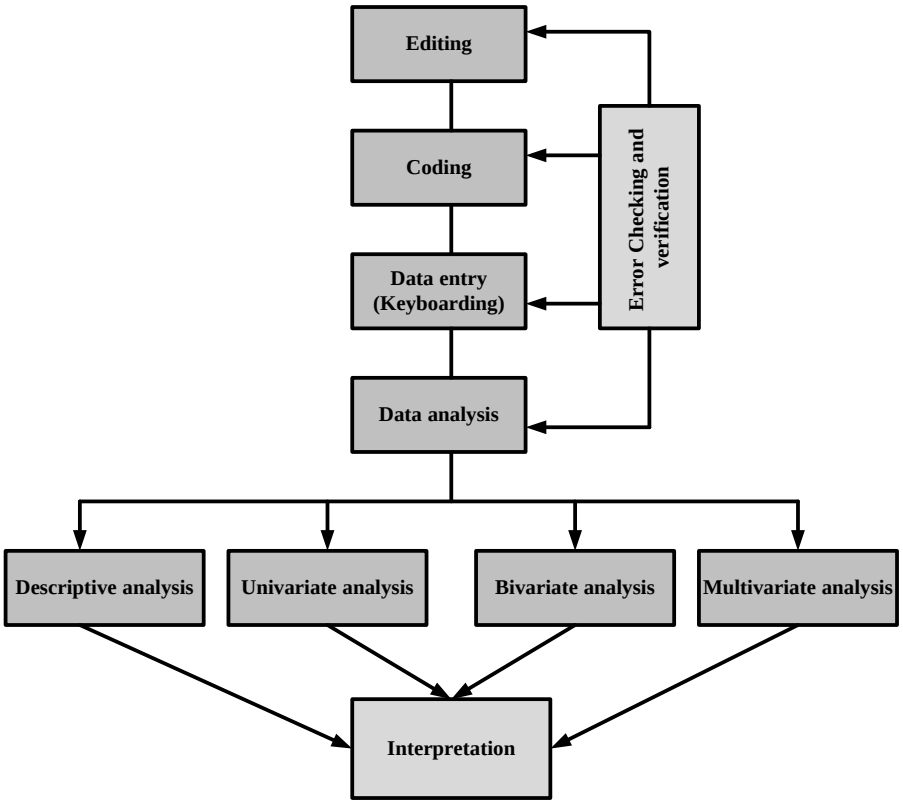



**Figure 7.1: Quantitative data analysis stages**

Source: Zikmund, 2000

## 7.4 Analysis procedures

Prior to receiving the completed questionnaires, the Statistical Package for the Social Sciences (SPSS) V. 13.0 was used to create a data entry file. The package was used to perform a number of statistical techniques to analyse the collected data. As the completed questionnaires were collected, each was given an identification number for reference purposes, ranging from 001 to 571, and a pre-edit was conducted for completeness and for logical consistency among the responses. The scores for each respondent were entered into a personal computer by the researcher (see appendix G). Upon completion of the data entry task, SPSS was used to generate descriptive information based on frequency distribution and percentages. Descriptive statistics provide an accurate portrayal or account of characteristics of a particular individual, situation, or group (Burns and Grove, 1997). Also, mean scores were used for the Likert scale items, e.g. for rating of satisfaction, and to draw a general picture of the data

through a measure of central tendency (Sekaran, 2003). The mean provides the most common descriptive statistics when the data are collected from sample on an outcome measure (McQueen and Knussen, 2002). In some cases, the data were analysed further using cross tabulations for satisfaction and importance with services provided under CHIS by some demographic variables providing more detailed information for those specific variables. The results of the various analyses are depicted in figures/charts and tables as evidenced in subsequent sections. The following are some statistical approaches used by the researcher:

1. For the purpose of determining the length of the cells in the 5-point Likert scale (maximum and minimum limits) used for the study dimensions, the range was calculated (5-1=4), then divided by the number of scale cells to obtain the accurate length of the cell (4/5= 0.80). This value was added to lowest value in the scale (the start of the scale which is 1) to determine the maximum limit for the cell. Table 7.4 shows that mean items with scores fall between the ranges (Al-omar, 2002:322; Alhaidary, 2004; Munoz, 2005:302; Medina, 2009:14; Tien, 2008:57; Ahmad and Aziz, 2009:20).

**Table 7.4 Likert Scale Interpretation**

| Point Scale | Mean | Qualitative interpretation |
|---|---|---|
| 1 | 1 and less than 1.80 | Very dissatisfied/ Very unimportant |
| 2 | 1.8 and less than 2.60 | Dissatisfied/ Unimportant |
| 3 | 2.6 and less than 3.40 | Moderate |
| 4 | 3.4 and less than 4.20 | Satisfied/ Important |
| 5 | 4.2 - 5 | Very satisfied/ Very important |

2. Descriptive statistics were computed for respondents' personal characteristics. The frequencies distribution, percentages, means and standard deviation were used to investigate the beneficiaries' views on different items of the main dimensions.
3. Cronbach's Alpha coefficient was used to measure the reliability of the questionnaire (refer to Chapter 6, section 6.10.2).

4. The means were calculated to compare the variability in the view of the respondents with regard to the statements of the main dimensions, taking into account that the mean is very useful in arranging the statements in terms of satisfaction or importance, according to the highest mean.
5. The standard deviation was calculated to "indicate the spread of respondents' answers to the questions in relation to the average" (Cook, 2004:21). The standard deviation shows the dispersion in respondents' views to the statement of each dimension. As its value becomes closer to zero (0), the respondents' views become concentrated with lower deviation in the scale (if the standard deviation is less than one, this means a concentration of the view without dispersion, while if the standard deviation is one or more, this means dispersion and absence of concentration). This is very useful in arranging the statements according to the mean based on the least dispersion if the means are equal.
6. The t-test for one group (population mean μ) was used to generalise results on all beneficiaries (not only the sample study). This is to determine the level of beneficiaries' satisfaction in the population and also to determine the level of importance from the population point of view (not only the sample of study).
7. Inferential statistics were employed for deeper analysis. For instance, t-test or independent samples t-test was employed to discover if there are any statistically significant relationships (significant at 0.01 or less) between the level of beneficiaries' satisfaction with each service item as the dependent variable and independent variables (personal and occupational) such as gender (male, female), and nationality (Saudi, non Saudi). This test was used because the variance in means of each group was equal. The significance level was fixed at 95% (0.05). In addition, t-tests were used to identify whether there were statistically significant differences in mean satisfaction scores of beneficiaries based on their

personal characteristic, namely, gender (male, female), nationality (Saudi, non Saudi), marital status (married, not married), type of insurance coverage (single, family). The independent t-test compares the means of two different samples and provides a probability that these means are the same (or that they come from the same population) (McQueen and Knussen, 2002). The t-test is easily applied, commonly used, and useful when we want to test the difference between two groups. Its disadvantage is that it can compare only two groups at a time (Graziano and Raulin, 2004).

8. The F-test or one way ANOVA was used to determine if there is any statistically significant difference (at 0.01 or less) in the mean of beneficiaries' satisfaction based on their personal characteristics, for educational level, marital status, occupation and monthly income. ANOVA is a technique often used to test for statistically significant differences in means for groups or variables (Graziano and Raulin, 2004; Coolidge, 2000). A basic assumption is that variables under examination should be normally distributed. ANOVA test was used to test for significant differences in satisfaction related to personal characteristics. A probability of 0.05 or less was considered statistically significant. In an ANOVA with three or more groups, if F is statistically significant, specific mean comparisons must be made to discover which groups differ significantly from the others. The specific means comparisons are carried out as *a priori* or as *post hoc* comparisons (Graziano and Raulin, 2004, 285). Inferential statistics are frequently used for hypothesis testing (Wilson and Butterworth, 2000).
9. If differences between the means were found, then a Scheffe test was used to determine the source of variation. Post hoc multiple comparison tests (Scheffe test) from the Equal Variances Assumed list was used to determine the location of any significant differences in satisfaction revealed by the analysis of variance

test, for personal characteristics of the study sample. If the analysis of variance revealed no statistical differences, then there is no need to use this test (Murad, 2000:294).

10. Pearson correlation coefficient was used to calculate the correlation between satisfaction level for each service item with age and number of family members currently living with the respondents. Correlation provides a measure of both the strength of a relationship between two variables and the direction of the relationship (positive or negative) (McQueen and Knussen, 2002).
11. Paired-samples t-tests are used when data from the same sample are collected either under two different conditions or regarding the measurement of two different variables (Pallant, 2001). Paired t-test compares the means of two different measures on a single outcome variable taken from a single group, usually on two different occasions (McQueen and Knussen, 2002). The paired-samples t-test was used to look for the significant differences between the level of importance and the level of satisfaction with services provided under the CHIS. Paired samples t-tests were employed to examine the relative importance of the dimensions and to study the differences between items' importance and satisfaction level for each item, and to determine the items which have priority for improvement and action so that the health services under the CHIS can be improved.
12. Gap analysis between beneficiaries' perception of the importance of services dimensions and their satisfaction with these dimensions was used by subtracting the score beneficiaries gave for satisfaction from the score that they gave for importance (Cook, 2004:45). Priorities for improvement emerged from this analysis.

13. Satisfaction with, and importance of, health services under the CHIS were assessed firstly by investigating the beneficiaries' level of satisfaction with the main dimensions of the provided services in general, and secondly, by investigating beneficiaries' level of satisfaction with various services under each dimension (items) of the services. A one-tailed t-test was used to investigate whether the level of beneficiaries' satisfaction with the main service dimensions (or the different items under each dimension) is:

| Level of Satisfaction | Mean satisfaction score out of 5 | Interpretation |
|---|---|---|
| Very low | < 1.8 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 1.8 is negative, and the significance (one-tailed) is < 0.05. |
| Low | 1.8 ≥ and < 2.6 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 2.6 is negative, and the significance (one-tailed) is < 0.05. |
| Moderate | 2.6 ≥ and < 3.4 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 3.4 is positive, and the significance (one-tailed) is < 0.05. |
| High | 3.4 ≥ and < 4.2 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 3.4 is positive, and the significance (one-tailed) is < 0.05. |
| Very high | ≥ 4.2 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 4.2 is positive, and the significance (one-tailed) is < 0.05. |

14. Frequencies, percentages, means and standard deviation were used to investigate the beneficiaries' views with regard to their satisfaction with their employers' role in their coverage with health insurance. Also, one-tailed t-test was used to investigate whether the level of beneficiaries' satisfaction with the employer's role in their coverage with health insurance (or the different items under this dimension) is:

| Level of Satisfaction | Mean agreement score out of 5 | Interpretation |
|---|---|---|
| Very low | < 1.8 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 1.8 is negative, and the significance (one-tailed) is < 0.05. |
| Low | 1.8 ≥ and < 2.6 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 2.6 is negative, and the significance (one-tailed) is < 0.05. |
| Moderate | 2.6 ≥ and < 3.4 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 3.4 is positive, and the significance (one-tailed) is < 0.05. |
| High | 3.4 ≥ and < 4.2 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 3.4 is positive, and the significance (one-tailed) is < 0.05. |
| Very high | ≥ 4.2 | This hypothesis can be accepted if the statistics (t) for the differences in the means and the value 4.2 is positive, and the significance (one-tailed) is < 0.05. |

15. Multiple regression analysis is a statistical technique that can be used to analyse the relationship between a single dependent (criterion) variable and several independent (predictor) variables. The most direct interpretation of the regression variant is a determination of the relative importance of each independent variable in the prediction of the dependent measure (Hair, 1998)**.** This technique can help in understanding the most important and influential dimensions on beneficiaries' satisfaction with the CHIS. Multiple regression analysis would not only enable the prediction of the dependent variable but also provide an assessment of the relative impact of each of the independent variables; moreover, it would indicate the combined ability of the independent variables in explaining the variation in the dependent variable (Diamantopoulos and Schlegelmilch, 1997). According to Neuman (2003:353) *"the regression results measure the direction and size of the effect of each variable on a dependent variable"*. This technique can provide information about the model as a whole, and the relative contribution of each of the independent variables that make up the model. Stepwise multiple regression was used to assess the combined effect of the independent variables on the

dependent variable in this study. Stepwise multiple regression technique was used because the researcher was dealing with one dependent variable and this variable is measured on a metric scale (Diamantopoulos and Schlegelmilch, 1997:213). Punch (2005:79) stated *"whenever a researcher is interested in relationships between variables, a regression analysis design can be used"*. Howitt and Cramer (2005:317) pointed out two major purposes of multiple regression:

a) To determine the minimum number of predictors required to predict a criterion. In other words, what are the independent variables which can best explain the variation of the dependent variable?
b) To indicate whether specific predictors are still significant and related to the criterion, when other predictors are controlled or held constant.

In this study, stepwise multiple regression analysis was carried out to examine how well the dimensions of service provision can predict beneficiaries satisfaction with services provided under the CHIS. Stepwise multiple regression was used to *"test the predictive efficiency of the regression model"* (Punch, 2005:122). The beneficiaries' personal characteristics variables (age, gender, educational level, nationality, occupation, monthly income, number of family members and type of health insurance coverage, communication, availability and accessibility of services, cost and service delivery), the role of the employer and the role of the insurance companies were considered independent variables in the model. The reason for selecting these variables was derived from their popularity in previous research. The dependent variable was the overall satisfaction level with the CHIS in the model. Issues such as sample size, the nature of the independent variables, and the possible creation of new variables to represent special relationships between the dependent and the independent variables were

considered. The assumed relationship is a linear association based on the correlations among the independent and the dependent measures (Hair, 1998). Multivariate normality implies that relationships among pairs of variables are linear. Six major assumptions had to be checked before running the regression model using the SPSS: normality, no perfect multicollinearity, homoscedasticity, independence of errors, sample size in regression and linearity (Field, 2005:170).

## 7.5 Sample nature and size in statistical analysis

The sample was drawn probabilistically which has enabled the researcher to use inferential statistics. Wilson and Butterworth (2000:22) stated that *"Inferential statistics allows inferences to be made about a population on the basis of data obtained from a sample of that population"*. One of the advantages of a survey questionnaire is that it is suitable for probability sampling and more accurate generalisability (Sekaran, 2003). Probability sampling is *"a sampling procedure in which each element of the population has a fixed probabilistic chance of being selected for the sample"* (Malhotra, 1993:358). It also *"ensures that all social classes are represented in the study"* (McPherson, 2001:292). The sampling frame was mentioned in section 6.13.1 of this study. Probability samples maximise the possibility for meaningful comparisons in the levels of beneficiaries' satisfaction with respect to services provided under the CHIS. Probability sampling was used due to time and financial constraints as it is less expensive than other alternatives (McPherson, 2001:293). For instance attempts to locate all participating organisations in the CHIS may involve more time and effort than locating a representative sample.

A sample size of at least 30 is considered sufficient to conduct simple analysis (Diamantopoulos and Schlegelmich, 1997:67). The sample size in this study is 462 respondents which is large enough to carry out multiple regression analysis and

generalise the results. Field (2005:172) argued that "the sample size required depends on the expected effect size that we are trying to detect, and how strong the relationship we are trying to measure". In addition, Tabachnick and Fidell (1996:132) pointed out some determinants of sample size, such as the desired power, alpha level, number of predictors and the expected effect size. Pallant (2001:136) argued that it is better to get a large sample in order to generalise the results. De Vaus (2002:357) and Green (1991:508) give two rules for the minimum size of the sample required. The first one is related to whether one is interested in testing the overall fit (multiple correlation) of the regression model. In this case, the sample required =50+8k, where k is the number of predictors. The second rule is related to testing each predictor within the model (partial correlation). Thus, the sample required=104+k. Field (2005:173) argued that in most regression models, researchers are interested in testing the overall fit (multiple correlation) and in the contribution of individual predictors (partial correlation). Hence, Green (1991:509) recommended computing the sample size according to both the above rules and using the largest one.

With regard to this study, according to the first rule, the sample size required=50+8X15=170 respondents (the number of predictors is 15 in this study), while the sample size according to the second rule=104+4= 119 respondents. The number of respondents was 462, which is considered to be acceptable since it is more than 170. Therefore, the sample size in this study is considered to be enough in order to run multiple regression analysis and generate results.

### 7.6 Results of quantitative data

This section presents the results of the survey regarding beneficiaries' satisfaction with the dimensions of health services provided under the CHIS and the importance of these services from the beneficiaries' point of view (questions one and three of the research

questions). This section also deals with the differences (gaps) in the level of satisfaction with the dimensions of health services provided under the CHIS according to the personal characteristics, in addition to the differences (gaps) in the level of importance of such services from the beneficiaries' point of view according to their personal characteristics (questions two and four of the research questions). In this section, I examine the differences (possible gaps) between the beneficiaries' perception of the importance of the health services dimensions provided under the CHIS and their satisfaction with services (the 4$^{th}$ question of the research study). The first part of the analysis (section 7.6.1) describes the general sample characteristics (Demography). The second part (section 7.6.2-7.6.11) analyses the results derived from the total sample for each of the CMT dimensions.

### 7.6.1 Characteristics of Respondents

This section describes the distribution of respondents based on personal characteristics.

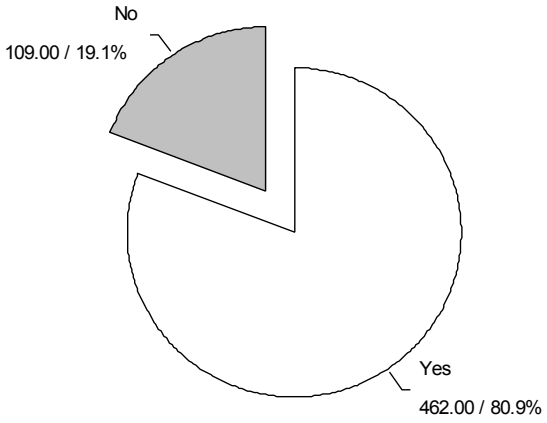
#### 7.6.1.1 Experiencing health care services provided under the CHIS in the past year (2007)

Table 7.5 and figure 7.2 show that the majority of survey respondents (80.9%) received treatment through the CHIS in the past year; those were the beneficiaries whose opinions were elicited with regard to their experience and satisfaction with the CHIS in this study. The other 19.1% of respondents had not received treatment through the CHIS in the past year, therefore their opinions were not considered because they had not experienced the services provided under the CHIS.

**Table 7.5: Distribution of study sample based on receiving health care through the CHIS**

| In the last year, did you try to get any kind of treatment through the CHIS | Frequency | Percentage % |
|---|---|---|
| Yes | 462 | 80.9% |
| No | 109 | 19.1% |
| **Total** | **571** | **100.0%** |

**Figure 7.2: The distribution of respondents according to receiving health care through the CHIS.**




### 7.6.1.2 Age of respondents:

Table 7.6 and figure 7.3 show that more than one quarter of survey respondents (34.98%) were between the ages of 29-less than 39 years. There were 33.86 % (n = 151) respondents between the ages of 19 to less than 29 years and 11.66 % (n = 52) between the ages of 49 to less than 59 years. There were 18.39 % (n = 82) respondents between the ages of 39 to less than 49 years. Only five respondents (1.12 %) were aged 59 years and above.

**Table 7.6: Categorised age of respondents**

| Age | Frequency | Percentage % |
|---|---|---|
| 19-less than 29 | 151 | 33.86% |
| 29-less than 39 | 156 | 34.98% |
| 39-less than 49 | 82 | 18.39% |
| 49-less than 59 | 52 | 11.66% |
| 59 and above | 5 | 1.12% |
| **Total** | **446*** | **100.0%** |

***** It is noted that the total number was not 462 because 16 respondents did not indicate their age

**Figure 7.3: The distribution of respondents according to their age**

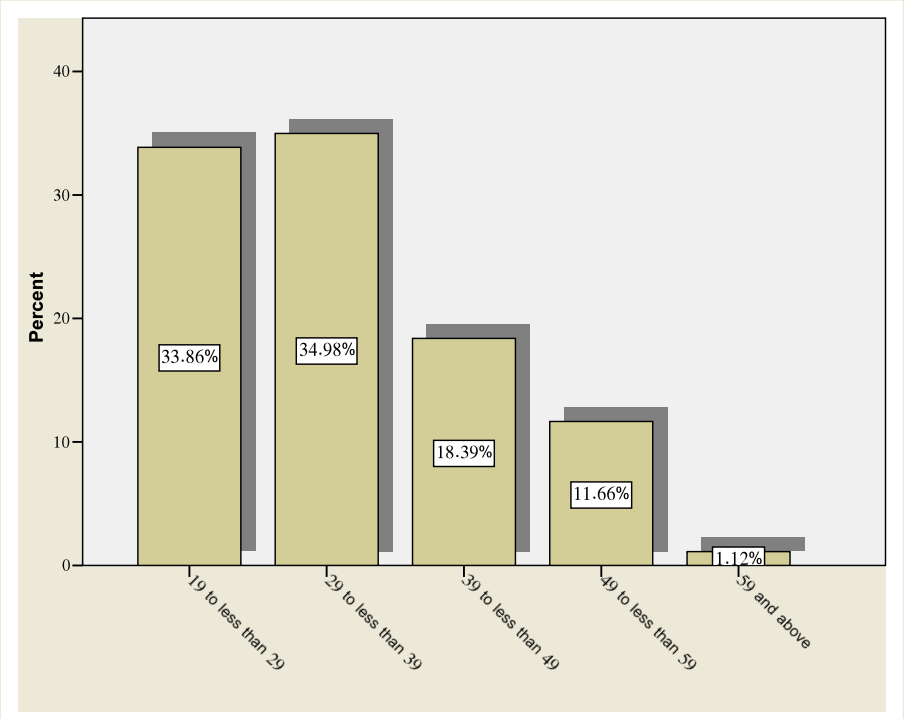



**Table 7.7: Descriptive statistics of age of respondents**

| Variable | N | Missing | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|---|
| Age of respondents | 446 | 16 | 35.02 | 9.86 | 19.0 | 68.0 |

Table 7.7 shows that the maximum age of beneficiaries' was 68 years and the minimum age was 19 years, the mean of ages was 35.02 years and the standard deviation was 9.86. The age of the respondents is compatible with the population pyramid in Saudi Arabia, indicating a representative sample of the population.

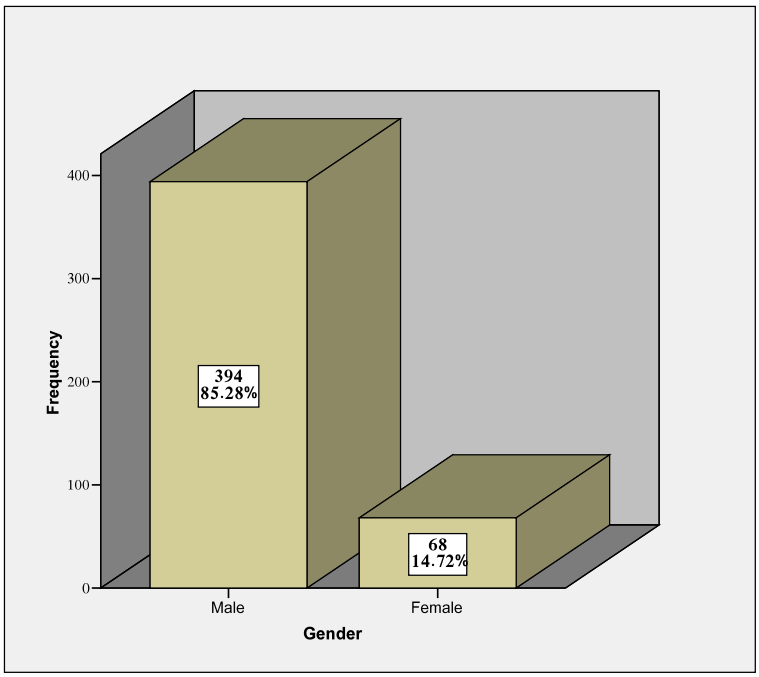
### 7.6.1.3 Gender of respondents

Table 7.8 and figure 7.4 show that the majority of survey respondents (85.3%) were male while 14.7% were female. This is consistent with similar studies in the Kingdom, and reflects Saudi traditions and sex segregation as mentioned earlier.

**Table 7.8: Distribution of respondents based on gender**

| Gender | Frequency | Percentage % |
|---|---|---|
| Male | 394 | 85.3% |
| Female | 68 | 14.7% |
| **Total** | **462** | **100.0%** |

**Figure 7.4: The distribution of respondents according to their gender**



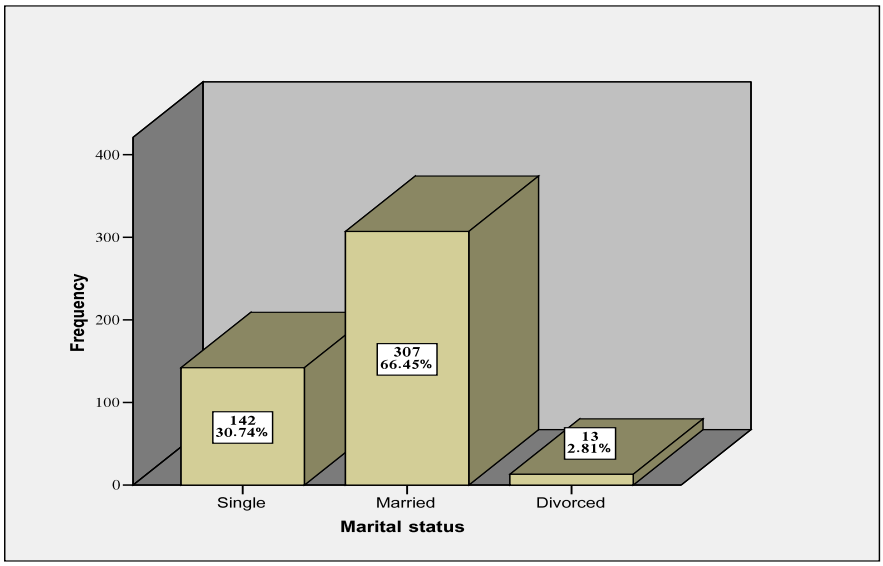

### 7.6.1.4 Marital Status of respondents

Table 7.9 and figure 7.5 show that 66.5 % of the beneficiaries were married people, singles represented 30.7 %, while only 2.8 % were divorced.

**Table 7.9: Distribution of respondents based on marital status**

| Marital Status | Frequency | Percentage % |
|---|---|---|
| Single | 142 | 30.7% |
| Married | 307 | 66.5% |
| Divorced | 13 | 2.8% |
| **Total** | **462** | **100.0%** |

**Figure 7.5: The distribution of respondents according to their marital status**



### 7.6.1.5 Number of family members living with married respondents

Table 7.10 and figure 7.6 show that 23.2% of the respondents were living with two family members, 22.0% of the respondents were living with four family members, 18.4% were living with three family members, 13.6% were living with one family member. The percentage of respondents living with 5 family members and more was 22.8%.

**Table 7.10: Distribution of respondents based on the number of family members living with married respondents**

| Number of family members living with you currently | Frequency | Percentage % |
|---|---|---|
| 1 | 34 | 13.6% |
| 2 | 58 | 23.2% |
| 3 | 46 | 18.4% |
| 4 | 55 | 22.0% |
| 5 | 25 | 10.0% |
| 6 | 17 | 6.8% |
| 7 | 11 | 4.4% |
| 8 | 3 | 1.2% |
| 11 | 1 | 0.4% |
| **Total** | **250*** | **100.0%** |

***** It is noted that the total number was not 462 because 212 respondents were either single or did not indicate how many family members were living with them.

**Figure 7.6: The distribution of respondents according to number of family members living with married respondents**

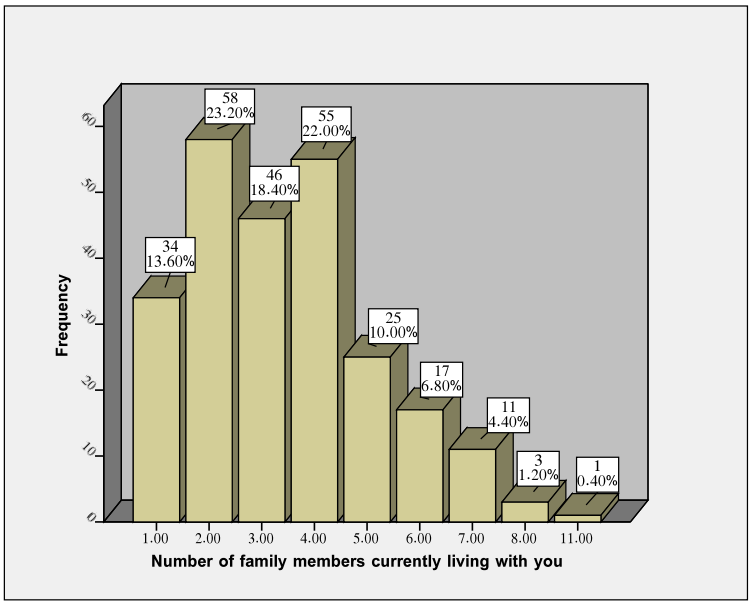


**Table 7.11: Descriptive statistics of number of family members living with beneficiary**

| Variables | N | Missing | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|---|
| Number of family members living with beneficiary | 250 | 212 | 3.39 | 1.76 | 1 | 11 |

Table 7.11 shows that the total family members per beneficiary ranged from 1-11, the mean number of family members living with the respondent was 3.39 and the standard deviation was 1.76. It is noted that 212 respondents did not answer this question and most of them were single.

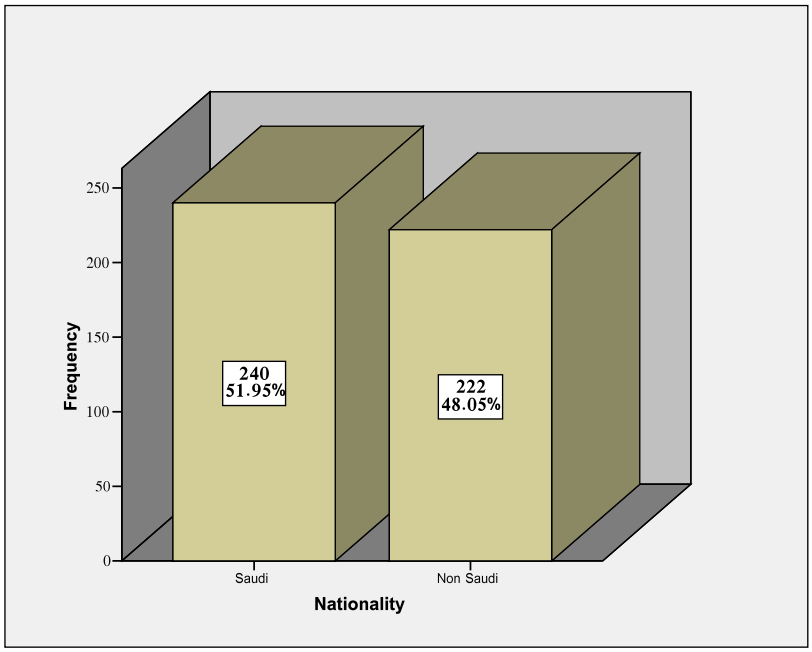
### 7.6.1.6 Nationality of respondents

Table 7.12 and figure 7.7 show approximately half the beneficiaries 51.1% (n = 240) were Saudis, while non-Saudis constituted 48.1% (n = 222) of the sample.

**Table 7.12: Distribution of respondents based on nationality**

| Nationality | Frequency | Percentage % |
|---|---|---|
| Saudi | 240 | 51.9% |
| Non Saudis | 222 | 48.1% |
| **Total** | **462** | **100.0%** |

**Figure 7.7: The distribution of beneficiaries according to their nationality**



### 7.6.1.7 Educational level of respondents

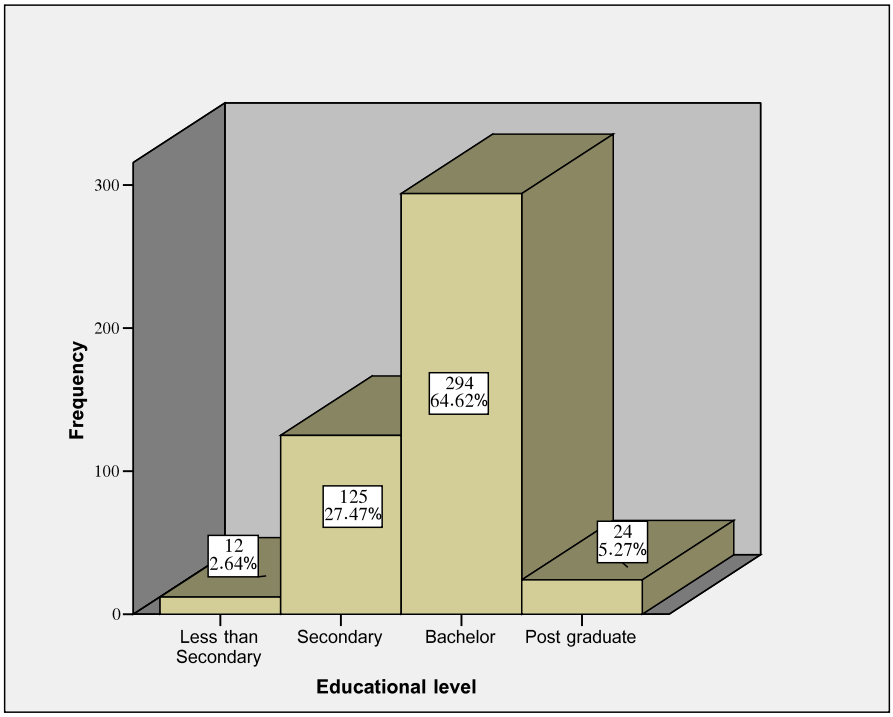
Table 7.13 and figure 7.8 show that the majority of survey respondents (63.6%) held a bachelor degree, 27.5% of the respondents held a secondary school certificate, 5.3% held post graduate degrees while 2.6% of the respondents were educated to less than secondary school level.

**Table 7.13: Distribution of respondents based on educational level**

| Educational level | Frequency | Percentage % |
|---|---|---|
| Less than secondary | 12 | 2.6% |
| Secondary | 125 | 27.5% |
| Bachelor | 294 | 63.6% |
| Post graduate | 24 | 5.3% |
| **Total** | **455*** | **100.0%** |

***** It is noted that the total number was not 462 because 7 respondents did not indicate their educational level.

**Figure 7.8: The distribution of beneficiaries according to their educational level**




### 7.6.1.8 Type of occupation

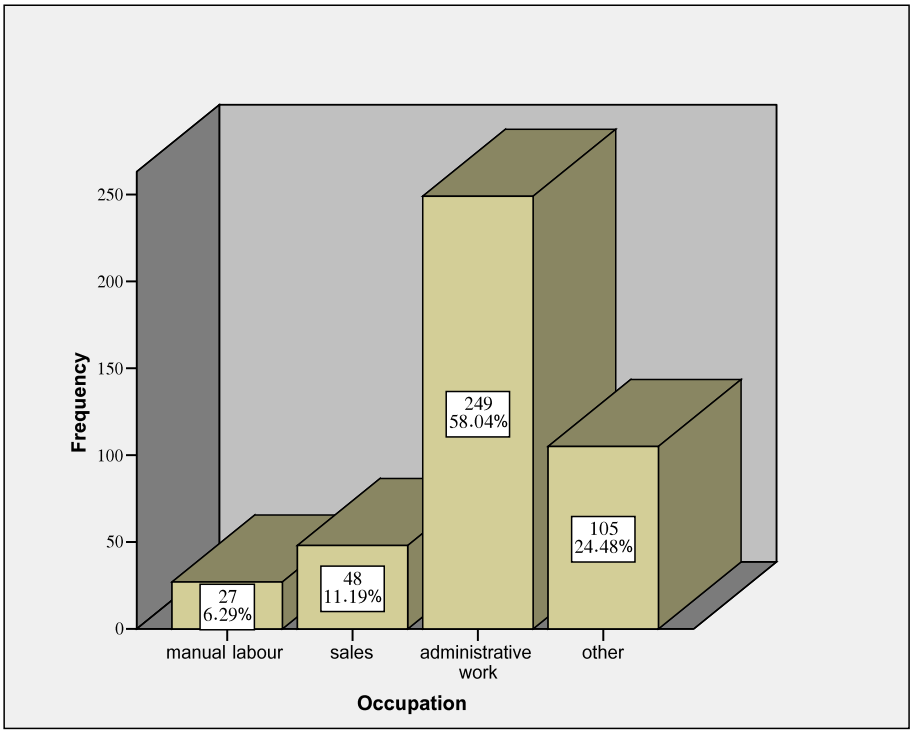
Table 7.14 and figure 7.9 show that the majority of survey respondents (58.0%) worked in administrative posts, 24% of the respondents worked in other posts, 11.2% of the respondents worked in sales posts, while 6.4% of the respondents worked in manual posts.

**Table 7.14: Distribution of respondents based on occupation**

| Occupation | Frequency | Percentage % |
|---|---|---|
| Manual labour | 27 | 6.3% |
| Sales | 48 | 11.2% |
| Administrative work | 249 | 58.0% |
| other | 105 | 24.0% |
| **Total** | **429*** | **100.0%** |

***** It is noted that the total number was not 462 because 33 respondents did not indicate their occupation.

**Figure 7.9: The distribution of respondents according to their occupation**




### 7.6.1.9 Respondents' monthly income

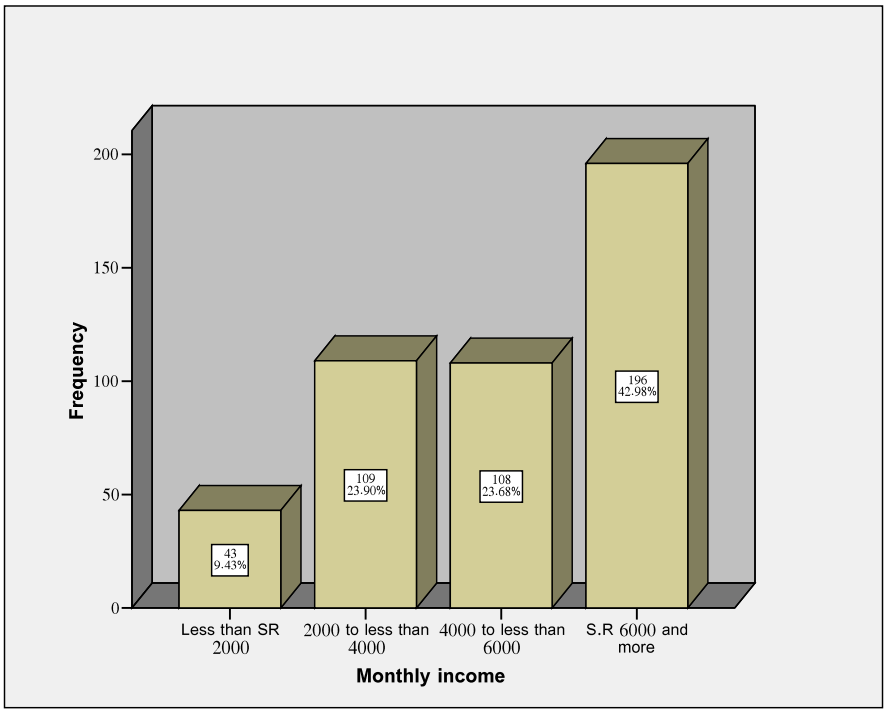
Table 7.15 and figure 7.10 show that the largest concentration (43.0%) received a monthly income of S.R 6,000 and above, while 9.4% of the respondents received less than S.R 2,000 income per month.

**Table 7.15: Distribution of respondents based on monthly income**

| Monthly income | Frequency | Percentage % |
|---|---|---|
| Less than S.R 2000 | 43 | 9.4% |
| 2000 to less than 4000 | 109 | 23.9% |
| 4000 to less than 6000 | 108 | 23.7% |
| S.R 6000 and more | 196 | 43.0% |
| **Total** | **456*** | **100.0%** |

***** It is noted that the total number was not 462 because 6 respondents did not indicate their monthly income.

**Figure 7.10: The distribution of respondents according to their monthly income**




### 7.6.1.10 Utilisation of health care services under the CHIS

**Table 7.16: Frequency of utilisation of health care services under the CHIS (excluding emergency care visit)**

| Variable | Gender | Mean | T-Value | P-Value | Sources of variations |
|---|---|---|---|---|---|
| Frequency of utilisation of health care services under the CHIS | Male | 3.7480 | -1.351 | 0.177 | 2 more than 1 |
| | Female | 4.0597 | | | |

Table 7.16 shows that there is significant difference in the mean of beneficiaries' utilisation of health care services under the CHIS associated with beneficiary gender. Women use health services under the CHIS more frequently than men.

### 7.6.1.11 Type of health insurance coverage

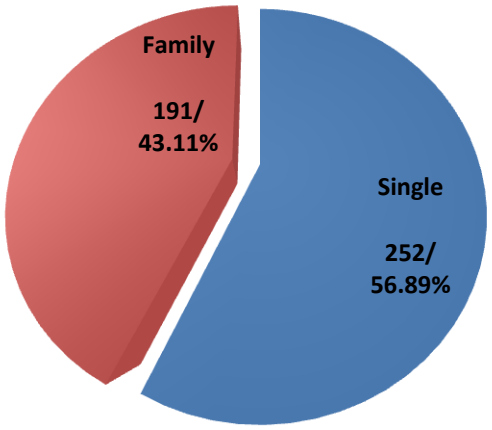
Table 7.17 and figure 7.11 show that more than half (56.89%) of the respondents had single health insurance coverage, while 43.11% of the respondents had family health insurance coverage.

**Table 7.17: Distribution of respondents based on type of health insurance coverage**

| Type of your health insurance coverage | Frequency | Percentage % |
|---|---|---|
| Single | 252 | 56.89% |
| Family | 191 | 43.11% |
| **Total** | **443** | **100.0%** |

***** It is noted that the total number was not 462 because 19 respondents did not indicate the type of health insurance coverage they have.

**Figure 7.11: The distribution of respondents according to the type of health insurance coverage they have**




### 7.6.2. Satisfaction with and importance of health services under the CHIS

#### 7.6.2.1 The respondents' level of satisfaction with the main dimensions of the provided services

This section investigates the beneficiaries' level of satisfaction with the main dimensions of the services provided under the CHIS as presented by the following table:

**Table 7.18 the level of beneficiaries' satisfaction with the main dimensions of health services provided under the CHIS**

| Elements (dimensions) of service | Sig. level | T-test for difference between means and (2.6) | Standard deviation | Mean | Satisfaction level and order |
|---|---|---|---|---|---|
| Service delivery | 0.000* | 22.206 | 0.756 | 3.381 | Moderate (2) |
| Access and availability of facilities | 0.000* | 17.522 | 0.831 | 3.278 | Moderate (3) |
| Communication while receiving service | 0.000* | 22.146 | 0.820 | 3.447 | Moderate (1) |
| Total | 0.000* | 20.681 | 0.709 | 3.282 | Moderate |
| **Elements (dimensions) of service** | **Sig. level** | **T-test for difference between means and (1.8)** | **Standard deviation** | **Mean** | **Satisfaction level and order** |
| Cost | 0.000* | 15.496 | 1.077 | 2.657 | Low (4) |

* Statistically significant at the 0.05 level

Table 7.18 shows that the total mean for the beneficiaries' satisfaction with service delivery, access and availability of services and communication while receiving services under the CHIS in the sample study was 3.282 with a low standard deviation of 0.709, which indicates that there was no variation in the level of beneficiaries satisfaction with the provided services in general. However, when using a one tailed t-test, the results show that the mean in population (μ) was significantly higher than the value 2.6 but not higher than the value 3.4. The statistics for the differences between the mean and the value 2.6 = 20.681 which is positive and the significant one-tailed value equals zero, which is less than 0.05. It can be stated that the beneficiaries' overall satisfaction with the CHIS in Riyadh city was moderate. The previous table also shows that the main dimensions of the services provided under the CHIS can be arranged from the highest to the lowest (based on the mean of satisfaction score) as follows:

1. From the beneficiaries' point of view "communication while receiving service dimension" received the highest satisfaction with a mean satisfaction score of 3.447 and a low standard deviation of 0.820. The mean in population (μ) was significantly higher than the value 2.6, but not higher than the value 3.4. The statistics for the differences between the mean and the value 2.6 = 22.146 which is positive and the significant one-tailed value equals zero which is less than 0.05. It can be stated that the beneficiaries' satisfaction with the services provided under this dimension was **moderate**.
2. The "service delivery" dimension ranked second with regard to beneficiaries' satisfaction. The mean satisfaction score with this dimension was 3.381 with a low standard deviation of 0.756. The mean in population (μ) was significantly higher than the value 2.6 but not higher than the value 3.4. The statistics for the differences between the mean of this dimension and the value 2.6 = 22.206, which is positive and the significant one-tailed value equals zero, which is less

than 0.05. It can be stated that the beneficiaries' satisfaction with the services provided under this dimension was **moderate**.

3. The "ease of access and availability of facilities" dimension ranked third order with regard to beneficiaries' satisfaction. The mean satisfaction score for this dimension was 3.278 with a low standard deviation of 0.831. The mean in population (μ) was significantly higher than the value 2.6 but not higher than the value 3.4. The statistics for the differences between the mean of this dimension and the value 2.6 = 17.522 which is positive and the significant one-tailed value equals zero, which is less than 0.05. It can be stated that the beneficiaries' satisfaction with the services provided under this dimension was **moderate**.
4. The "cost" dimension was ranked fourth and last with regard to beneficiaries' satisfaction. The mean satisfaction score with this dimension was 2.657 with a standard deviation of 1.077. The mean in population (μ) was significantly higher than the value 1.8 but not higher than the value 2.6. The statistics for the differences between the mean of this dimension and the value 1.8 = 15.4962, which is positive and the significant one-tailed value equals zero, which is less than 0.05. It can be stated that the beneficiaries' satisfaction with the services provided under this dimension was **low**.

In general, the previous results indicate that the level of beneficiaries' satisfaction with the main service dimensions of the CHIS was moderate, with the exception of the cost, which received low satisfaction scores and this is consistent with the beneficiaries' general satisfaction. Also, the standard deviation values indicate that there is a high level of consistency in the sample with regard to their satisfaction level.

### 7.6.2.2 Beneficiaries' level of satisfaction with various services under each dimension (item) of the services.

This section investigates the beneficiaries' level of satisfaction with various services under each dimension (item) of the services provided under the CHIS as follows:

**The 1st dimension: Service delivery under the CHIS**

Table 7.19 (a) shows the level of beneficiaries' satisfaction with the health service delivery under the CHIS.

**Table 7.19 (a): Beneficiaries level of satisfaction with service delivery under the CHIS**

| services | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Mean | St. deviation | T-test for differences between means and (3.4) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) Number of visits required to receive the treatment for each case | 46 | 243 | 89 | 53 | 21 | 3.531 | 0.984 | 2.830 | 0.003* | High (3) |
| | 10.2 | 53.8 | 19.7 | 11.7 | 4.6 | | | | | |
| 3) Number of people dealt with to get health service | 43 | 221 | 111 | 54 | 19 | 3.480 | 0.969 | 1.745 | 0.041* | High (5) |
| | 9.6 | 49.3 | 24.8 | 12.1 | 4.2 | | | | | |
| 5) Courtesy of service staff | 53 | 229 | 96 | 56 | 24 | 3.504 | 1.021 | 2.187 | 0.015* | High (4) |
| | 11.6 | 50.0 | 21.0 | 12.2 | 5.2 | | | | | |
| 7) Service staff respect to patients | 69 | 238 | 100 | 35 | 14 | 3.686 | 0.926 | 6.605 | 0.000* | High (2) |
| | 15.1 | 52.2 | 21.9 | 7.7 | 3.1 | | | | | |
| 9) Protected your privacy/confidentiality | 80 | 237 | 90 | 31 | 17 | 3.730 | 0.955 | 7.366 | 0.000* | High (1) |
| | 17.6 | 52.1 | 19.8 | 6.8 | 3.7 | | | | | |

* Statistically significant at the 0.05 level

Table 7.19 (a) shows the results of the t-test for the population mean. The level of beneficiaries' satisfaction with the services of the first dimension service delivery provided under the CHIS, was high for five out of 12 services, or 41.7%. The t-test value for the differences in the means and the value 3.4 were positive and the significant one-tailed levels were less than 0.05. Satisfaction was moderate for 7 out of 12 with a rate of (58.3%). The values of t-test for the differences in the means and the value 2.6 were positive and the significant one-tailed levels were less than 0.05. Also it is noted from the previous table that the services of the first dimension "service delivery' can be arranged from the highest to the lowest based on the mean of beneficiaries' satisfaction with them as follows:

**First: Services with high satisfaction level**

1. The protection of beneficiaries' privacy/confidentiality service was ranked first with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.730 with a low standard deviation of 0.955. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 17.6%+52.1%=69.7% of the total sample.
2. "Service staff respect to patients" was ranked second with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.686 with a low standard deviation of 0.926. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 15.1%+52.2%= 67.3% of the total sample.
3. "Number of visits required to receive the treatment for each case" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.531 with a low standard deviation of 0.984. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.2%+ 53.8%= 64.0% of the total sample.
4. "Courtesy of service staff" was ranked fourth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.504 with a low standard deviation of 1.021. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 11.6%+50.0%= 61.6% of the total sample.
5. "Number of people dealt with to get health service" was ranked fifth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.480 with a low standard deviation of 0.969. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 9.6%+49.3%=58.9% of the total sample.

**Second: Services with moderate satisfaction level**

**Table 7.19 (b): Beneficiaries' level of satisfaction with service delivery under the CHIS (cont)**

| services | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Mean | St. deviation | T-test for differences between means and (3.4) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 2) The waiting time to receive the health service | 28 | 178 | 99 | 114 | 42 | 3.078 | 1.112 | 9.228 | 0.000* | Moderate (10) |
| | 6.1 | 38.6 | 21.5 | 24.7 | 9.1 | | | | | |
| 4) Fairness in the provision of health services | 46 | 208 | 94 | 77 | 27 | 3.374 | 1.067 | 15.41 | 0.000* | Moderate (8) |
| | 10.2 | 46.0 | 20.8 | 17.0 | 6.0 | | | | | |
| 6) Service staff were Competent | 42 | 217 | 119 | 65 | 14 | 3.455 | 0.950 | 19.24 | 0.010* | Moderate (6) |
| | 9.2 | 47.5 | 26.0 | 14.2 | 3.1 | | | | | |
| 8) Met your safety and security needs | 40 | 211 | 137 | 43 | 22 | 3.450 | 0.953 | 19.00 | 0.000* | Moderate (7) |
| | 8.8 | 46.6 | 30.2 | 9.5 | 4.9 | | | | | |
| 10) Accuracy in filling medical reports for the purpose of requesting approval for treatment | 57 | 199 | 91 | 65 | 42 | 3.364 | 1.151 | 14.13 | 0.000* | Moderate (9) |
| | 12.6 | 43.9 | 20.1 | 14.1 | 9.3 | | | | | |
| 11) Comprehensiveness of covered health services | 47 | 135 | 77 | 123 | 73 | 2.912 | 1.272 | 5.234 | 0.000* | Moderate (12) |
| | 10.3 | 29.7 | 16.9 | 27.0 | 16.0 | | | | | |
| 12) Prescription drug benefits coverage | 62 | 153 | 66 | 101 | 76 | 3.053 | 1.327 | 7.296 | 0.000* | Moderate (11) |
| | 13.5 | 33.4 | 14.4 | 22.1 | 16.6 | | | | | |

* Statistically significant at the 0.05 level

1. "Service staff were competent" was ranked sixth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.455 with a low standard deviation of 0.950. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 9.2%+ 47.5%= 56.7% of the total sample.
2. "Met beneficiary safety and security needs" was ranked seventh with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.450 with a low standard deviation of 0.953. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 8.8%+ 46.4%= 55.2% of the total sample.
3. "Fairness in the provision of health services" was ranked eighth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with

this service was 3.374 with a low standard deviation of 1.067. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.2%+ 46.0%= 56.2% of the total sample.

4. "Accuracy in filling medical reports for the purpose of requesting approval from insurance company for treatment" was ranked ninth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.364 with a standard deviation of 1.151. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 12.6%+ 43.9%= 56.5% of the total sample.
5. "The waiting time to receive the health service" was ranked tenth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.078 with a standard deviation of 1.112. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 6.1%+ 38.6%= 44.7% of the total sample.
6. "Prescription drug benefits coverage" was ranked eleventh with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.052 with a standard deviation of 1.327. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 13.5%+ 33.4%= 46.9% of the total sample.
7. "Comprehensiveness of covered health services" was ranked twelfth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.912 with a standard deviation of 1.272. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.3%+ 29.7%= 40.0% of the total sample.

**The 2nd dimension: Access and availability of facilities under the CHIS**

The following table shows the level of beneficiaries' satisfaction with the second dimension, "access and availability of facilities under the CHIS" as follows:

**Table 7.20: Respondents level of satisfaction with access and availability of facilities under the CHIS**

| The hospital/clinic that provided you with the healthcare service under cooperative health insurance | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Mean | St. deviation | T-test for differences between means and (3.4) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 2) Was conveniently located | 76 | 201 | 97 | 47 | 37 | 3.507 | 1.129 | 2.020 | 0.022* | High (2) |
| | 16.6 | 43.9 | 21.2 | 10.3 | 8.1 | | | | | |
| 5)Had signs that were easy to understand | 53 | 223 | 102 | 58 | 20 | 3.507 | 1.001 | 2.273 | 0.016* | High (1) |
| | 11.6 | 48.9 | 22.4 | 12.7 | 4.4 | | | | | |
| 4) Had waiting areas that were comfortable | 60 | 200 | 105 | 63 | 30 | 3.430 | 1.085 | 16.370 | 0.000* | High (3) |
| | 13.1 | 43.7 | 22.9 | 13.8 | 6.6 | | | | | |
| **The hospital/clinic that provided you with the healthcare service under cooperative health insurance** | **Very satisfied (5)** | **Satisfied (4)** | **Neutral (3)** | **Dissatisfied (2)** | **Very dissatisfied (1)** | **Mean** | **St. deviation** | **T-test for differences between means and (2.6)** | **sig.1-tailed** | **Satisfaction level and order** |
| 1) Was easily accessible by telephone | 48 | 188 | 90 | 74 | 58 | 3.205 | 1.208 | 10.724 | 0.000* | Moderate (7) |
| | 10.5 | 41.0 | 19.7 | 16.2 | 12.7 | | | | | |
| 3) Had adequate parking | 42 | 153 | 109 | 99 | 57 | 3.052 | 1.187 | 8.170 | 0.000* | Moderate (8) |
| | 9.1 | 33.3 | 23.7 | 21.5 | 12.4 | | | | | |
| 6) Ease of scheduling appointments | 47 | 192 | 104 | 82 | 33 | 3.301 | 1.100 | 13.651 | 0.000* | Moderate (5) |
| | 10.3 | 41.9 | 22.7 | 17.9 | 7.2 | | | | | |
| 7) Had health information system | 38 | 157 | 146 | 83 | 26 | 3.218 | 1.028 | 12.746 | 0.000* | Moderate (6) |
| | 8.4 | 34.9 | 32.4 | 18.4 | 5.8 | | | | | |
| 8) Offered other methods of access (i.e., fax, internet, e-mail) | 37 | 120 | 141 | 80 | 76 | 2.916 | 1.197 | 5.631 | 0.000* | Moderate (9) |
| | 8.1 | 26.4 | 31.1 | 17.6 | 16.7 | | | | | |
| 9) The regular working hours met your needs | 57 | 202 | 89 | 69 | 41 | 2.916 | 1.197 | 5.631 | 0.000* | Moderate (9) |
| | 12.4 | 44.1 | 19.4 | 15.1 | 9.0 | | | | | |
| 10) Had all medical specialties | 61 | 180 | 91 | 75 | 44 | 3.308 | 1.185 | 12.689 | 0.000* | Moderate (4) |
| | 13.5 | 39.9 | 20.2 | 16.6 | 9.8 | | | | | |

* Statistically significant at the 0.05 level

Table 7.20 shows the results of the t-test for the population mean. The level of beneficiaries' satisfaction with the services of the second dimension, "access and availability of facilities under the CHIS", was high for three out of ten services with a rate of 30.0%. The value of t-test for the differences in the means and the value 3.4 were positive and the significant one-tailed levels were less than 0.05. Satisfaction was moderate for seven out of ten items with a rate of 70.0%. The values of t-test for

the differences in the means and the value 2.6 were positive and the significant one-tailed levels were less than 0.05. Also it is noted from the previous table that the services of this dimension can be arranged from the highest to the lowest based on the mean of beneficiaries' satisfaction level with them as follows:

**First: Services with high satisfaction level**

1. "Had signs that were easy to understand" was ranked first with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.507 with a low standard deviation of 1.001. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 11.6%+ 48.9%= 60.5% of the total sample.
2. "Was conveniently located" was ranked second with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.507 with a standard deviation of 1.129. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 16.6%+ 43.9%= 60.5% of the total sample.
3. "Had waiting areas that were comfortable" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.430 with a low standard deviation of 1.085. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 13.1%+ 43.7%= 56.8% of the total sample.

**Second: Services with moderate satisfaction level**

1. "Had all medical specialties" was ranked fourth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.308 with a standard deviation of 1.185. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 13.5%+ 39.9%= 53.4% of the total sample.

2. "Ease of scheduling appointments" was ranked fifth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.301 with a standard deviation of 1.100. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.3%+ 41.9%= 52.2% of the total sample.
3. "Had health information system" was ranked sixth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.218 with a standard deviation of 1.028. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 8.4%+ 34.9%= 43.3% of the total sample.
4. "Was easily accessible by telephone" was ranked seventh with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.205 with a standard deviation of 1.208. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.5%+ 41.0%= 51.5% of the total sample.
5. "Had adequate parking" was ranked eighth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.052 with a standard deviation of 1.187. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 9.1%+ 33.3%= 42.4% of the total sample.
6. "Offered other methods of access (i.e., fax, internet, e-mail)" and "The regular working hours met your needs" were ranked ninth and last with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with these services were 2.916 with a standard deviation of 1.197. The percentage of beneficiaries who rated "Offered other methods of access as moderate (either very satisfied or satisfied) was 8.1%+ 26.4%= 34.5% of the total sample. The

percentage of beneficiaries who rated "The regular working hours met your needs" as moderate (either very satisfied or satisfied) was 12.4%+ 44.1%= 56.5% of the total sample.

**The 3rd dimension: Communication while receiving service under the CHIS**

The following table shows the level of beneficiaries' satisfaction with the third dimension, "communication while receiving service under the CHIS", as follows:

**Table 7.21: Respondents level of satisfaction with communication while receiving service under the CHIS**

| Communication while receiving health care service | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Mean | St. deviation | T-test for differences between means and (3.4) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 3) Written and verbal language was clear (e.g., not complicated). | 55 | 225 | 96 | 63 | 18 | 3.516 | 1.002 | 2.483 | 0.000* | High (3) |
| | 12.0 | 49.2 | 21.0 | 13.8 | 3.9 | | | | | |
| 5) Forms were easy to understand and fill out. | 48 | 249 | 99 | 47 | 14 | 3.591 | 0.918 | 4.442 | 0.000* | High (1) |
| | 10.5 | 54.5 | 21.7 | 10.3 | 3.1 | | | | | |
| 6) Procedures were straight forward and easy to understand | 48 | 234 | 101 | 59 | 17 | 3.516 | 0.970 | 2.570 | 0.005* | High (2) |
| | 10.5 | 51.0 | 22.0 | 12.9 | 3.7 | | | | | |
| 1) My questions were answered | 45 | 219 | 96 | 71 | 22 | 3.428 | 1.025 | 17.197 | 0.000* | Moderate (5) |
| | 9.9 | 48.3 | 21.2 | 15.7 | 4.9 | | | | | |
| 2) The information that I needed was available | 35 | 213 | 118 | 74 | 16 | 3.388 | 0.963 | 17.470 | 0.000* | Moderate (6) |
| | 7.7 | 46.7 | 25.9 | 16.2 | 3.5 | | | | | |
| 4) Documents and other information were easy to understand. | 45 | 225 | 109 | 57 | 22 | 3.467 | 0.992 | 18.704 | 0.000* | Moderate (4) |
| | 9.8 | 49.1 | 23.8 | 12.4 | 4.8 | | | | | |
| 7) Health care providers were responsive to my complaint and comments | 39 | 177 | 128 | 75 | 38 | 3.228 | 1.085 | 12.370 | 0.000* | Moderate (7) |
| | 8.5 | 38.7 | 28.0 | 16.4 | 8.3 | | | | | |

* Statistically significant at the 0.05 level

Table 7.21 shows the results of the t-test for the population. The level of beneficiaries' satisfaction with the services of the third dimension "communication while receiving service under the CHIS" was high for three out of seven services with a rate of 42.9%. The values of t-test for the differences in the means and the value 3.4 were positive and the significant one-tailed levels were less than 0.05. Satisfaction

was moderate for four out of seven items with a rate of 57.1%. The values of t-test for the differences in the means and the value 2.6 were positive and the significant one-tailed levels were less than 0.05. Also it is noted from the table that the services of this dimension "communication while receiving service under the CHIS" can be arranged from the highest to the lowest based on the mean of beneficiaries' satisfaction level with them as follows:

**First: Services with high satisfaction level**

1. "Forms were easy to understand and fill out" service was ranked first with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.591 with a low standard deviation of 0.918. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.5%+ 54.5%= 65.0% of the total sample.
2. "Procedures were straight forward and easy to understand" was ranked second with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.516 with a low standard deviation of 0.970. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.5%+51.0%=61.5% of the total sample.
3. "Written and verbal language was clear (e.g., not complicated)" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.516 with a standard deviation of 1.002. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 12.0%+ 49.2%= 61.2% of the total sample.

**Second: Services with moderate satisfaction level**

1. "Documents and other information were easy to understand" was ranked fourth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.467 with a low standard deviation of 0.992.

The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 9.8%+ 49.1%= 58.9% of the total sample.

2. "My questions were answered" was ranked fifth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.428 with a standard deviation of 1.025.The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 9.9%+ 48.3%= 58.2% from the total sample.
3. "The information that I needed was available" was ranked sixth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.388 with a low standard deviation of 0.963. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 7.7%+ 46.7%= 54.4% of the total sample.
4. "Health care providers were responsive to my complaint and comments" was ranked seventh with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 3.228 with a standard deviation of 1.085. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 8.5%+ 38.7%= 47.2% of the total sample.

**The 4th dimension: cost under the CHIS**

The researcher asked the respondents to state whether they pay copayment for receiving health care services under the CHIS or not. The answers were as follows:

**Table 7.22: Distribution of respondents' based on whether they pay copayment for receiving health care services under the CHIS or not.**

| Do you pay copayment for receiving health care services | Frequency | Percentage % |
|---|---|---|
| Yes | 376 | 81.4% |
| No | 86 | 18.6% |
| Total | 462 | 100.0% |

Table 7.22 shows that the majority of respondents (81.4%) paid copayment for receiving health care services under the CHIS, while (18.6%) of them did not. When beneficiaries who are paying copayment for receiving health care services under the CHIS were asked about their satisfaction with the cost, the results were as follows:

**Table 7.23: Beneficiaries level of satisfaction with cost of health care services under the CHIS**

| Cost | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Mean | St. deviation | T-test for differences between means and (2.6) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) The method of payment was convenient | 41 | 123 | 65 | 84 | 63 | 2.987 | 1.289 | 5.818 | 0.000* | Moderate (1) |
| | 10.9 | 32.7 | 17.3 | 22.3 | 16.8 | | | | | |
| 2) The copayment for physician care you pay at each visit. | 27 | 100 | 86 | 89 | 68 | 2.808 | 1.227 | 3.263 | 0.005* | Moderate (2) |
| | 7.3 | 27.0 | 23.2 | 24.1 | 18.4 | | | | | |
| **Cost** | **Very satisfied (5)** | **Satisfied (4)** | **Neutral (3)** | **Dissatisfied (2)** | **Very dissatisfied (1)** | **Mean** | **St. deviation** | **T-test for differences between means and (1.8)** | **sig.1-tailed** | **Satisfaction level and order** |
| 3) The copayment you pay for medicines | 30 | 94 | 69 | 101 | 82 | 2.705 | 1.276 | 13.753 | 0.000* | Low (3) |
| | 8.0 | 25.0 | 18.4 | 26.9 | 21.8 | | | | | |
| 4) The copayment you pay for laboratory tests and radiography (X-rays and ultrasound) | 30 | 77 | 67 | 96 | 102 | 2.592 | 1.303 | 11.280 | 0.000* | Low (4) |
| | 8.1 | 20.7 | 18.0 | 25.8 | 27.4 | | | | | |
| 5) The cost of health care uncovered by insurance | 26 | 36 | 64 | 115 | 133 | 2.217 | 1.223 | 6.590 | 0.000* | Low (5) |
| | 7.0 | 9.6 | 17.1 | 30.7 | 35.6 | | | | | |

* Statistically significant at the 0.05 level

Table 7.23 shows the results of the t-test for the population mean. The level of beneficiaries' satisfaction with the services of the fourth dimension "cost of health care services under the CHIS" was moderate for two out of five services, with a rate of 40.0%. The values of t-test for the differences in the means and the value 2.6 were positive and the significant one-tailed levels were less than 0.05. Satisfaction was low for three services out of seven, with a rate of 60.0%. The values of t-test for the differences in the means and the value 1.8 were positive and the significant one-tailed levels were less than 0.05. Also it is noted from the table that the services of this

dimension can be arranged from the highest to the lowest based on the mean of beneficiaries' satisfaction level with them as follows:

**First: Services with moderate satisfaction level**

1. "The method of payment was convenient" was ranked first with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.987 with a standard deviation of 1.289. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 10.9%+ 32.7%= 43.6% of those of the sample who paid copayment for receiving health care services.
2. "The copayment for physician care you pay at each visit" was ranked second with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.808 with a standard deviation of 1.227. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 7.3%+ 27.0%= 34.3% of all those who paid copayment for receiving health care services.

**Second: Services with low satisfaction level**

1. "The copayment you pay for medicines" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.705 with a standard deviation of 1.276. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 8.0%+ 25.0%= 33.0% of those who paid copayment for receiving health care services.
2. "The copayment you pay for laboratory tests and radiography" was ranked fourth with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.592 with a standard deviation of 1.303. The percentage of beneficiaries who rated this service as high (either very satisfied or

satisfied) was 8.1%+ 20.7%= 28.8% of those who paid copayment for receiving health care services.

3. "The cost of health care uncovered by insurance" was ranked fifth and last with regard to satisfaction from the beneficiaries' point of view. The mean of satisfaction with this service was 2.217 with standard deviation of 1.223. The percentage of beneficiaries who rated this service as high (either very satisfied or satisfied) was 7.0% + 9.6%= 16.6% of those who paid copayment for receiving health care services.

### 7.6.3. Differences in the mean of beneficiaries' level of satisfaction with the service dimensions provided under the CHIS according to their personal characteristics

#### 7.6.3.1 Differences in beneficiaries' level of satisfaction based on gender differences:

**Table 7.24: Results of T-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions according to their gender**

| Elements (dimensions) of service | Gender | Mean | T-Value | P-Value | Sources of variations |
|---|---|---|---|---|---|
| Service delivery | Male | 3.3830 | 0.120 | 0.904 | None |
| | Female | 3.3711 | | | |
| Access & availability of facilities | Male | 3.2554 | -1.373 | 0.170 | None |
| | Female | 3.4052 | | | |
| Communication while receiving service | Male | 3.4307 | -1.027 | 0.305 | None |
| | Female | 3.5413 | | | |
| Cost | Male | 2.5982 | -2.511 | 0.002* | (1) less than (2) |
| | Female | 2.9788 | | | |
| Total | Male | 3.2666 | -1.145 | 0.253 | None |
| | Female | 3.3731 | | | |

* there is a statistical significant difference at the 0.05 level.

Table 7.24 shows that there is no statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, and in all the main dimensions of the services provided under the CHIS, associated with beneficiary gender all significance values were more than 0.05, with the exception of the cost dimension. For this dimension, men's level of satisfaction with these services was significantly lower than that of women.

### 7.6.3.2 Differences in beneficiaries' level of satisfaction based on nationality differences:

**Table 7.25: Results of T-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions according to their nationality**

| Elements (dimensions) of service | Nationality | Mean | T-test | P-Value | Sources of variations |
|---|---|---|---|---|---|
| Service delivery | Saudi | 3.3401 | -1.218 | 0.224 | None |
| | Non-Saudi | 3.4258 | | | |
| Access & availability of facilities | Saudi | 3.2077 | -1.883 | 0.030* | (1) less than (2) |
| | Non-Saudi | 3.3530 | | | |
| Communication while receiving service | Saudi | 3.3941 | -1.447 | 0.149 | None |
| | Non-Saudi | 3.5048 | | | |
| Cost | Saudi | 2.8146 | 2.922 | 0.002* | (1) more than (2) |
| | Non-Saudi | 2.4944 | | | |
| Total | Saudi | 3.2538 | -0.897 | 0.370 | None |
| | Non-Saudi | 3.3130 | | | |

* there is a statistical significant difference at the 0.05 level

Table 7.25 shows that there is no statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, and for service delivery and communication in services provided under the CHIS associated with beneficiary nationality (all significance values were more than 0.05). However, there were significant differences for dimensions:

- Access and availability of facilities: Saudi beneficiaries' level of satisfaction with these services was significantly lower than that of non-Saudi beneficiaries.
- Cost dimension: non -Saudi beneficiaries' level of satisfaction with this aspect of services was significantly lower than that of Saudi beneficiaries' level of satisfaction with these services.

### 7.6.3.3 Differences in beneficiaries' level of satisfaction based on marital status differences:

**Table 7.26: Results of T-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions according to their marital status**

| Elements (dimensions) of service | Marital status | Mean | T-test | P-Value | Sources of variations |
|---|---|---|---|---|---|
| Service delivery | Married | 3.4151 | 0.683 | 0.495 | None |
| | Unmarried | 3.3642 | | | |
| Access and availability of facilities | Married | 3.2967 | 0.353 | 0.724 | None |
| | Unmarried | 3.2678 | | | |
| Communication while receiving service | Married | 3.4727 | 0.473 | 0.636 | None |
| | Unmarried | 3.4342 | | | |
| Cost | Married | 2.8907 | 3.117 | 0.001* | (1) more than (2) |
| | Unmarried | 2.5325 | | | |
| Total | Married | 3.3265 | 0.953 | 0.341 | None |
| | Unmarried | 3.2599 | | | |

* there is a statistical significant difference at the 0.05 level

Table 7.26 shows that there is no statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, and in all the main dimensions of the services provided under the CHIS, associated with marital status (all significance values were more than 0.05), with the exception of the cost dimension. Married beneficiaries' level of satisfaction with these services was greater than that of non married beneficiaries.

### 7.6.3.4 Differences in beneficiaries' level of satisfaction based on the type of health insurance coverage differences:

**Table 7.27: Results of T-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions according to their type of insurance coverage**

| Elements (dimensions) of service | Type of coverage | Mean | T-test | P-Value | Sources of variations |
|---|---|---|---|---|---|
| Service delivery | Single | 3.3574 | -0.949 | 0.343 | None |
| | Family | 3.4262 | | | |
| Access and availability of facilities | Single | 3.2619 | -0.585 | 0.559 | None |
| | Family | 3.3087 | | | |
| Communication while receiving service | Single | 3.4394 | -0.363 | 0.717 | None |
| | Family | 3.4678 | | | |
| Cost | Single | 2.6914 | 0.697 | 0.486 | None |
| | Family | 2.6122 | | | |
| Total | Single | 3.2689 | -0.579 | 0.486 | None |
| | Family | 3.3081 | | | |

* there is a statistical significant difference at the 0.05 level

Table 7.27 shows that there is no statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, and in all the main dimensions of the services provided under the CHIS, associated with the type of health insurance coverage (all significance values were more than 0.05).

### 7.6.3.5 Differences in beneficiaries' level of satisfaction based on their educational level differences:

**Table 7.28: Results of F-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions according to their educational level**

| Elements (dimensions) of service | Educational level | Mean | F-Value | P-Value | Sources of variations Scheffe test |
|---|---|---|---|---|---|
| Service delivery | Less than Secondary | 3.3681 | 0.026 | 0.994 | None |
| | Secondary | 3.3720 | | | |
| | Bachelor | 3.3836 | | | |
| | Post-graduate | 3.3424 | | | |
| Access and availability of facilities | Less than Secondary | 3.1956 | 0.538 | 0.656 | None |
| | Secondary | 3.3345 | | | |
| | Bachelor | 3.2791 | | | |
| | Post-graduate | 3.1134 | | | |
| Communication while receiving service | Less than Secondary | 3.8571 | 1.198 | 0.310 | None |
| | Secondary | 3.3962 | | | |
| | Bachelor | 3.4611 | | | |
| | Post-graduate | 3.4514 | | | |
| Cost | Less than Secondary | 2.2283 | 3.803 | 0.010* | (2) less than (3) |
| | Secondary | 2.4038 | | | |
| | Bachelor | 2.7805 | | | |
| | Post-graduate | 2.8598 | | | |
| Total | Less than Secondary | 3.3048 | 0.116 | 0.950 | None |
| | Secondary | 3.2556 | | | |
| | Bachelor | 3.2982 | | | |
| | Post-graduate | 3.2627 | | | |

* there is a statistical significant difference at the 0.05 level

Table 7.28 shows that there is no statistically significant difference in the mean of beneficiaries satisfaction with the services in general, and in all the main dimensions of the services provided under the CHIS, associated with education level (all significance values were more than 0.05), with the exception of the cost dimension. The satisfaction of those educated to secondary level was less than that of beneficiaries who held bachelor degrees.

### 7.6.3.6 Differences in beneficiaries' level of satisfaction based on differences in their monthly income in Saudi Riyals:

**Table 7.29: Results of F-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions (elements) according to their monthly income in Saudi Riyals**

| Elements (dimensions) of service | Monthly income in Saudi Riyals (S.R) | Mean | F-Value | P-Value | Sources of variations Scheffe test |
|---|---|---|---|---|---|
| Service delivery | Less than S.R 2000 | 3.3422 | 5.470 | 0.001* | (4) more than (3) |
| | 2000 to less than 4000 | 3.4825 | | | |
| | 4000 to less than 6000 | 3.1313 | | | |
| | S.R 6000 and more | 3.4529 | | | |
| Access and availability of facilities | Less than S.R 2000 | 3.4290 | 1.862 | 0.135 | None |
| | 2000 to less than 4000 | 3.3221 | | | |
| | 4000 to less than 6000 | 3.1233 | | | |
| | S.R 6000 and more | 3.2940 | | | |
| Communication while receiving service | Less than S.R 2000 | 3.5102 | 2.949 | 0.032* | (4) more than (3) |
| | 2000 to less than 4000 | 3.4679 | | | |
| | 4000 to less than 6000 | 3.2442 | | | |
| | S.R 6000 and more | 3.5241 | | | |
| Cost | Less than S.R 2000 | 2.3275 | 6.845 | 0.000* | (1),(2), (3) less than (4) |
| | 2000 to less than 4000 | 2.4085 | | | |
| | 4000 to less than 6000 | 2.5597 | | | |
| | S.R 6000 and more | 2.9459 | | | |
| Total | Less than S.R 2000 | 3.3377 | 4.230 | 0.006* | (4) more than (3) |
| | 2000 to less than 4000 | 3.2990 | | | |
| | 4000 to less than 6000 | 3.0772 | | | |
| | S.R 6000 and more | 3.3689 | | | |

* there is a statistical significant difference at the 0.05 level

Table 7.29 shows the following:

- There is a statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, associated with beneficiaries' monthly income in Saudi Riyals (the significance level value was 0.006 which is less than $\alpha = 0.05$). The satisfaction of those with high monthly income (S.R 6000 and above) was greater than those beneficiaries with medium monthly income (S.R 4000 to less than 6000).

- There is a statistically significant difference in the mean of beneficiaries' satisfaction with the first dimension "service delivery" associated with monthly income in Saudi Riyals (the significance level was 0.001 which is less than $\alpha =$

0.05). Beneficiaries with high monthly income (S.R 6000 and above) were more satisfied than those with medium monthly income (S.R 4000 to less than 6000).

- There is a statistically significant difference in the mean of beneficiaries' satisfaction with the third dimension "communication while receiving service", associated with monthly income in Saudi Riyals (the significance level value was 0.032 which is less than $\alpha = 0.05$). Beneficiaries' with high monthly income (S.R 6000 and above) were more satisfied than those with medium monthly income (S.R 4000 to less than 6000).

- There is a statistically significant difference in the mean of beneficiaries' satisfaction with the fourth dimension, "cost", associated with monthly income in Saudi Riyals (the significance level value was 0.000 which is less than $\alpha = 0.05$). Beneficiaries with high monthly income (S.R 6000 and above) were more satisfied than all other groups.

- There is no statistically significant difference in the mean of beneficiaries' level of satisfaction with the second dimension, "Access and availability of facilities", associated with monthly income in Saudi Riyals (the significance level value was 0.135, which is more than $\alpha = 0.05$).

### 7.6.3.7 Differences in beneficiaries' level of satisfaction based on differences in their occupations:

**Table 7.30: Results of F-test to identify the differences in the level of beneficiaries' satisfaction with CHIS service dimensions (elements) according to their occupation**

| Elements (dimensions) of service | Occupation | Mean | F-test | P-Value | Sources of variations Scheffe test |
|---|---|---|---|---|---|
| Service delivery | Manual labour | 3.2932 | 0.153 | 0.928 | None |
| | Sales | 3.3584 | | | |
| | Administrative work | 3.3684 | | | |
| | Other | 3.4013 | | | |
| Access and availability of facilities | Manual labour | 3.2037 | 0.372 | 0.774 | None |
| | Sales | 3.1633 | | | |
| | Administrative work | 3.2861 | | | |
| | Other | 3.2900 | | | |
| Communication while receiving service | Manual labour | 3.4074 | 0.164 | 0.921 | None |
| | Sales | 3.4649 | | | |
| | Administrative work | 3.4261 | | | |
| | Other | 3.4866 | | | |
| Cost | Manual labour | 1.7154 | 9.259 | 0.000* | (1) less than (2), (3) and (4) |
| | Sales | 3.0607 | | | |
| | Administrative work | 2.6842 | | | |
| | Other | 2.6823 | | | |
| Total | Manual labour | 3.0621 | 0.962 | 0.411 | None |
| | Sales | 3.2748 | | | |
| | Administrative work | 3.2792 | | | |
| | Other | 3.3224 | | | |

*there is a statistical significant difference at the 0.05 level.

Table 7.30 shows that there is no statistically significant difference in the mean of beneficiaries' satisfaction with the services in general, and in all the main dimensions of the services provided under the CHIS, associated with their occupations (all significance values were more than 0.05), with the exception of the cost dimension. Beneficiaries employed in manual labour were less satisfied with these services than those employed in "other" jobs.

### 7.6.3.8. Differences in beneficiaries' level of satisfaction based on differences in their age:

Correlation coefficient (Pearson's Product Moment correlation 'parametric test') was used to study the relationship between the age variable (which is a ratio scale) and the level of beneficiary satisfaction (which is an interval scale). The Pearson Product-Moment correlation coefficient "measures the degree of the relationship between two continuous variables" (Coolidge, 2000).

**Table 7.31: The results of the simple correlation coefficient between the beneficiaries' level of satisfaction with the dimensions of provided services under the CHIS and age**

| Elements (dimensions) of service | | Age |
|---|---|---|
| Service delivery | Simple linear coefficient Pearson | 0.118 |
| | P-value | 0.012* |
| Access and availability of facilities | Simple linear coefficient Pearson | 0.102 |
| | P-value | 0.031* |
| Communication while receiving service | Simple linear coefficient Pearson | 0.124 |
| | P-value | 0.009* |
| Cost | Simple linear coefficient Pearson | -0.075 |
| | P-value | 0.275 |
| Total | Simple linear coefficient Pearson | 0.121 |
| | P-value | 0.010* |

* there is a statistical significance at the 0.05 level (2-tailed)

Table 7.31 shows the following:

- There is a statistically significant relationship between beneficiaries' level of satisfaction with the health insurance services in general and age (the significance level value was 0.010 which is less than $\alpha = 0.05$). This is a direct and weak correlation (direct because of the positive sign and weak because the simple linear correlation coefficient was 0.121 which is less than 0.30). This means that beneficiary level of satisfaction increases with age (older people are more satisfied with the CHIS).
- There is a statistically significant relationship between beneficiaries' level of satisfaction with the first dimension, "service delivery" and age (the significance level value was 0.012 which is less than $\alpha = 0.05$). This is a direct and weak correlation (direct because of the positive sign and weak because the simple linear correlation coefficient was 0.118 which is less than 0.30). This means that the level of satisfaction with the first dimension "service delivery" increases with age.
- There is a statistically significant relationship between beneficiaries level of satisfaction with the second dimension, "access and availability of facilities" and age (the significance level value was 0.031 which is less than $\alpha = 0.05$). This

is a direct and weak correlation (direct because of the positive sign and weak because the simple linear correlation coefficient was 0.102 which is less than 0.30). This means that the level of satisfaction with the second dimension "access and availability of facilities" increases with age.

- There is a statistically significant relationship between beneficiaries' level of satisfaction with the third dimension, "communication while receiving service" and age (the significance level value was 0.009 which is less than $\alpha = 0.05$). This is a direct and weak correlation (direct because of the positive sign and weak because the simple linear correlation coefficient was 0.124 which is less than 0.30). This means that the level of satisfaction with the third dimension "communication while receiving service" increases with age.
- There is no statistically significant relationship between beneficiaries' level of satisfaction with the fourth dimension "cost" and age (the significance level value was 0.275 which is more than $\alpha = 0.05$). This means that beneficiaries of all ages agree on this dimension, which received the lowest satisfaction level

**7.6.3.9 Differences in beneficiaries' level of satisfaction based on differences in the number of family members**

Correlation coefficient (Pearson) was used to study the relationship between the number of family members' variable (which is a ratio scale) and the level of beneficiary satisfaction (which is an interval scale).

**Table 7.32: The results of the simple correlation coefficient between the beneficiaries' level of satisfaction with the dimensions of services provided under the CHIS and number of family members**

| Elements (dimensions) of service | | Number of family members |
|---|---|---|
| Service delivery | Simple linear coefficient Pearson | 0.053 |
| | P-value | 0.407 |
| Access and availability of facilities | Simple linear coefficient Pearson | -0.017 |
| | P-value | 0.785 |
| Communication while receiving service | Simple linear coefficient Pearson | 0.020 |
| | P-value | 0.754 |
| Cost | Simple linear coefficient Pearson | 0.025 |
| | P-value | 0.728 |
| Total | Simple linear coefficient Pearson | 0.026 |
| | P-value | 0.686 |

Table 7.32 shows that there was no statistical significant relationship between beneficiaries level of satisfaction with the health insurance services in general and the number of family members (all significance level values were more than $\alpha = 0.05$).

### 6.7.4 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under the CHIS and their satisfaction with the main services dimensions (services requiring improvement)

**Table 7.33: The results of t-test for significant differences between perceptions of the importance of the main services dimensions and satisfaction with these dimensions**

| Main elements (dimensions) arranged according to priority for improvement | Mean Importance | Mean satisfaction | Mean for the differences (importance-Satisfaction) | T-Value | P-Value |
|---|---|---|---|---|---|
| Cost of health care services | 4.2551 | 2.6574 | 1.606 | 20.551 | 0.000* |
| Access and availability of facilities for the provision of health services | 4.1841 | 3.2775 | 0.906 | 18.451 | 0.000* |
| Service Delivery | 4. 2443 | 3.3813 | 0.863 | 19.447 | 0.000* |
| Communication while receiving health care service | 4.1371 | 3.4470 | 0.690 | 13.788 | 0.000* |

* Statistically significant at the 0.05 level

Table 7.33 shows that there are statistical significant differences (the t value is high and the significance level is less than 0.05) between the beneficiaries' perception of the importance of the main services dimensions and their satisfaction with these services in general, and in all the main dimensions of the services provided under the CHIS. These differences were on the side of the importance level (the mean values for the difference of all dimensions were positive). This indicates that the level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The order of these gaps according to their values (the difference in the means) and hence the orders of priority for improvement were as follows:

1. Services related to cost.
2. Services related to access and availability of facilities for the provision of health services.
3. Services related to service delivery under the CHIS.
4. Services related to communication while receiving health care.

### 7.6.4.1 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under the CHIS and their satisfaction with the "service delivery"

**Table 7.34: The results of t-test for the significant differences between the importance of services under "service delivery" dimension and satisfaction with these services**

| Service delivery arranged according to priority for improvement | Mean Importance | Mean satisfaction | Mean for the differences (importance-Satisfaction) | T-Value | P-Value |
|---|---|---|---|---|---|
| Comprehensiveness of covered health services | 4.4859 | 2.9121 | 1.583 | 20.872 | 0.000* |
| Prescription drug benefits coverage | 4.5482 | 3.0524 | 1.478 | 19.765 | 0.000* |
| The waiting time to receive the health service | 4.2941 | 3.0781 | 1.203 | 17.466 | 0.000* |
| Accuracy in filling medical reports for the purpose of requesting approval for treatment | 4.2941 | 3.3642 | 0.907 | 12.877 | 0.000* |
| Service staff were Competent | 4.3082 | 3.4551 | 0.862 | 14.712 | 0.000* |
| Fairness in the provision of health services | 4.1942 | 3.3739 | 0.796 | 12.941 | 0.000* |
| Courtesy of service staff | 4.2335 | 3.5044 | 0.709 | 11.925 | 0.000* |
| Met your safety and security needs | 4.1579 | 3.4503 | 0.690 | 11.696 | 0.000* |
| Service staff respect to patients | 4.3506 | 3.6864 | 0.670 | 12.684 | 0.000* |
| Protected your privacy/confidentiality | 4.3500 | 3.7297 | 0.607 | 12.684 | 0.000* |
| Number of visits required to receive the treatment for each case | 4.0490 | 3.5310 | 0.491 | 8.619 | 0.000* |
| Number of people dealt with to get health service | 3.8286 | 3.4799 | 0.325 | 5.498 | 0.000* |

* Statistically significant at the 0.05 level

Table 7.34 shows that there is a statistically significant difference (the t value is high and the significance level is less than 0.05) between the beneficiaries' perception of the importance of this service and their satisfaction with this service for all items of

"services delivery". This difference was on the side of the importance level (the mean values for the difference of all services were positive). This indicates that the level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The order of these gaps according to their values (the difference in the means) and hence the orders of priority for improvement were as follows:

1. Comprehensiveness of covered health services.
2. Prescription drug benefits coverage.
3. The waiting time to receive the health service.
4. Accuracy in filling medical reports for the purpose of requesting approval for treatment.
5. Competent of service staff.
6. Fairness in the provision of health services.
7. Courtesy of service staff.
8. Meeting safety and security needs.
9. Service staff respect towards patients.
10. Protection of privacy/confidentiality.
11. Number of visits required to receive the treatment for each case.
12. Number of people dealt with to get health service.

### 7.6.4.2 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under the CHIS and their satisfaction with the "access and availability of facilities for the provision of health services"

**Table 7.35: The results of t-test for the significant differences between the importance of services under "access and availability of facilities" dimension and satisfaction with these services**

| Access and availability of facilities for the provision of health services arranged according to priority for improvement | Mean Importance | Mean satisfaction | Mean for the differences (importance-Satisfaction) | T-Value | P-Value |
|---|---|---|---|---|---|
| Had adequate parking | 4.1235 | 3.0522 | 1.079 | 14.947 | 0.000* |
| Ease of scheduling appointments | 4.3543 | 3.3013 | 1.068 | 16.986 | 0.000* |
| Had all medical specialties | 4.2088 | 3.3082 | 1.062 | 15.172 | 0.000* |
| Was easily accessible by telephone | 4.2088 | 3.2052 | 1.009 | 14.401 | 0.000* |
| Offered other methods of access (i.e., fax, internet, e-mail) | 3.9175 | 2.9163 | 0.998 | 13.729 | 0.000* |
| The regular working hours met your needs | 4.2784 | 3.3603 | 0.904 | 13.541 | 0.000* |
| Had health information system | 4.0849 | 3.2178 | 0.854 | 13.399 | 0.000* |
| Was conveniently located | 4.2821 | 3.5066 | 0.764 | 12.297 | 0.000* |
| Had waiting areas that were comfortable | 4.1930 | 3.4301 | 0.762 | 12.206 | 0.000* |
| Had signs that were easy to understand | 4.1072 | 3.5066 | 0.600 | 10.199 | 0.000* |

* Statistically significant at the 0.05 level

Table 7.35 shows that there is a statistically significant difference (the t value is high and the significance level is less than 0.05) between the beneficiaries' perception of the importance of this service and their satisfaction with this service for all items of "access and availability of facilities". This difference was on the side of the importance level (the mean values for the difference of all services were positive). This indicates that the level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The order of these gaps according to their values (the difference in the means) and hence the orders of priority for improvement were as follows:

1. Had adequate parking.
2. Ease of scheduling appointments.
3. Had all medical specialties.
4. Was easily accessible by telephone.
5. Offered other methods of access (i.e., fax, internet, e-mail).
6. The regular working hours met your needs.
7. Had health information system.
8. Was conveniently located.
9. Had waiting areas that were comfortable.
10. Had signs that were easy to understand.

**7.6.4.3 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under "communication while receiving health care service" and satisfaction with these services**

**Table 7.36: The results of t-test for the significant differences between the importance of services under "communication while receiving health care service" dimension and satisfaction with these services**

| Communication while receiving health care service arranged according to priority for improvement | Mean Importance | Mean satisfaction | Mean for the differences (importance-Satisfaction) | T-Value | P-Value |
|---|---|---|---|---|---|
| Health care providers were responsive to my complaint and comments | 4.2710 | 3.2276 | 1.061 | 16.459 | 0.000* |
| The information that I needed was available | 4.2075 | 3.3882 | 0.801 | 14.044 | 0.000* |
| My questions were answered | 4.2133 | 3.4283 | 0.782 | 13.052 | 0.000* |
| Written and verbal language was clear | 4.1686 | 3.5164 | 0.646 | 11.018 | 0.000* |
| Procedures were straight forward and easy to understand | 4.1221 | 3.5163 | 0.617 | 10.340 | 0.000* |
| Documents and other information were easy to understand. | 4.0731 | 3.4672 | 0.592 | 8.861 | 0.000* |
| Forms were easy to understand and fill out. | 3.9671 | 3.5908 | 0.364 | 5.609 | 0.000* |

* Statistically significant at the 0.05 level

Table 7.36 shows that there is a statistically significant difference (the t value is high and the significance level is less than 0.05) between the beneficiaries' perception of the importance of this service and their satisfaction with this service for all items of "communication while receiving health care service". This difference was on the side of the importance level (the mean values for the difference of all services were positive). This indicates that the level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The order of these gaps according to their values (the difference in the means) and hence the orders of priority for improvement were as follows:

1. Health care providers were responsive to my complaint and comments.
2. The information that I needed was available.
3. My questions were answered.
4. Written and verbal language was clear (e.g., not complicated).
5. Procedures were straight forward and easy to understand.
6. Documents and other information were easy to understand.
7. Forms were easy to understand and fill out.

#### 7.6.4.4 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under "cost" and their satisfaction with these services

**Table 7.37: The results of t-test for the significant differences between the importance of services under "cost" dimension and satisfaction with these services**

| Cost of health care service arranged according to priority for improvement | Mean Importance | Mean satisfaction | Mean for the differences (importance-Satisfaction) | T-Value | P-Value |
|---|---|---|---|---|---|
| The cost of health care uncovered by insurance | 4.3658 | 2.2166 | 2.145 | 23.573 | 0.000* |
| The copayment you pay for laboratory tests and radiography | 4.2722 | 2.5618 | 1.728 | 18.814 | 0.000* |
| The copayment you pay for medicines | 4. 2938 | 2.7048 | 1.608 | 17.818 | 0.000* |
| The copayment for physician care you pay at each visit | 4.1761 | 2.8081 | 1.398 | 15.933 | 0.000* |
| The method of payment was convenient. | 4.1840 | 2.9867 | 1.214 | 13.190 | 0.000* |

* Statistically significant at the 0.05 level

Table 7.38 shows that there is a statistically significant difference (the t value is high and the significance level is less than 0.05) between the beneficiaries' perception of the importance of this service and their satisfaction with this service for all items of "cost". This difference was on the side of the importance level (the mean values for the difference of all services were positive). This indicates that the level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The order of these gaps according to their values (the difference in the means) and hence the order of priority for improvement was as follows:

1. The cost of health care not covered by insurance.
2. The copayment you pay for laboratory tests and radiography (X-rays and ultrasound).
3. The copayment you pay for medicines.
4. The copayment (percentage of the fee) for physician care you pay at each visit.
5. The method of payment was convenient.

### 7.6.5 The level of beneficiaries' satisfaction with the employers' role in their coverage with health insurance

**Table 7.38: The level of beneficiaries' satisfaction with the employer's role in their coverage with health insurance**

| Statements | Strongly Agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly disagree (1) | Mean | St. deviation | T-test for differences between means and (1.8) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) I have been denied access to health care services under the CHIS # | 14 | 39 | 89 | 83 | 228 | 1.958 | 1.150 | 2.924 | 0.004* | Low (4) |
| | 3.1 | 8.6 | 19.6 | 18.3 | 50.3 | | | | | |
| **Statements** | **Strongly Agree (5)** | **Agree (4)** | **Neutral (3)** | **Disagree (2)** | **Strongly disagree (1)** | **Mean** | **St. deviation** | **T-test for differences between means and (2.6)** | **sig.1-tailed** | **Satisfaction level and order** |
| 3) I have been informed about coverage limits | 78 | 201 | 78 | 47 | 45 | 3.188 | 1.227 | 15.875 | 0.000* | Moderate (3) |
| | 17.4 | 44.8 | 17.4 | 10.5 | 10.0 | | | | | |
| 4) I have the freedom to choose health care provider | 100 | 158 | 78 | 52 | 67 | 3.378 | 1.338 | 12.402 | 0.000* | Moderate (2) |
| | 22.0 | 34.7 | 17.1 | 11.4 | 14.7 | | | | | |
| **Statements** | **Strongly Agree (5)** | **Agree (4)** | **Neutral (3)** | **Disagree (2)** | **Strongly disagree (1)** | **Mean** | **St. deviation** | **T-test for differences between means and (3.4)** | **sig.1-tailed** | **Satisfaction level and order** |
| 2) I have been supplied with a list of available providers | 111 | 195 | 70 | 43 | 36 | 3.664 | 1.174 | 4.793 | 0.000* | High (1) |
| | 24.4 | 42.9 | 15.4 | 9.5 | 7.9 | | | | | |
| Overall beneficiaries satisfaction with employer role in their coverage with CHIS | | | | | | 3.639 | 0.818 | 6.266 | 0.000* | High |

* Statistically significant at the 0.05 level

# the coding of this statement was changed (because it's negative statement towards the employer role) when counting the total mean for this dimension

Table 7.38 shows that the general mean agreement with the positive roles played by the employer toward covering beneficiaries' with health insurance from beneficiaries point of view was 3.639 with a low standard deviation of 0.818. This indicates that there was no large variation in the views of respondents towards the employer's role.

After employing the t-test for the population mean as described earlier, it was found that the level of beneficiaries' satisfaction with the role of the employer in their coverage with health insurance was high (the value of statistic (t) for the total mean differences and the value 3.4 was positive and the one-tailed significance level was less than 0.05).

Table 7.38 also shows that the statements under this dimension can be arranged from the highest to the lowest based on the mean of the agreement score as follows:

1. "I have been supplied with a list of available providers" was ranked first with regard to satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.664 with a standard deviation of 1.174. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 24.4%+ 42.9%= 67.3% of the total beneficiaries' sample.
2. "I have the freedom to choose health care provider" was ranked second with regard to satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.378 with a standard deviation of 1.338. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 22.0%+ 34.7%= 56.7% of the total beneficiaries' sample.
3. "I have been informed about coverage limits" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.188 with a standard deviation of 1.227. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 17.4%+ 44.8%= 62.2% of the total beneficiaries' sample.
4. The negative statement, "I have been denied access to health care services under the CHIS" was ranked fourth and last with regard to satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 1.958 with a standard deviation of 1.150. The percentage of beneficiaries who showed high agreement with this negative statement (either strongly agree or agree) was 3.1%+ 8.6%= 11.7% of the total beneficiaries' sample.

### 7.6.6 The level of beneficiaries' satisfaction with the insurance companies' role in their coverage with health insurance

**Table 7.39: The level of beneficiaries' satisfaction with the insurance company's role in their coverage with health insurance**

| Statements | Strongly Agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly disagree (1) | Mean | St. deviation | T-test for differences between means and (2.6) | sig.1-tailed | Satisfaction level and order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) The insurance company was responsive to my complaints and comments | 30 | 154 | 156 | 55 | 60 | 3.086 | 1.116 | 9.282 | 0.000* | Moderate (4) |
| | 6.6 | 33.8 | 34.3 | 12.1 | 13.2 | | | | | |
| 2) If preauthorization was requested, the waiting time for the insurance company answer was appropriate | 32 | 151 | 122 | 83 | 64 | 3.009 | 1.171 | 7.426 | 0.000* | Moderate (5) |
| | 7.1 | 33.4 | 27.0 | 18.4 | 14.2 | | | | | |
| 3) The insurance company has competent and qualified staff able to manage the insurance processes | 40 | 141 | 189 | 47 | 35 | 3.230 | 1.014 | 13.206 | 0.000* | Moderate (2) |
| | 8.8 | 31.2 | 41.8 | 10.4 | 7.7 | | | | | |
| 4) The health insurance representatives were courteous | 40 | 168 | 172 | 44 | 29 | 3.322 | 0.977 | 15.1565 | 0.000* | Moderate (1) |
| | 8.8 | 37.1 | 38.0 | 9.7 | 6.4 | | | | | |
| 5) I am satisfied with the way the insurance company processed used to process my claims | 35 | 146 | 153 | 66 | 49 | 3.116 | 1.100 | 9.937 | 0.000* | Moderate (3) |
| | 7.8 | 32.5 | 34.1 | 14.7 | 10.9 | | | | | |
| Overall beneficiaries satisfaction with insurance company role in their coverage with CHIS | | | | | | 3.149 | 0.921 | 12.737 | 0.000* | Moderate |

* Statistically significant at the 0.05 level

Table 7.39 shows that the general mean agreement with the positive roles played by the insurance companies toward covering beneficiaries with health insurance from beneficiaries' point of views was 3.149 with a low standard deviation of 0.921. This indicates that there was no large variation in the views of respondents towards the insurance company's role. After employing the t-test for the population mean, it was found that the level of beneficiaries' satisfaction with the role of the insurance company in their coverage with health insurance was moderate (the value of statistic (t) for the

total mean differences and the value 2.6 was positive and the one-tailed significance level was less than 0.05. Table 7.40 also shows that the statements under this dimension can be arranged from the highest to the lowest based on the mean of the agreement score as follows:

1. "The health insurance representatives were courteous" was ranked first with regard to level of satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.322 with a standard deviation of 0.977. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 8.8%+ 37.1%= 45.9% of the total beneficiaries' sample.
2. "The insurance company has competent and qualified staff able to manage the insurance processes" was ranked second with regard to satisfaction level from the beneficiaries' point of view. The mean of agreement with this statement was 3.230 with a standard deviation of 1.014. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 8.8%+ 31.2%= 40.0% of the total beneficiaries' sample.
3. "I am satisfied with the way the insurance company processed used to process my claims" was ranked third with regard to satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.116 with a standard deviation of 1.100. The percentage of beneficiaries who showed high agreement with this statement (either strongly agree or agree) was 7.8%+ 32.5%= 40.3% of the total beneficiaries' sample.
4. "The insurance company was responsive to my complaints and comments" was ranked fourth with regard to level of satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.086 with a standard deviation of 1.116. The percentage of beneficiaries who showed high agreement

with this negative statement (either strongly agree or agree) was 6.6%+ 33.8%= 40.4% of the total beneficiaries' sample.

5. "If preauthorisation was requested, the waiting time for the insurance company answer was appropriate" was ranked fifth with regard to level of satisfaction from the beneficiaries' point of view. The mean of agreement with this statement was 3.009 with a standard deviation of 1.171. The percentage of beneficiaries who showed high agreement with this negative statement (either strongly agree or agree) was 7.1%+ 33.4%= 40.5% of the total beneficiaries' sample.

### 7.6.7 Beneficiaries' utilisation of health services under the CHIS

**Table 7.40: The distribution of the beneficiaries' (of the CHIS) based on the number of times they had visited a clinic or hospital in the last year (2007)**

| How many times did you go to a clinic or a hospital to get health care for yourself in the last year | Frequency | Percentage % |
|---|---|---|
| 1 | 70 | 15.9% |
| 2 | 52 | 11.8% |
| 3 | 56 | 12.7% |
| 4 | 69 | 15.7% |
| 5-9 times | 106 | 24.1% |
| 10 times or more | 87 | 19.8% |
| Total | 440* | 100.0% |
| Mean | 5.46 | |
| Standard deviation | 3.84 | |

***** It is noted that the total number was not (462) because (22) respondents did not indicate the number of times they visited the clinic or hospital for treatment

Table 7.40 shows that 24.1% of the respondents had visited a clinic or hospital in the last year from 5-9 times. 19.8% of the respondents had visited a clinic or hospital in the last year 10 times or more. 15.9% of the respondents had visited a clinic or hospital in the last year once. 15.7% of the respondents had visited a clinic or hospital in the last year four times and finally, 11.8% of the respondents had visited a clinic or hospital in the last year twice. The mean of the number of visits to a clinic or hospital in the last year was 5.46 times with a standard deviation of 3.84 times. The results obtained when respondents were asked about the last time they received health care services under the CHIS were as follows:

**Table 7.41: The distribution of the beneficiaries' (of the CHIS) based on the last time they had received health care services under the CHIS**

| The last time you received health care services under cooperative health insurance | Frequency | Percentage % |
|---|---|---|
| week or less | 89 | 20.2% |
| 2 weeks | 47 | 10.7% |
| Month | 142 | 32.2% |
| 2-5 months | 92 | 20.9% |
| 6-11 months | 45 | 10.2% |
| Year or more | 26 | 5.9% |
| Total | 441* | 100.0% |

***** It is noted that the total number was not (462) because (21) respondents did not indicate the last time they received treatment through the CHIS

Table 7.41 illustrates that 32.2% of the respondents stated that the last time they had received health care services under the CHIS was one month previously. 20.9% had last received health care services under the CHIS 2-5 months previously. 20.2% had last received health care services under the CHIS one week or less previously. 10.7% of the respondents had last received health care services under the CHIS two weeks ago previously. 10.2% had last received health care services under the CHIS 6-11 months ago previously and 5.9% of the respondents had last received health care services under the CHIS a year or more ago, previously.

### 7.6.8 The most important problems facing beneficiaries using health services under the CHIS

**Table 7.42: The distribution of the beneficiaries' (of the CHIS) based on the most important problems facing them when receiving health services**

| Problems encountered while getting the service | Frequency | Percentage % |
|---|---|---|
| Denial of provision of some services | 195 | 48.3% |
| I got conflicting information from different people | 92 | 22.8% |
| Determining hospital length of stay by the insurance company | 60 | 14.9% |
| Other problem | 57 | 14.1% |
| Total | 404* | 100.0% |

***** It is noted that the total number was not (462) because (58) respondents did not mention the problems encountered while receiving care through the CHIS.

Table 7.42 shows that the problems encountered by beneficiaries who experienced service under the CHIS (N = 404) tended to fall into four categories (multiple responses accepted): denial of provision of some services, getting conflicting information from different people, length of hospital stay being determined by the insurance company and others. Nearly half of the respondents (48.3%) indicated that they had been denied some services under the CHIS. 22.8% of the respondents indicated that they had received conflicting information, 14.9% of the respondents indicated that their length of hospital stay had been determined by the insurance company, while 14.1% of the respondents indicated that they had encountered a variety of problems included in the 'other' category. They had encountered the following problems (the problems are arranged according to the frequency with which they were reported):

- Delays in receiving approvals for certain procedures.
- Medicines are not available.
- Long waiting time to receive health care service under the CHIS.
- Some medicines are not prescribed because they are not covered.
- Health insurance does not cover all family members.
- Congestion in hospitals.
- Provider requests unnecessary tests.
- Physicians are hesitant to prescribe costly medicines.
- Some medical services are not covered under the CHIS.
- Admission denied.
- Interference in the choice of physician.
- Scheduling appointment is difficult.
- Differences in the copayment of physician visits and medicines.
- The copayment for dental care is high.

### 7.6.9 Overall satisfaction with health care provider

Table 7.43 and Figure 7.12 show that more than half (56.1%) of the respondents are satisfied with their health care providers, while 20.6% of the respondents are dissatisfied with their health care providers.

**Table 7.43: Overall satisfaction with health care provider**

| | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Total | Mean | St. deviation |
|---|---|---|---|---|---|---|---|---|
| Overall satisfaction with health care provider | 42 | 198 | 100 | 65 | 23 | 428 | 3.399 | 1.0319 |
| | 9.8 | 46.3 | 23.4 | 15.2 | 5.4 | 100% | | |

***** It is noted that the total number was not 462 because 34 respondents left the question blank.

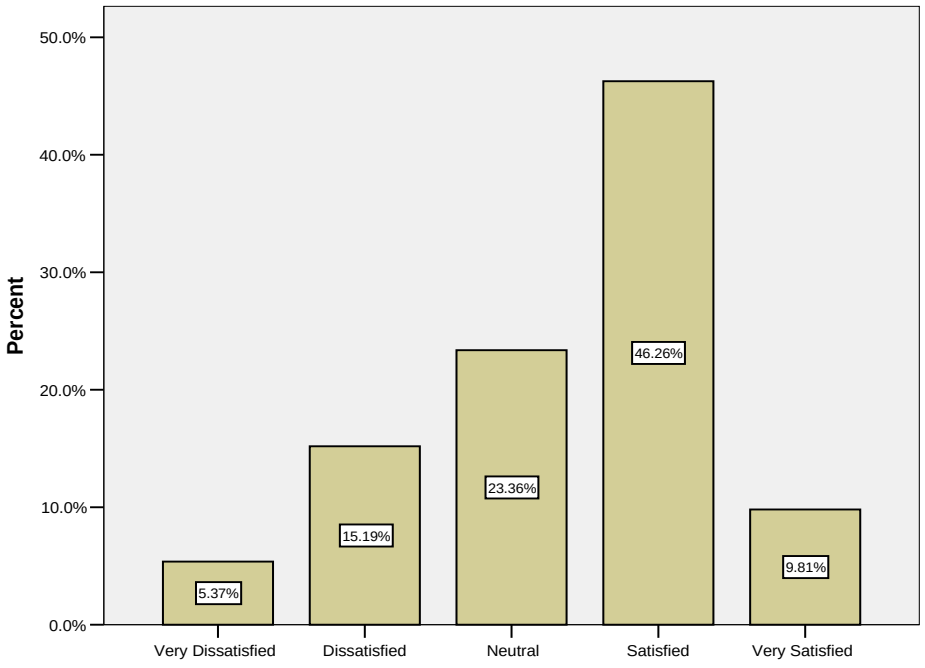



**Figure 7.12: Overall satisfaction with health care provider**

### 7.6.10 Overall satisfaction with the insurance company's role

Table 7.44 and Figure 7.13 show that half (50.3%) of the respondents are satisfied with the insurance company's role, while 29.6% of the respondents are dissatisfied with the insurance company's role.

**Table 7.44: Overall satisfaction with the insurance company's role**

| | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Total | Mean | St. deviation |
|---|---|---|---|---|---|---|---|---|
| Overall satisfaction with the insurance company role | 59 | 169 | 91 | 86 | 48 | 453 | 3.2318 | 1.20715 |
| | 13 | 37.3 | 20.1 | 19.0 | 10.6 | 100% | | |

***** It is noted that the total number was not 462 because 9 respondents left the question blank.

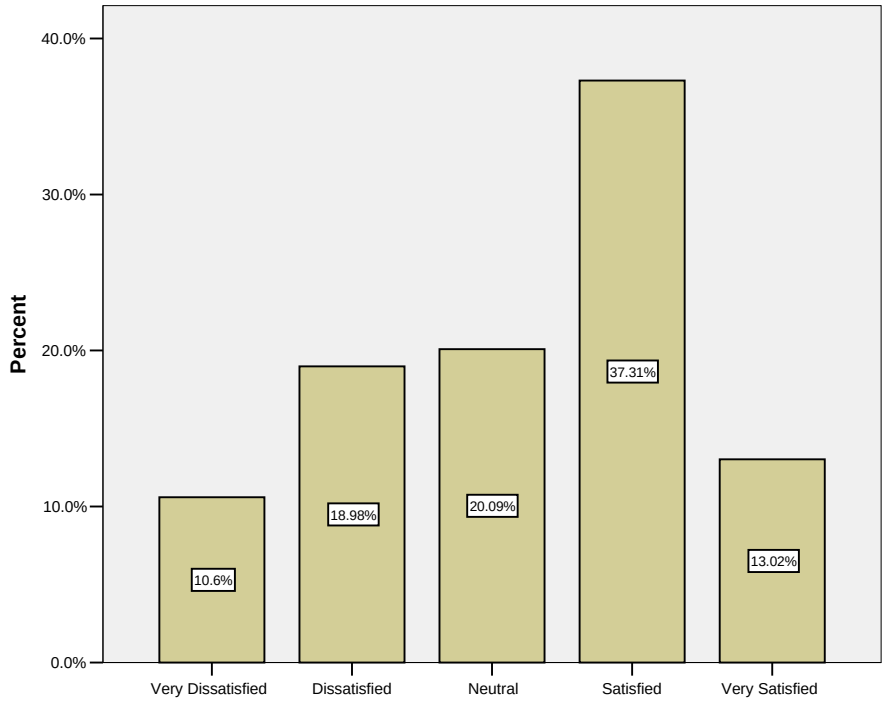



**Figure 7.13: Overall satisfaction with the insurance company role**

### 7.6.11 Overall satisfaction with the CHIS

Table 7.45 and Figure 7.14 show that more than half (58.8%) of the respondents are satisfied with the CHIS, while 21.5% of the respondents are dissatisfied with the CHIS.

**Table 7.45: Overall satisfaction with the CHIS**

| | Very satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Very dissatisfied (1) | Total | Mean | St. deviation |
|---|---|---|---|---|---|---|---|---|
| Overall satisfaction with the CHIS | 87 | 178 | 89 | 62 | 35 | 451 | 3.4878 | 1.17443 |
| | 19.3 | 39.5 | 19.7 | 13.7 | 7.8 | 100% | | |

***** It is noted that the total number was not 462 because 11 respondents left the question blank.

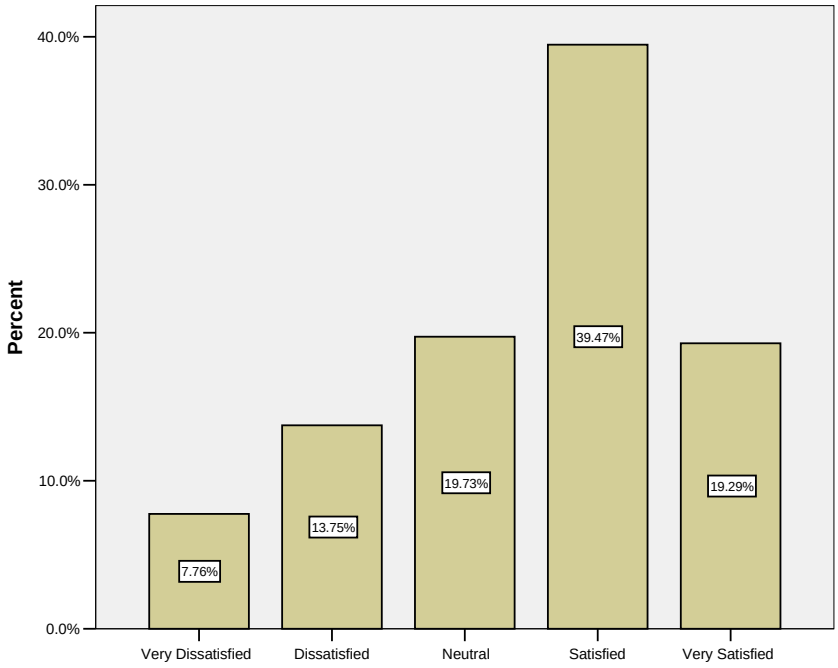



**Figure 7.14: Overall satisfaction with the CHIS**

### 7.6.12 The results of stepwise multiple regression

#### 7.6.12.1 The most important factors (dimensions) that impact the level of beneficiaries' satisfaction with the CHIS in Riyadh city

It is noted that the previous tests enabled the researcher to study the relationship between two variables only. They overlooked the effect of other variables on this relationship, which may lead to somewhat misleading results and cause acceptance of the existence of such a relationship while it was not statistically significant. There was therefore a need for an analytical technique which takes into consideration the combined effect of the independent variables on the dependent variable in this study; therefore, stepwise multiple regression was used as mentioned in section 7.3.

#### 7.6.12.2 Multicollinearity

Multicollinearity exists when there is a high correlation between two or more independent variables (predictor variables) in the regression model (Brace, Kemp and Snelgar, 2003:213). Field (2005:174) pointed out that: *"high levels of collinearity increase the probability that a good predictor of the outcome will be found non-*

*significant and rejected from the model"*. The impact of multicollinearity is to reduce any single independent variable's predictive power by the extent to which it is associated with the other independent variables (Hair, 1998). Correlation coefficients between the independent variables were scanned to check that there was no strong multicollinearity (correlations of above 0.08) (Field, 2005:175; Fahmi, 2005:679) between the independent variables, which could lead to misleading results for the regression analysis. Multicollinearity leads to an unstable correlation matrix which is the core on which the main regression statistics are based. Consequently, multicollinearity can produce unreliable and unstable regression estimates, significance levels and confidence intervals (De Vaus, 2002). In this study, the correlation matrix was run using SPSS. All the values of the correlation coefficient were less than 0.08, which indicates the non existence of strong multicollinearity between the independent variables. Variance Inflation Factor (VIF) for the independent variables was also calculated and all were less than 10 (see Table 7.47) which confirms the absence of strong multicollinearity (Field, 2005:175, Fahmi, 2005:680) between the independent variables. It is generally believed that if the variance inflation factor (VIF) for any predictor variable exceeds 10.0, there is a potential problem with multicollinearity (Bowerman and O'Connell, 1990; Myers 1990, Lee et al., 2002). Stepwise regression was run using SPSS (see appendix G). The results of this regression at the 5% significance level are shown in Table 7.46 as follows:

**Table7.46: Stepwise multiple regression between beneficiaries' personal characteristics, satisfaction with different dimensions of service, satisfaction with employer role, satisfaction with insurance company role as independent variables in the model and the overall level of beneficiaries' satisfaction with the CHIS as a dependent variable:**

| Independent variables | Standardised Beta coefficient | t | Significance level | VIF |
|---|---|---|---|---|
| Satisfaction with insurance company role | 0.293 | 3.226 | 0.002* | 2.072 |
| Satisfaction with service delivery | 0.278 | 3.094 | 0.002* | 2.037 |
| Type of health insurance coverage | 0.140 | 2.122 | 0.035* | 1.093 |
| Number of family members covered by the CHIS | - 0.130 | - 2.048 | 0.042* | 1.008 |
| F- value for the model was 22.718 and the $R^2$ was 0.361 | | | | |

*Statistically significant at the 0.05 level

The results presented in Table 7.46 show that there is a statistically significant relationship between the independent variables (satisfaction with insurance company role, satisfaction with service delivery, type of health insurance coverage and number of family members) and the dependent variable (beneficiaries' satisfaction with the CHIS). The following represent the ranking of these independent variables and the strength of their impact (based on Beta coefficient values) on beneficiaries' overall satisfaction with the CHIS as a dependent variable:

1. Satisfaction with insurance company role was the greatest (first) explanatory factor with respect to its impact on the overall satisfaction with the CHIS. There was a direct relationship (Beta =positive 0.293, the significance level was less than 0.05) which means that when the beneficiaries' level of satisfaction with the insurance company role increases, their overall satisfaction with the CHIS increases.
2. The variable "satisfaction with service delivery" was the second explanatory factor with respect to its impact on the overall satisfaction with the CHIS. There was a direct relationship (Beta =positive 0.278, the significance level was less than 0.05) which means that when the beneficiaries' level of satisfaction with the

services provided under this dimension increases, their overall satisfaction with the CHIS increases.

3. The variable "type of health insurance coverage" was the third explanatory factor with respect to its impact on the overall satisfaction with the CHIS. There was a direct relationship (Beta =positive 0.140, the significance level was less than 0.05) which means that when beneficiaries get health insurance coverage which meets their needs (usually family coverage), their overall satisfaction with the CHIS increases.
4. The variable "number of family members" was the fourth explanatory factor with respect to its impact on the overall satisfaction with the CHIS. There was a negative relationship (Beta=negative 0.130, the significance level was less than 0.05) which means that when the family members of the beneficiary are not covered by the CHIS, his/her overall satisfaction with the CHIS decreases.

The results also indicate that all of these four variables explain only 36.1% (R-square) of the variance in the overall level of beneficiaries' satisfaction with the CHIS. This means that there may be other relevant factors than those mentioned and used in this study that explain 63.9% of the variance in the overall level of satisfaction with the CHIS.

## 7.7 Summary

This chapter has presented the research techniques and methods that were applied to achieve the research objectives. Statistical techniques used in previous related studies were presented. Statistical techniques which were employed in this study have been highlighted. Descriptive, inferential statistics, correlation, gap analysis and multiple regression analysis were used to analyse the questionnaire. Sample nature and size in statistical analysis were discussed. The characteristics of respondents and the results of the quantitative data from the survey were presented.

Study findings revealed that, overall, 59% of respondents were moderately satisfied with the CHIS. The CHIS has improved access to the health care system as indicated by the results of the utilisation. The results also revealed that more than half (56%) of the respondents were satisfied with their health care providers**,** that overall they were highly satisfied with their employer's role in their coverage with health insurance and that half of the respondents were moderately satisfied with the insurance company's role in their coverage with health insurance.

As regards personal characteristics, no significant statistical differences existed between respondents' satisfaction with services provided under the CHIS and their gender, marital status, educational level, or occupation, with the exception of the cost dimension. Respondents with high monthly income were more satisfied with service delivery, communication while receiving service and cost than those with medium monthly income. A significant statistical relationship was found between respondents' level of satisfaction with service delivery, access and availability of facilities, communication while receiving service, and age. However, no statistically significant relationship was found between respondents' level of satisfaction with the cost of service and age. The results also revealed that there was a statistically significant difference between respondents' satisfaction with the service delivery, communication while receiving service, cost of services and their monthly income, while no statistical difference was found between access, availability of facilities and their monthly income. In addition, no significant statistical differences existed between respondents' satisfaction with service delivery and communication in services provided under the CHIS associated with their nationality. However, significant differences existed between respondents' level of satisfaction with access and availability of facilities and the cost of service.

The results indicated that the level of respondents' satisfaction with communication while receiving service, service delivery, ease of access and availability of facilities was moderate. With regards to service delivery, respondents were highly satisfied with the protection of respondents' privacy, service staff respect to patients, number of visits required to receive the treatment for each case, courtesy of service staff and the number of people dealt with to obtain health service. However, they were moderately satisfied with the comprehensiveness of covered health services. Respondents were not satisfied with waiting times to receive the service under the CHIS. The comprehensiveness of covered health services was also a concern. With regards to access and availability of facilities under the CHIS, approximately 60% of the respondents attributed their high levels of satisfaction with this dimension to the availability of signs that were easy to understand and to the convenient location of their health care providers. As regards communication while receiving service under the CHIS, the results revealed that 65% of the respondents were highly satisfied with the ease of understanding and filling forms, that 61% were satisfied with the CHIS procedures and that 61% were satisfied with the written and verbal language used to communicate with them. One quarter (25%) of the respondents were dissatisfied with the responsiveness of health care providers to their complaints or comments. With regards to the cost, the results revealed that more than three-quarters of the respondents (81%) paid copayment for receiving health care services under the CHIS and that the level of their satisfaction with the copayment paid for medicines, the copayment paid for laboratory tests and radiography; and the cost of health care not covered by insurance was low. Respondents reported that the cost of health services was high.

The problems encountered by respondents who experienced service under the CHIS (N = 404) tended to fall into four categories: denial of provision of some services (48.3%), getting conflicting information from different people (22.8%), length of hospital stay

being determined by the insurance company (14.9%). In the ‘other’ category 14.1% of respondents indicated that they encountered multiple problems such as the exclusion of dental care, skin care, excluding some family members from coverage and language barriers. Accordingly, comprehensiveness of covered health services, adequacy of car parking, responsiveness of health care providers to respondent complaint and comments and cost of health care not covered by insurance were ranked as the highest priority for improvement from the respondents' point of view.

Stepwise multiple regression analysis revealed that satisfaction with the insurance company role, service delivery, type of coverage and inclusion of family members explain only 36% ( $R^2$) of the variance in the overall level of respondents' satisfaction with the CHIS. The insurance company role was the most powerful explanatory factor with respect to its impact on the overall satisfaction with the CHIS. Finally, the next chapter will report on the qualitative data analysis and results.

# CHAPTER EIGHT

## Analysis and Results of Qualitative Data

# 8. Analysis and Results of Qualitative Data

## 8.1 Introduction

This chapter presents an in-depth information on all the service dimensions investigated, based on the researcher's observations and twenty-one interviews conducted to elicit participants' perceptions of services provided under the CHIS. Qualitative data from the open question in the questionnaire is also presented. The data in this chapter are grouped into five main sections. The first discusses the qualitative data processing and analysis. The second contains the outcomes of the researcher's observations on the selected services. The third includes general information about the interviewees; the fourth contains their responses on service perceptions. The fifth section is devoted to the open question contained in the questionnaire. Detailed discussion of the relevance of the data to the research questions and implications is confined to Chapter Nine.

## 8.2. Qualitative data processing and analysis

The qualitative approach is more subjective in nature than quantitative. It involves the examination and reflection of perceptions in order to understand social and human activities. It is difficult to analyse the data and write up the final report (Hussey and Hussey, 1997; Basit, 2003) because the analysis of qualitative data is seen by Basit (2003:143) as "*a dynamic, intuitive and creative process of inductive reasoning, thinking and theorising"*. Bogdan and Biklen (1982:145) define qualitative data analysis as: *"working with data, organising it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others"*. According to Jorgensen (1989: 107):

> *"Analysis is a breaking up, separating, or disassembling of research materials into pieces, parts, elements, or units. With facts broken down into manageable pieces, the researcher sorts and sifts them, searching for types, classes, sequences, processes, patterns or wholes. The aim of this process is to assemble or reconstruct the data in a meaningful or comprehensible fashion".*

Qualitative data analysis starts at the beginning of data collection. The researcher collects and analyses data as soon as it is collected and then decides what data to collect next based on what has been learnt. Thus, it was a challenge to specify a structured data collection and analysis plan in advance (Bryman and Bell, 2003; Dean and Sharp, 2006). There are good grounds for making analysis an ongoing activity (Basit, 2003), because it allows the researcher to be more aware of emerging themes that can be used to ask more specific questions in the interviews. Qualitative data analysis was used to explore the findings and provide a deeper understanding of the quantitative results. Creswell (2003:190) stated that qualitative data analysis

> *"involves preparing the data for analysis, conducting different analysis, moving deeper and deeper into understanding the data, representing the data, and making an interpretation of the larger meaning of the data"*

Data were analysed by organising them into categories on the basis of themes, concepts, or similar features as advised by Richards (2005:68) and Basit (2003:144). New concepts were developed and conceptualised and the researcher was looking for consistencies and variations in an effort to find and understand meaning (McQueen and Knussen, 2002). Open-ended responses in the survey, which asked respondents for their comments, suggestions and opinions were edited and categorised into general themes, which were created based on a review of the questionnaire responses. Compared with quantitative data analysis, there are no clear approved approaches which could be used for analysing qualitative data (Ritchie and Lewis, 2003:200; Collis and Hussey, 2003:253; Neuman, 2006:457). Indeed, the analysis methods depend on the purpose of the research. However, these methods should be systematic, disciplined and able to be

seen and described (Punch, 1998:200). It is not possible to review all the approaches here, since there are too many and some are not relevant to the nature of this study. However, some approaches, for example, content analysis and grounded theory, which have been explained by some researchers (i.e. Punch, 1998; Silverman, 2001; Collis and Hussey, 2003) will be discussed briefly in this study. In addition, the approach which was used in this study will be discussed in detail.

### 8.2.1 Content analysis

Content analysis is a set of techniques that examine and analyse information represented as text (Dutka, 1994:22). It is a technique for the objective, systematic and quantitative description of the manifest content of communication (Cooper and Schindler, 2001). Content analysis is a way of converting text and documents to numerical variables in order to apply quantitative data analysis (Collis and Hussey, 2003:255). The main advantage of content analysis is that it is not expensive and access to public documents is not a problem. In addition, the time pressure with interviews is not an issue since the researcher can choose any time to conduct his analysis and the procedures for carrying out this analysis are usually acceptable in terms of reliability and validity (Collis and Hussey, 2003:257). However, this method has some disadvantages and criticisms. "The theoretical basis of this method is unclear and its conclusions can often be trite" (Silverman, 2001:123). In addition, content analysis may discard a large amount of data to record only the words or phrases which are of interest to the researcher. However, the data that was omitted could be important to understand the phenomenon under investigation (Collis and Hussey, 2003:258). Content analysis was not used in this research. The researcher intended to explore the views of beneficiaries using non-quantifying methods, whereas "Content analysis can be useful to the researcher who has collected qualitative data and wishes to convert it into quantitative data" (Collis and Hussey, 2003:258). The researcher applied quantitative approaches in the first phase of

the study. A more qualitative approach was very useful to provide a comprehensive understanding about the results of the second phase of this study. The researcher was interested in analysing all the data of the interviews, and concerned to avoid omission of a large amount of the data, which could affect the richness of the interviews.

### 8.2.2 Grounded theory

It has been argued that grounded theory is not theory at all. Rather, it is an approach or a strategy (Punch, 1998). Punch (1998:163) defined grounded theory as:

> *"a research strategy whose purpose is to generate theory from data. 'Grounded' means that the theory will be generated on the basis of data; the theory will therefore be grounded in data. 'Theory' means that the objective of collecting and analysing the research data is to generate theory. The essential idea in grounded theory is that theory will be developed inductively from the data"*

Thus, the major purpose of grounded theory is to discover a theory from the data. Grounded theory analysis is carried out in three major stages. The first stage is to identify conceptual categories in the data. The second stage is to find linkages and relationships among these categories. The final stage is a higher level of conceptualising these relationships, where the theory emerges (Punch, 1998:210). Moreover, three kinds of coding are used in the different stages of analysis (Neuman, 2006:460):

1. Open coding: occurs in the first stage of analysis, when the researcher indicates the themes and assigns codes for these themes in order to condense the mass of data into categories.
2. Axial coding: the second stage of coding, where the researcher organises the codes, creates linkage among themes and identifies the key concepts axis in data analysis. In addition, new codes could emerge during this stage of the research and the researcher should be aware of that.
3. Selective coding: the last stage, which enables the researcher to scan and examine the previous codes and themes. Then the researcher selects the themes, ideas, concepts and the codes which interpret the qualitative data and makes

comparisons and constructs. This stage provides the underpinning core for generalisations and conclusions.

Grounded theory analysis was not used in this study, as the main proposition of grounded theory is that it is to be applied where there is no theoretical framework for the study. For grounded theorists, qualitative analysis is about generating new theory (Gibbs, 2002:60). *"It is widely employed and can be very helpful in analysing qualitative data where there is no preconceived theoretical framework"* (Collis and Hussey, 2003:272). This objective of discovering and developing a theory from the data is quite different from the researcher's objective in applying qualitative methods in this research, namely, to support and enhance understanding regarding the beneficiaries' satisfaction with services provided under the CHIS. Satisfaction theories already exist, and there was no intention to develop a new theory in this study.

### 8.2.3 General Analytical procedures

The general analytical procedure (Collis and Hussey, 2003:263) was used to analyse the qualitative data. This can be used with any methodology. Gibbs (2002:2) stated that *"qualitative data analysis is coincident with data collection"*. The data collection methods in qualitative research produce a large volume of material which can be managed and controlled by specific procedures and steps. The procedures involved in this approach are illustrated in Figure 8.1.

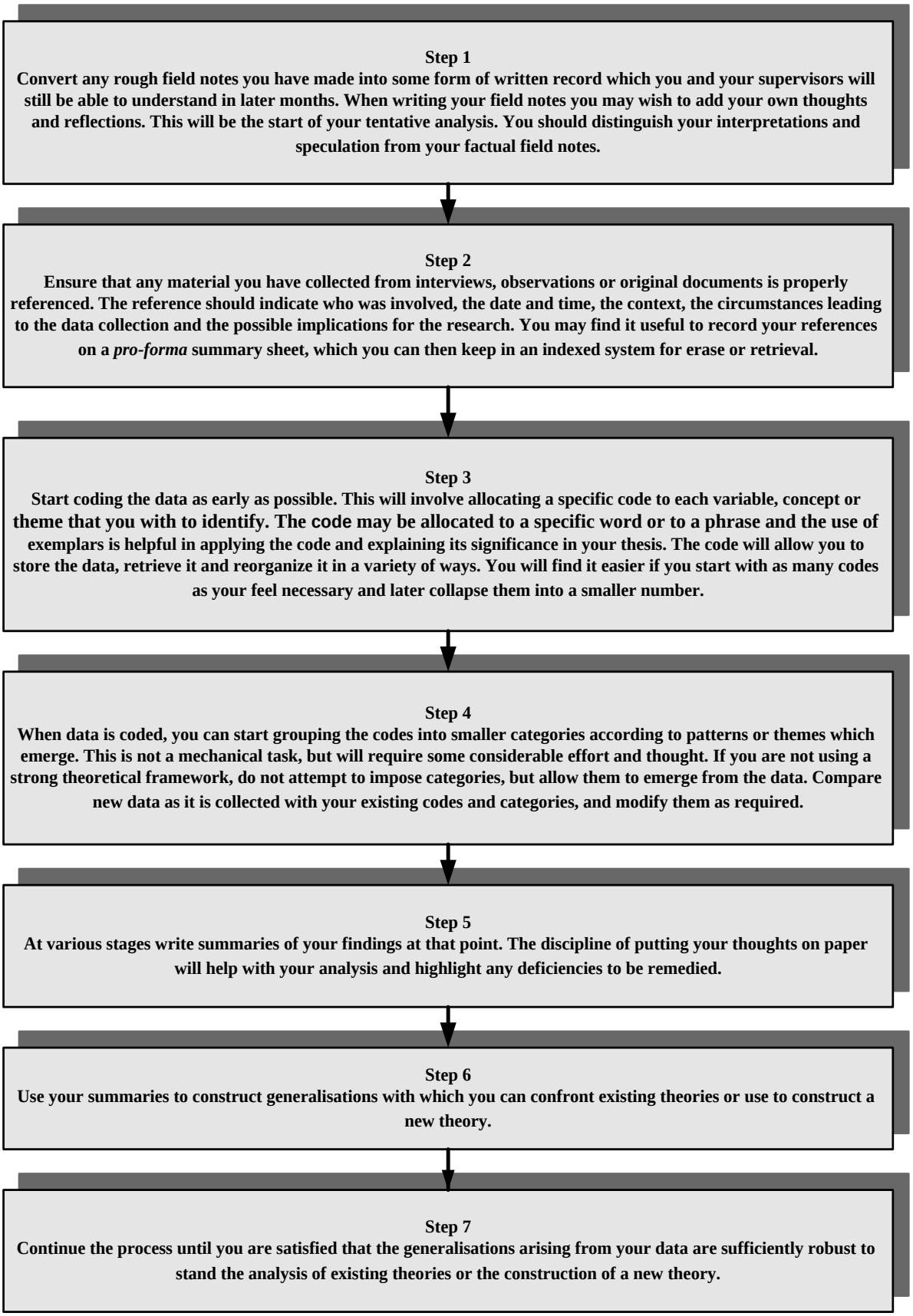



**Figure 8.1 General analytical procedures for qualitative data**

Source: Collis and Hussey (2003:264)

The reason for choosing such an approach in this study was that it provided systematic procedures that were followed in managing, analysing and generating the results from qualitative data. These procedures were clear and easy to follow. Similar steps have been pointed out by Cresswell (2003). Those steps were summarised in the following paragraph:

> *"More generic steps include organising and preparing the data, an initial reading through the information, coding the data, developing from the codes a description and thematic analysis, and representing the findings in tables, graphs, and figures. It also involves interpreting the data in the light of personal lessons learned, comparing the findings with past literature and theory, raising questions and/or advancing an agenda for reform"* (Cresswell, 2003:206)

Collis and Hussey (2003:279) state that *"the main challenges when attempting to analyse qualitative data are how to reduce the data, give it structure and use it in a form other than extended texts"* which could be used in analysis and findings. However, *"few studies describe the methods adopted to analyse qualitative data sufficiently explicitly to provide a comprehensive guide"* (Collis and Hussey, 2003:279). Moreover, the focus in qualitative data is on data collection methods and interpretations of findings, more than the analysis procedure. Collis and Hussey (2003:280) stated that *"no matter how good the systems and procedures you adopt are, the quality of your analysis will depend on the quality of the data you have collected and your interpretations"*. The researcher used the steps of general analytical procedures in order to analyse the results of the qualitative phase of the study. The linkages between each procedure (step) and the process of interview analysis are as follows:

#### 8.2.3.1 Converting audio recorded data into written texts (Step 1)

In order to ensure the reliability of the interview, permission was obtained from the interviewees to record their conversation. A digital audio recorder was used to record the interviews because it has the advantage of speeding up the interview process and providing a complete verbal record which can be studied much more thoroughly than

data in the form of interviewer notes. In addition, the quality of the recording in the digital voice recording can improve the accuracy of transcription, the digital voice recording can be played back without the quality of the recording deteriorating, there is no need to purchase audio tapes, digital recorders are small, easy to use, light and portable, making them unobtrusive in a research interview and easy to carry (Bryman and Bell, 2007). The digital audio recorder was tried before each interview to make sure it worked. The use of the digital voice recorder helped in reducing researcher bias by documenting the interview. Heritage (1984:238) suggests that the procedure of recording and transcribing interviews has the following advantages:

- It helps to correct the natural limitations of our memories and of the intuitive glosses that we might place on what people say in interviews.
- It allows more thorough examination of what people say.
- It permits repeated examinations of the interviewees' answers.
- It opens up the data to public scrutiny by other researchers, who can evaluate the analysis that is carried out by the original researchers of the data.
- It therefore helps to counter accusations that an analysis might have been influenced by a researcher's values or biases.
- It allows the data to be reused in other ways from those intended by the original researcher - for example, in the light of new theoretical ideas or analytic strategies.

At the end of each interview, interviewees were provided with an account of what has been said to the researcher in the interview. This was done in order to seek confirmation that the researcher's findings match with the views of those on whom the research was conducted and to seek out areas in which there is a lack of association and the reasons for it. Bryman and Bell (2007:411) stated that *"respondent validation provides a means of confirming the validity of individual accounts"*.

Note-taking is time consuming and may unwittingly lead to leaving important information, missing behavioural clues and not exploring all the issues. The researcher wrote notes immediately after each interview. Sekaran (2003:229) stated that *"When conducting interviews, it is important that the researcher makes written notes as the interviews are taking place, or as the interview is terminated"*. After each interview, the researcher checked the recorder for audibility and notes for legibility and wrote the full notes, thoughts and reflections about the interview then transcribed each interview. The processes of interviewing, transcription and the analysis of transcripts were time consuming (Bryman and Bell, 2007). After recording, *"the transcription process is tedious; it may take a day's typing to transcribe a one-hour interview"* (Gilbert, 1993:147)**.**

Some interviews were conducted with respondents in their primary language "Arabic". Once each interview was terminated, the recorded conversation was transcribed by the researcher in the language spoken during the interview. Arabic transcripts were translated into English by the researcher. Translating Arabic text to English text in this study may not give a fully accurate transcript because some Arabic verbal utterances (especially non formal language) have no English equivalent. Finally, the interviews were analysed and interpreted in English. The language which was used was informal, as recommended in qualitative studies, so as not to lose the original meaning (Collis and Hussey, 2003:49). The recoding files were given to a bilingual colleague to listen to and check and search for any differences between the transcripts. The interviews were repeated with the same interviewees, if the results were the same, then there would be confidence in the reliability of the interviews. The researcher followed the sequence shown in Figure 8.2 to conduct the interviews.


**Figure 8.2: The Sequence of the Interview Process**

#### 8.2.3.2 Interview details (Step 2)

Interviewing related stakeholders such as health care policy makers (MOH), CCHI Officers, employers, insurers, health care providers are undoubtedly beneficial in order to enhance our understanding of beneficiaries' satisfaction with the CHIS. However, the limitation of time and access caused the researcher to interview beneficiaries. Participants were able to provide a detailed understanding regarding their experiences, perspectives and suggestions as regards the improvement of the CHIS. The researcher conducted 21 interviews. The interview details are presented in Table 8.1.

**Table 8.1 Interviews Details**

| No | Age | Nationality | Job title | Marital status | Educational level | Monthly income | Number of family members | Type of health insurance coverage | Date | Time duration |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46 | Saudi | Site inspector | Married | Bachelor | above S.R 6000 | 3 | Family | 17/05/08 | 10-11:30 hrs |
| 2 | 48 | Saudi | Site inspector | Married | Occupational diploma | above S.R 6000 | 5 | Family | 17/05/08 | 12:30-1:15 hrs |
| 3 | 28 | Saudi | Electric engineer | Married | Bachelor | above S.R 6000 | 2 | Family | 18/05/08 | 1:30-2:00 hrs |
| 4 | 26 | Saudi | Meters technician | Married | Secondary school | above S.R 6000 | 2 | Family | 18/05/08 | 2:15-3:00 hrs |
| 5 | 53 | Non Saudi | Electrical engineer | Married | Bachelor | above S.R 6000 | 5* | Single | 19/05/08 | 9:00-09:45 hrs |
| 6 | 50 | Saudi | System analyst | Married | Secondary school | above S.R 6000 | 8 | Family | 21/05/08 | 1:00-2:00 hrs |
| 7 | 38 | Non Saudi | Administrative services | Married | diploma after secondary school | less than S.R 2000 | 4 | Family | 24/05/08 | 10-11:00 hrs |
| 8 | 34 | Non Saudi | Branch manager | Married | Secondary school | S.R 4000 -6000 | 4 | Single | 24/05/08 | 1:00-1:45 hrs |
| 9 | 23 | Saudi | Credit representative | Single | diploma after secondary school | S.R 4000 -6000 | Not** applicable | Single | 26/05/08 | 9:30-10:00 hrs |
| 10 | 28 | Non Saudi | Accountant | Single | Bachelor | S.R 2000 - less than 4000 | Not** applicable | Single | 27/05/08 | 10-10:30 hrs |
| 11 | 52 | Non Saudi | Engineer | Married | Bachelor | S.R 4000 - 6000 | 4 | Family | 27/05/08 | 1:00-1:30 hrs |
| 12 | 26 | Non Saudi | HR Coordinator | Single | Bachelor | S.R 2000 - less than 4000 | Not** applicable | Single | 28/05/08 | 11-11:30 hrs |

**Table 8.1 Interviews Details (cont)**

| No | Age | Nationality | Job title | Marital status | Educational level | Monthly income | Number of family members | Type of health insurance coverage | Date | Time duration |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 13 | 30 | Non Saudi | System analyst | Married | Bachelor | S.R 4000 - 6000 | 2 | Family | 31/05/08 | 10-10:30 hrs |
| 14 | 23 | Saudi | Cashier | Single | Secondary school | less than S.R 2000 | Not** applicable | Single | 1/06/08 | 9:00-9:30 hrs |
| 15 | 40 | Non Saudi | Driver | Married | Technical Diploma | less than S.R 2000 | 3 | Single | 1/06/08 | 9:40-10:10 hrs |
| 16 | 32 | Non Saudi | Travel and reservation | Married | Bachelor | S.R 2000 - 4000 | 2 | Single | 1/06/08 | 11-12:00 hrs |
| 17 | 45 | Non Saudi | Credit risks manage | Married | Diploma after secondary school | above S.R 6000 | 6 | Family | 2/06/08 | 12:30-1:25 hrs |
| 18 | 47 | Non Saudi | Credit risk officer | Married | Bachelor | above S.R 6000 | 5 | Family | 2/06/08 | 3:00 -3:20 hrs |
| 19 | 25 | Saudi | Assistant Credit controller | Single | Diploma after secondary school | above S.R 6000 | Not** applicable | Single | 3/06/08 | 10-10:45 hrs |
| 20 | 30 | Saudi | Sales representative | Single | Diploma after secondary school | above S.R 6000 | Not** applicable | Single | 4/06/08 | 1:00-1:45 hrs |
| 21 | 35 | Non Saudi | Cashier | Married | Bachelor | S.R 2000 -4000 | 3 | Married | 4/06/08 | 2:00-2.30 hrs |

*Not living with the respondent in Saudi Arabia. ** Because respondent is not married

#### 8.2.3.3 Coding (Step 3)

Qualitative analysis is based on an interpretative philosophy (Gibbs, 2002). The first point considered after organising and preparing the interview for analysis is to read it through in order to obtain a general sense of the information and reflect on its overall meaning (Bryman and Bell, 2007:594). Reading through the interviews helps the researcher to understand *"What general ideas are participants saying? What is the tone of the ideas? What is the general impression of the overall depth, credibility, and use of the information?"* (Creswell, 2003: 191). The researcher compares and contrasts the data in order to discover similarities, differences and to find sequences and patterns. Coding is a *"method of managing or organising the data. All the original data are preserved"* (Gibbs, 2002:4). It is the process of identifying and recording one or more discrete passages of text or other data items that exemplify the same theoretical or descriptive idea (Gibbs, 2002:57). Coding is the starting process of data analysis and the foundation for what comes later in this analysis (Punch, 1998:204; Bryman and Bell, 2007:593). Codes are links between locations in the data and sets of concepts or ideas, and they are in that sense heuristic devices, which enable the researcher to go beyond the data (Coffey and Atkinson, 1996). Miles and Huberman (1994:56) presented a comprehensive definition of this term:

> *"Codes are tags or labels for assigning units of meaning to the descriptive inferential information complied during a study. Codes usually are attached to "chunks" of varying size - words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting. They can take the form of straightforward category labels or a more complex one (e.g. a metaphor)".*

As regards interviews,

> *"Coding is the process of grouping interviewees' responses into categories that bring together the similar ideas, concepts, or themes you have discovered, or steps or stages in a process" (Rubin and Rubin, 1995:238).*

Computer Assisted Qualitative Data Analysis Software (CAQDAS) is widely used in social science research to facilitate qualitative data analysis (Dean and Sharp, 2006:11). Using software in the data analysis process has been thought by some to add rigour to qualitative research (Richards and Richards, 1991). After getting the initial sense of the interviews, the researcher started the coding process using NVivo qualitative analysis software (version 8) from QRS International (www.qsrinternational.com). Dean and Sharp (2006:20) argued that good NVivo analysis is more interpretivist. The researcher decided to use NVivo because it is relatively simple to use and it had addressed some of the earlier problems of other packages - particularly the need in programs like NUD.IST to determine minimum text units in advance of the analysis. It is possible to import documents directly from a word processing package and code these documents easily on screen. Coding stripes can be made visible in the margins of documents so that the researcher can see, at a glance, which codes have been used where (Welsh, 2002). One way in which such accuracy could be achieved is by using the search facility in NVivo which facilitates interrogation of the data.

NVivo was used to help in understanding and interpreting how the interviewees construct the world around them. In this study, NVivo software was used mainly as an organising tool. NVivo does not automatically make the codes as the researcher is the one who has to interpret the data, to create the codes, to reorganise and to retrieve them when needed. Bryman and Bell (2007:605) argued that CAQDAS, like NVivo, helps the analyst to think about codes that are developed in terms of trees of interrelated ideas and consider possible connection between codes. Gibbs (2002:11) stated that the use of:

> *"such code-and-retrieve programs make it easy not only to select chunks of text and apply codes to them, but also to retrieve all similarly coded text without losing any information about where it came from and to work with it in further analyses".*

The researcher spent considerable time to get acquainted with the NVivo package. The researcher believed that learning how to use the NVivo package was very useful and worth the time spent on gaining a transferable skill. Two steps were undertaken to start using NVivo as a helpful tool for analysis. The first step was to create a project in the software for this research. The project acted as a container to all the data files used during the project. The second step undertaken was to arrange the transcripts in a meaningful way. One folder entitled "Beneficiaries interviews" was created in the internal sources as shown in the screenshot in Figure 8.3. Moreover, each of the interviews was considered as a case and the attributes of each case was identified. Figure 8.4 shows the attributes assigned to the cases.

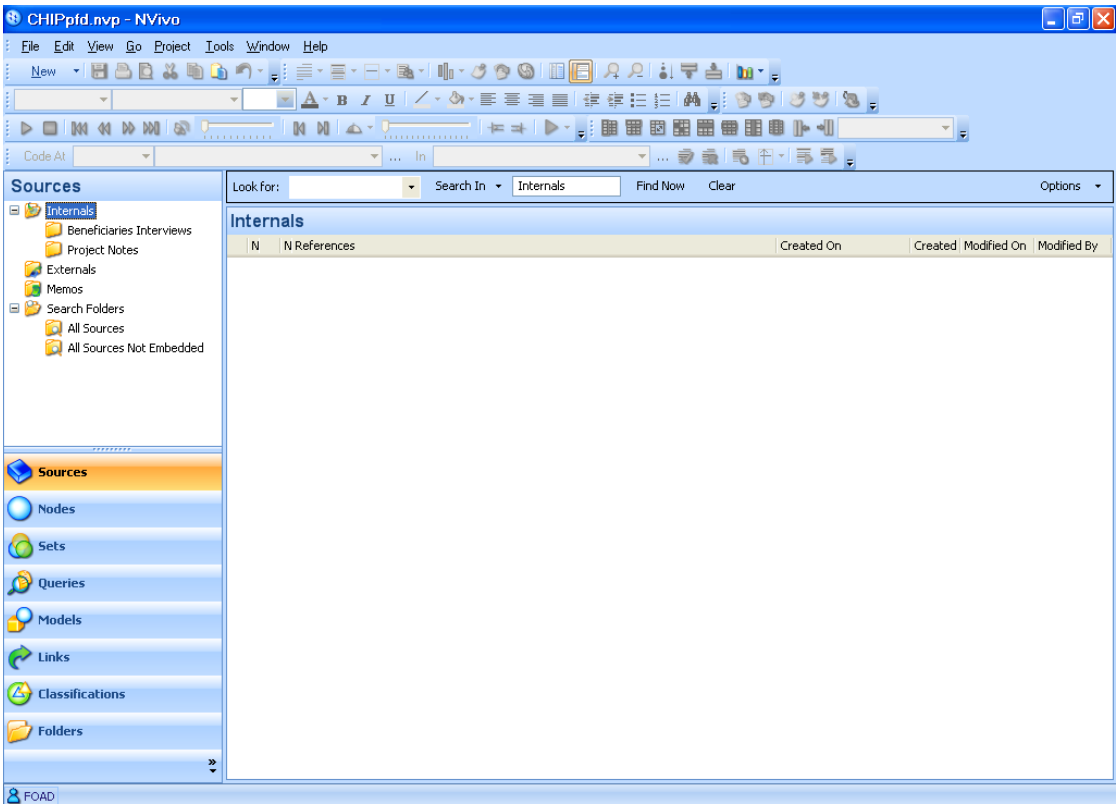



**Figure 8.3: Creating Folder Using NVivo**

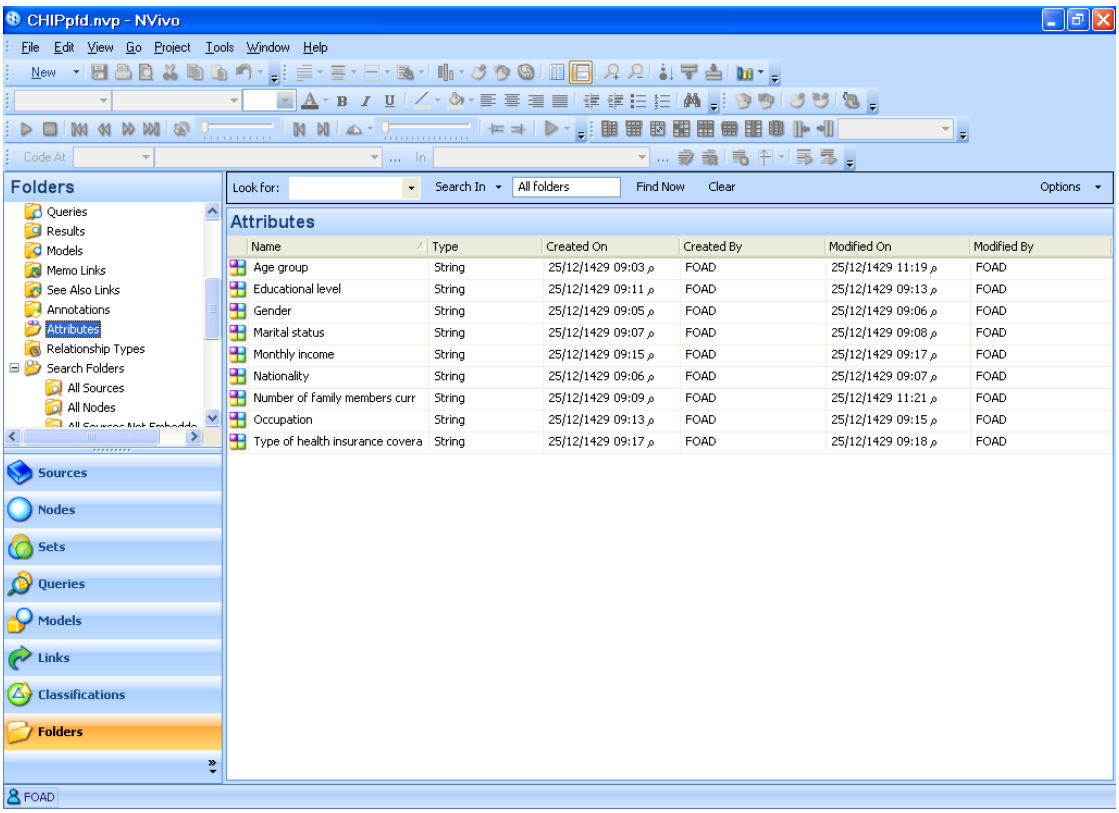



**Figure 8.4: Creating Attributes Using NVivo**

Transcripts were imported into NVivo directly from a word document. This has enabled the researcher to code, organise, link and explore data (Welsh, 2002). Using NVivo in this study encouraged the researcher to look at the transcripts line by line and think about the meaning of each sentence and idea. The researcher gained many advantages by using NVivo software as a tool to help in analysing the data such as decreasing the time required to perform manual tasks, enabling the researcher to handle large amounts of qualitative data and enhancing the flexibility and comprehensiveness of data handling. Through the use of NVivo, interview transcripts were able to be broken down into categories and properties. NVivo enabled the researcher to organise themes, explore and analyse them, showing relationships between data. Coding was carried out by connecting each of the passages to a node (Beekhuyzen, 2007). Gibbs (2002:57) stated that coding is *"a way of connecting a theoretical concept or idea with passages of text that in some way exemplify that idea"*. The nodes were constructed through close

reading of the text as advised by Gibbs (2002). Gibbs (2002:59) stated that *"If your project has been defined in the context of a clear theoretical framework then it is likely that you will have some good ideas about what potential nodes you will need"*. The production of a preliminary node tree was based on the literature as recommended by Dean and Sharp (2006:18). Nodes were created by the researcher and coded references were added to them. Coding was carried out by applying nodes to segments of text. Coding using NVivo allowed retrieval and viewing of the text that was coded at any particular node. Related materials were gathered from multiple sources into a node. The coding was accomplished by categorising the data. A more inductive approach was selected for coding data as suggested by Miles and Huberman (1994:57). Some codes have been determined according to relevant categories that emerged in the literature review while other categories were created inductively from data (Dean and Sharp, 2006, Strauss and Corbin, 1990). The data were grouped together under the following headings: service delivery under the CHIS, availability and access to health care facilities for the provision of health care under the CHIS, communication while receiving health care and cost of health care under the CHIS. The data were read and re-read to enable concepts to emerge. Themes or ideas emerged as the researcher explored the source references. NVivo has enabled the researcher to search for answers to questions and assisted in developing a deep understanding of the situation under study. It also allowed for a more flexible, iterative approach to data analysis. It is important to indicate that NVivo assists qualitative data analysis but it does not undertake the thinking for the researcher (Bryman and Bell, 2007; Basit, 2003). Dean and Sharp (2006:11) indicated that NVivo can *"support qualitative analysis rather than perform any automated analysis"*. Interpretation involves connecting meaning and significance to the analysis, explaining descriptive patterns and looking for relationships and linkage among descriptive dimensions.

#### 8.2.3.4 The interview framework (general observation) (Step 4)

Codes were assembled into smaller categories according to patterns or themes which emerged from the data (Fetterman, 1998:82 and 96). One of the preferred methods of creating codes as recommended by Miles and Huberman (1994) is to create a provisional 'start list' of codes prior to fieldwork. That list comes from the conceptual framework, list of research questions, hypotheses, problem areas and/or key variables that the researcher brings to the study. This study has a theoretical framework concerning consumer satisfaction with the CHIS. The literature review has provided a sufficient basis for this framework. Gibbs (2002:59) stated that *"the categories or concepts the nodes represent may come from the literature and previous studies"*. New data were compared to the existing categories and modified accordingly. The interviews were interpreted according to the different themes and aspects of satisfaction with services provided under the CHIS. The analysis of the qualitative approach related to coding the data and grouping these codes into categories**.** Accordingly, different aspects of each category are discussed according to the beneficiaries' views.

## 8.3 The outcomes of researcher's observations

As indicated in Chapter six, throughout the research, the researcher took every opportunity to observe incidents and conditions relevant to the research themes. These observations provide valuable first-hand information on the situation on the ground, and provide a useful complement to the data gathered by other means. In this section, the researcher's observations are reported under the headings: Service delivery, availability of service, accessibility of service, communication while receiving services, cost of health care, insurance companies' role, employer role, health Insurance awareness**,** emergent issues and challenges.

### 8.3.1 Service delivery

The professionalism of staff in lower-grade health care facilities varies. They appear to be inadequately trained and lack the skills of customer relations and knowledge regarding health insurance. It is also noticeable that some facilities lack visible directions for reaction in case of fire. According to the insurance policy, beneficiaries are entitled to a shared room when they need to be admitted to the hospital, however, most Saudis ask for private rooms even when required to pay for the difference from their pockets as they seek fast and quality health services (hotel-like). The reason for requesting private rooms is to enable their female relatives to be comfortable when accompanying the patient or visiting the patient as women are required to cover their faces in the presence of strangers according to Islamic traditions. On the other hand, non Arabs follow the rules without involving themselves in argument regarding their coverage limits and entitlement. They use written complaints to describe their experience and dissatisfaction as some beneficiaries enjoy VIP services and private rooms while others are deprived from privacy.

Sometimes it is difficult to book an appointment over the telephone simply because all lines are busy. The caller sometimes has to wait on line from five to ten minutes and sometimes the line cuts off and the caller needs to try again. Also, sometimes it is difficult to find dates and times that are suitable to the patient resulting in the patient having to wait longer before seeing the doctor. In addition, it is observed that the waiting time to receive approval for treatment varies depending on the insurance policy standards. Some policies need at least 24 hours before receiving approval while some policies may take 4 hours. The implementation of the CHIS has led to higher utilisation of medical services which has affected the quality of services provided to the patients. The researcher observed that patients sometimes waited 30-40 minutes to receive service as a result of congestion in a large private hospital during the evening shift

which usually starts from 4 pm and finishes at 10 pm. The waiting problem may be complicated if the patient case requires approval prior to rendering the service as there were delays in claims submission and approvals from providers due to the volume of patients. The health care providers also need a profit margin and that is why they contract with lots of insurance companies and are pressured by too many beneficiaries. So, the first thing that attracts the attention of people is money and cost; and they believe that improving the quality and organising health care comes later on.

In the course of interviewing, one of the oldest private hospitals was visited. Informal discussion with the hospital general manager revealed that the majority (80%) of hospital patients are insured while 20% of hospital patients are cash patients. The hospital is located in one of the best districts of Riyadh city; however, it was difficult to find a place for car-parking because spaces are limited and the number of visitors is high. It was observed that despite the development of the communication systems in Saudi Arabia, most providers have not utilised it to ease the procedures and receive approvals of treatment from the insurance companies. Internet and e-mail services are not used to facilitate the communication between the insurance parties. Provision of information to beneficiaries was found to be poor. It is notable to mention that there is a shortage of health insurance experts in Saudi Arabia, such as actuarial experts and expert lawyers in the field of health insurance, and that penalty laws for misconduct in the insurance field are not implemented.

### 8.3.2 Availability of service

As regards services and facilities, the basic medical service was available, but at variable cost depending on the classification of the facility and the requested procedures. One notable feature was the lack of Saudi personnel working in the field of health insurance transactions and approvals. A number of private health care facilities

and clinics which provide medical services to the insured were visited in Riyadh City. Such facilities varied in terms of availability and the quality of provided services, depending on their operation capacity, classification and the number of staff. Large hospitals usually have all medical specialties while some clinics are run by general practitioners. Some medical centres were as good as, or better than hospitals. These medical centres appeared to be very popular, presumably because they offer comprehensive quality services at reasonable cost as compared to hospitals. Nowadays people tend to use communication technology service in their daily lives in Saudi Arabia, especially after significant improvement was made to the communication sector. However, no efforts have been made to utilise this technology to inform beneficiaries about their claim approvals or at least to remind them about their appointments.

### 8.3.3 Accessibility of service

Accessibility problems may lead to customer dissatisfaction. It was noticeable that health services provision was not well balanced between districts. In general, most health care providers are located in the northern area of Riyadh City while there is a deficiency in the number of health care facilities in the low-class neighbourhoods of the city which has the highest population density. Sometimes it was not easy to reach providers because there were no clear signs or direction indicators to guide to their location. No information was given to beneficiaries to help them find the provider quickly in case of emergency. What people tend to do is to ask a friend to guide them or anyone on the street or at least to stop a taxi driver to get the directions from him.

### 8.3.4 Communication while receiving services

All of the private health care facilities generally had multinational staff and most of them were non-Saudi Arabs (Egyptians, Sudanese, Syrians and others) and fluent in Arabic; in addition they were proficient in at least one other language. Others, however,

were non-Arabs and were not proficient in Arabic, causing communication problems with the patients. It is noticeable that most providers recruit non Saudis because their salaries are lower than Saudis and some of them consider non Saudis as more productive.

Although insurance companies distribute booklets to beneficiaries, the main problem was that the information was not well managed or distributed as some claimed that they did not get any. In the absence of such information, the researcher noticed, it was common for them to face difficulties and have to ask for information regarding inclusions, exclusions and coverage limits. Most facilities lack an integrated information system that can support the health insurance transactions and solve or at least minimise problems and until now each hospital contracts with foreign companies to establish and maintain its own information system. Some contract with Canadian companies and use the International Classification of Diseases (ICD 10) and some contract with Australian companies and use the Australian version of the ICD which is different from the international version. Initiatives have not yet been taken to design or customise a system that meets the needs of the insurance parties.

### 8.3.5 Cost of health care

It was observed that beneficiaries are requested to pay variable co-payment depending on the contract between the provider and the health insurance company. For instance some beneficiaries are requested to pay S.R 10 per physician visit; some pay S.R 20; others pay nothing. There is a lack of standards to judge the quality of the prescribed medications. Insurance companies were forcing the health care providers to prescribe low cost generic medicines for beneficiaries in order to reduce the cost. They actually sent a list of the medications with trade names that they would accept and pay for; anything excluded from the list would be rejected. The insurance companies failed in

this practice and shifted to another system to contain the cost of medications by putting limits on medications such as S.R100 or S.R150 per visit and anything above this limit should be paid by the beneficiary. Insurance companies pressured the MOH to price medications, which has led to a good reduction in the medication prices. Any person being asked to purchase his own medication means that there is a deficiency in the provision of the services. The biggest beneficiaries are insurance companies and Saudi pharmaceutical companies. Beneficiaries judged the quality of medications based on price but they did not realise that other factors are associated with the cost of new medications, such as production rights, advertising and the research involved in the development of medication. On the other hand, they did not realise that the low cost of generic medications is because of the absence of the previously mentioned factors. According to a health insurance Act, health providers are obliged to accept and treat patients in emergency cases. However, it is not uncommon to find patients unable to pay the expenses or the insurance refusing to cover the case due to pre-existing conditions and such like.

### 8.3.6 Insurance companies' role

Insurance companies vary in their human resources capacity and they receive tremendous amounts of approval requests from a network of health care providers; therefore, delays in processing claims might be expected. Risk pooling requires a large number of participants and if the total number of foreign workers in the kingdom is 7 millions, dividing the seven million foreign workers by 23 insurance companies means 304,348 participants per insurance company, which means that there will be a lack of commitment toward the beneficiaries. Each company will increase insurance premiums if the number of subscribers drops, which means that the biggest beneficiary in this transaction is the insurance company. Insurance companies are not following the approved articles set by the rules and regulations of the CCHI. Even the policies of

some insurance companies are totally different from the unified policy, which means that there is a difference between what has been written and what is actually implemented in real life situations. Some companies tend to delay approvals for treatment they receive from the providers so that the beneficiary will not receive the required service. Some insurance companies do not pay the providers and when the beneficiary visits the provider, he/she may be asked to pay cash and then claim the money back from the insurance company and because some beneficiaries are unable to pay cash they consider themselves victims of the dispute between the insurance company and the provider. If the provider requests certain procedures such as a CT scan to be performed at another centre and requests the approval of the insurance companies, sometimes the insurance companies neglect the request until they receive a fax from the provider or when the beneficiary complains. In addition, most people believe that the strategy of the insurance company reflects the motto "every Riyal we do not pay is a net profit". That is why they do not approve the services to some people. There are a lot of rejections from insurance companies that most providers refuse to declare.

### 8.3.7 Employer role

Some employers tend not to inform their employees of their rights, responsibilities, insurance coverage limits, inclusions, exclusions and available providers. When the beneficiary visits the provider for treatment he/she may be asked to pay for the difference of coverage. As some beneficiaries may have the choice of more than one provider, they may prefer to seek medical care from other providers if they are not comfortable with their current provider. They may have reached their coverage limits without the notice of the latter provider; therefore, providers require approvals prior to the provision of services. Approvals enable the insurance company to control the provision of health care services based on insurance coverage limits. Some employers grant full health care coverage to their employees and some deduct a certain percentage

(10-30%) of their salaries (this is against the health insurance Act). Those workers who share in the payment of their medical bill will be more concerned about the quality of health service they receive. In addition, some employers cover only two children per employee, which means that the employees will bear the medical cost of additional children they may have. According to Article 36 of the Cooperative Health Insurance Regulations "The employer is obliged to pay premiums for his contracted employees as well as their dependents. This provision applies to non-working or dependent persons". As stated in Article (1) *"A dependent is a husband, wives, and boys under the age of 18 years and unmarried girls"*. In addition, Article (12) states that *"Insurance coverage of pregnancy and childbirth apply to those who are hired with a married status contract within the limits stated in the policy"*. Some employers invite representatives from the insurance companies to their organisation to conduct presentations in an orientation session for the purpose of explaining the health insurance policy, inclusions, exclusions, approval procedures, duration and requirements to receive medical services, handling complaints and customer services contact numbers.

### 8.3.8 Health Insurance Awareness

Health insurance is a new phenomenon in Saudi Arabia and people's awareness towards insurance is still limited. The beneficiary must be aware of the existence of health care under the CHIS (in order to fulfil his or her needs) before the intention to use the services can arise. Raising awareness about health insurance is crucial because many people do not know which services actually do exist, which are covered and which are excluded. Many people still hold the belief that cooperative insurance programmes are driven by profits rather than the basic needs of the vast majority of the population. So far employers, CCHI, decision-makers and policy planners and the media have failed to inform the general public of the characteristics of the CHIS, with the result that many Saudis and non-Saudis have little knowledge about it. Beneficiaries believe that as long

as they have a health insurance card and their coverage is up to S.R 250,000 they are entitled to all types of services and they want to get the maximum benefits when they utilise the health care services. Some think that the insurance companies must pay them back the difference if they do not reach their maximum policy limits.

Some scholars who approved the current health insurance condemn the beneficiaries' deception of the insurance companies. People deceive the insurance companies because of the lack of information. The lack of control and the negative behaviour toward health insurance can lead to substantial loss to the insurance companies. Some health insurance companies have declared bankruptcy as a result of deception. Some people consider health insurance as a forbidden transaction (Haram) and therefore they deceive the insurance companies.

### 8.3.9 Emergent issues

The role of the CCHI is to license health insurance companies and deal with complaints. They follow up on cases with documented complaints but they do nothing for those who do not complain. According to the rules and regulations of the CCHI, if any problem occurs between the beneficiary and either the provider or the insurance company, the beneficiary can forward his complaint to the CCHI. If the beneficiary is not happy with the settlement of the dispute by the CCHI, who can solve the problem? There are no courts that can solve these kinds of problems because, as mentioned in Chapter three, most religious scholars prohibit insurance transactions.

### 8.3.10 Challenges

Prior to the implementation of the CHIS, some private employers entered into group contract directly with health care providers for a discounted rate. Some employers used to cover their employees as a benefit and privilege granted by the employer and some employers did not pay for the treatment of their workers when they were sick. Medical

care was not considered as a right of the worker. It was a privilege granted by the employer. Therefore, most workers were satisfied because they would not bear the whole risk as their employers were sharing in the payment of their medical bills. On the other hand, Saudis are receiving free health care services and perceive the provision of health care as a right. Implementing health insurance and regulating health care for Saudis by requiring pre-authorisation, approvals for the provision of health services, claims management and control will result in delay of services and dissatisfaction. There were no professional medical standards in the medical field in Saudi Arabia. Every surgeon operates on patients according to certain procedures he/she follows but not according to unified standards. Physicians are of different nationalities, graduated from different medical schools, practised in different countries and use different methods and procedures to treat the same medical problem. Tseng (2003: 267) argued that western physicians tend to view the body and the mind as separate, dichotomised beings and that problems expressed through psychological complaints are superior or more mature than somatic complaints. On the other hand, Eastern physicians tend to view the body and mind as integrated parts of the whole thing, they do not try to view psychological or somatic manifestation in a hierarchical way.

If there is a medical malpractice it will not be easy to judge which procedure is the most appropriate. Some physicians are not even qualified to undertake certain procedures. It is assumed that the standardisation will lead to compatibility, consistency, and comprehensiveness of claims data with improved information quality. There is a misunderstanding of what is covered by cooperative health insurance and what is covered by social insurance when a worker gets a work related injury. Health insurance companies do not cover work-related injuries.

To conclude this section, it can be said that the researcher's observations, while revealing some examples of good practice, also revealed significant shortcomings in each of the service areas investigated. In the next sections, interviewees' perceptions of the same issues will be explored. First, however, the interview respondents will be introduced.

### 8.4 General information about the interviewees

This section contains information on interviewees' age, marital status, educational level, income and type of health insurance contract. Regarding gender, all interviewees were men. 71% of the interviewees were married while 29% of them were single; the percentage of married interviewees was greater than that of married questionnaire respondents. As regards the age of the interviewees, seven were between 20-29 years and three were aged between 50-59 years. In this respect there was similarity with the questionnaire respondents, since the largest age group was between 20-29 years, and the second significant age group was between 30-39 years. Another important factor is that beneficiaries who were less educated were less inclined to understand the value of the research and most of them declined to be involved. In this regard, they differed from the questionnaire respondents, less than half of whom had a bachelor degree (48%) and 48% had secondary school education while 4% had less than secondary school education. As regards interviewees' income, ten of them (48%) had income of S.R 6,000 and above. This corresponds with the number who had high qualifications. All the rest earned between S.R 5,999 to S.R 2,000, except three whose income was less than S.R 2,000. These results were consistent with the results obtained from the questionnaire respondents. 52% of the interviewees had family health insurance coverage while 48% of them had single coverage contract. 11 interviewees were married and had family coverage, 4 interviewees were married and had single coverage contract while 6 interviewees had single coverage.

## 8.5 Beneficiaries' perceptions of services provided under the CHIS.

The interviews were interpreted according to the different themes and aspects of service satisfaction as described in section 6.15.3. Each interviewee was given a number and his contribution is shown in *italics*. Respondents were able to convey their thoughts through recount of experiences from their past visits to health care providers to receive the service under the CHIS as a means of making sense of their world. Seidel and Kelle (1995) view the role of coding as noticing relevant phenomena; collecting examples of those phenomena; and analysing those phenomena in order to find commonalities, differences, patterns and structures. The researcher followed the suggestion made by Dean and Sharp (2006) in reporting NVivo analysis. Dean and Sharp (2006:18) stated that *"It is usually better to provide a synoptic view that brings out the commonalities between, say, different cases and to note any significant differences between cases"*.

### 8.5.1 Services delivery

The interviewees were asked to express to what extent they were satisfied regarding service provided under the CHIS.

#### 8.5.1.1 Comprehensiveness of covered health services

Comprehensiveness of coverage varies among beneficiaries depending on their employer profile. Those who work for high profile organisations get full coverage while those who work for medium to low profile organisations have limits on their coverage. The views regarding the comprehensiveness of coverage are shown in the table below:

**Table 8.2 Views about the comprehensiveness of coverage**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Some medicines, tooth fillings and skin care are excluded |
| 2 | ✔ | - | ✔ | - | - | Physical therapy and immunisations excluded |
| 3 | - | ✔ | ✔ | - | - | Parents not covered |
| 4 | - | ✔ | ✔ | - | - | Physical therapy and dental care excluded |
| 5 | ✔ | - | ✔ | - | - | Tooth filling excluded |
| 6 | - | ✔ | - | - | ✔ | Some medicines and procedures are excluded |
| 8 | - | ✔ | - | - | ✔ | Family not covered |
| 9 | | | | | | Dental care included |
| 10 | ✔ | - | ✔ | - | - | Dental and optic care included |
| 11 | - | ✔ | - | - | ✔ | Some chronic diseases are excluded |
| 13 | ✔ | - | ✔ | - | - | Dental care included |
| 14 | ✔ | - | - | ✔ | - | Unaware of coverage limits |
| 15 | - | ✔ | - | - | ✔ | Family not covered |
| 16 | ✔ | - | ✔ | - | - | Dental care included |
| 18 | ✔ | - | ✔ | - | - | Comprehensiveness of coverage→satisfaction |
| 19 | - | ✔ | - | - | ✔ | Parents not covered |

Two interviewees were satisfied with the comprehensiveness of coverage; however, they stated that they have limitation in coverage. Interviewee (4) was satisfied with the comprehensiveness of coverage. He commented *"Our employer pays for the delivery and baby incubators. If we compare the situation with other companies I observe that they only cover admission for two days only after that the employee will be responsible for the payment, even if there is a need for an incubator"*. Three interviewees were dissatisfied with their dental coverage. They claimed that teeth extraction is covered and teeth fillings are not covered. On the other hand, teeth extraction and fillings are covered for some interviewees namely (9), (13) and (16) because they work for high profile organisations. Two interviewees stated that physical therapy is not covered. The major issue is that insurance excludes pre-existing and chronic diseases which are

prevalent nowadays in Saudi Arabia. Chronic diseases need monitoring and continuous visits to the health care providers. Interviewee (6) said *"I think that the health care providers will not pay attention to such patients because they are guaranteed their payment already"*. The CHIS covers diseases that are relatively cheap in terms of therapy costs. In addition to that, insurance companies do not cover the elderly, for example, who are the most in need of medical services, nor do they cover children's vaccinations or children with chronic illnesses such as diabetes. For example one interviewee had an eight year old daughter who had been diagnosed with diabetes six years previously. The consultant had suggested the installation of an insulin pump to control her blood sugar level; however, the insurance company did not agree.

Interviewee (6) was concerned about the exclusions of some procedures which are not cosmetic in his view such as circumcision for Muslim newborn boys. According to him *"this procedure is necessary in our culture and is done once in a lifetime"*. He added *"I was totally dissatisfied and I went to a private practice to do the procedure for my son for only S.R 200"*. Interviewee (7) raised the issue of excluding his family members from the coverage despite his efforts to convince his employer to change his status from single to family coverage because he is responsible for their treatment when sick; however, his status has not as yet changed. In addition, two interviewees were concerned with the coverage of their parents.

**Most common concerns**

- Exclusion of chronic diseases.
- Exclusion of dental care especially fillings.
- Exclusion of physical therapy.
- Exclusions of some family members and parents from coverage.

#### 8.5.1.2 Waiting time

Despite interviewees being able to access the service, this did not mean obstacles might not occur during the process. One major issue related to access to services provided under the CHIS was the increasing demand for access, which resulted in ever growing patient numbers. Nearly half of the interviewees stated that they were concerned about the time they waited to receive the service under the CHIS. The views about the waiting time to receive health services under the CHIS are shown in the following table:

**Table 8.3 Views about waiting time to receive health services under the CHIS**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Congestion during evening shifts |
| 2 | - | ✔ | - | ✔ | - | Choosing a particular physician→ long waiting times |
| 3 | - | ✔ | - | - | ✔ | Shortage of staff→ long waiting times |
| 5 | - | ✔ | - | ✔ | - | Choosing a particular physician→ long waiting times |
| 7 | ✔ | - | ✔ | - | - | There is no delays |
| 8 | ✔ | - | ✔ | - | - | There is no delays |
| 10 | - | ✔ | - | ✔ | - | Waiting time is a problem |
| 13 | ✔ | - | ✔ | - | - | There is no delays |
| 15 | - | ✔ | - | - | ✔ | Long waiting time for treatment approval |
| 16 | ✔ | - | - | ✔ | - | No prior appointment→ Long waiting times |
| 19 | - | ✔ | ✔ | - | - | Choosing a particular physician→ long waiting times |
| 20 | - | ✔ | - | - | ✔ | Congestion during evening shifts |
| 21 | - | ✔ | - | ✔ | - | Congestion during evening shifts in private sector |

This time varies depending on the health care provider and the needed specialty. The patients may wait as a result of the availability of the physician or for approvals. For instance, interviewee (15) stated that *"I have experienced long waiting times in the*

*outpatient department when the provider asks for approval from the health insurance company"*. Some patients said that they did not wait for long such as interviewees (13) and (7) who said *"at the first visit it took me ten minutes to open the file, issue the patient card and copy the identification"*. However, it is not unusual to see a patient waiting if they attend the hospital without an appointment as stated by interviewee (16) who said *"when I go to the provider without having an advance appointment, sometimes it takes about 30 minutes before seeing the physician"*.

According to interviewee (1) *"delays in the provisions of health services by the health care providers occur during the evening shifts because most employers do not allow their employees to visit the provider during the working hours"*. If there is flexibility in choosing the physicians then it is up to the beneficiary to decide to wait and see specific physicians or to see another physician. Some interviewees such as interviewee (5) prefer to wait to see his preferred physician. For instance, interviewee (2) stated that *"there is no problem in choosing a particular physician but the patient has to wait"*. Interviewees (2) and (3) reported that there is a problem in waiting in the gynaecology department because sometimes the gynaecologist will be called to the operating room for a delivery while scheduled patients are asked to wait or otherwise book other appointments. Even if the patient waited for longer time, it is not guaranteed that he/she will see the physician as mentioned by interviewee (19) who stated that *"sometimes even if he waits for a longer time the official working hours finish and the provider requests the patient to come at another time"* which leads to beneficiary dissatisfaction. Interviewee (10) supports the previous view by giving an example from his own experience "*I was booked for an appointment with the physician at 8 P.M and I wasn't called to see the doctor until 10 P.M. After the clinical examinations the physician asked me to have an x-ray but I couldn't do it because the hospital working hours end at 10 PM. I think that the working hours of the providers should be extended"*.

The lengthy waiting time might be attributed to the following: the increasing volume of patients as a result of the implementation of the CHIS, the shortage of health care facilities and also the wish of patients to be seen by a particular physician. There is a perception that providers are seeking for profit and for that reason they try to contract with too many insurance companies. This has affected the quality of provided services negatively and led to beneficiaries' dissatisfaction. For instance, interviewee (20) elaborated on this: *"my current health care provider is considered one of the most famous medical centres in Riyadh city. The quality of health care services at this centre was great but due to the increased number of customers I observed that the quality is not like before. For instance, before they used to call each patient to confirm appointments but now with the patients' congestion it is even hard to book an appointment and the patient has to wait for a longer time in the waiting room to see the physician"*. Interviewee (1) confirmed the previous view: *"there is a delay in booking appointments to see a dentist or urologist in private hospitals because of the increasing volume of patients"*.

**Most common concerns**

- Lengthy waiting time.
- Increasing volume of patients led to congestion.
- Shortage of physicians and staff.

#### 8.5.1.3 Freedom to choose the preferred physician under the CHIS

There were different views among interviewees about their freedom to choose their preferred physician under the CHIS. Their views are shown in the following table:

**Table 8.4 Views about freedom to choose the physician under the CHIS**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 2 | ✔ | - | - | ✔ | - | Freedom to choose the physician |
| 5 | ✔ | - | ✔ | - | - | Freedom to choose the physician |
| 6 | ✔ | - | - | ✔ | - | Freedom to choose the physician |
| 7 | ✔ | - | ✔ | - | - | Freedom to choose the physician |
| 10 | - | ✔ | - | ✔ | - | Can't choose physician |
| 19 | - | ✔ | - | ✔ | - | Shortage of physicians |
| 21 | ✔ | - | ✔ | - | - | Freedom to choose the physician |

Five interviewees said that they were given the choice to select their preferred physician. However, some interviewees such as (2), (6), (7) and (21) said that there is no problem in choosing a particular physician but the patient has to wait sometimes for months to be seen by a physician of their choice. Interviewee (19) said that *"It is hard to choose a physician as the insured have to wait for a longer time"*. Interviewee (5) said *"I am free to choose the health care provider and the physicians"*. On the other hand, interviewee (10) said *"I cannot choose the physician and sometimes I have been referred to a general practitioner instead of specialist.*

**Most common concern:**

- Waiting to be seen by physician of patient choice.
- Shortage of physicians.

#### 8.5.1.4 Fairness in the provision of health services

There were different views among interviewees about the fairness in the provision of health services under the CHIS. Their views are shown in the following table:

**Table 8.5 Views about the fairness in the provision of health services**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | No equity in distributing health care providers |
| 12 | - | ✔ | - | ✔ | - | Changing job title may lead to losing benefits |
| 13 | ✔ | - | ✔ | - | - | Classification of insurance gives some privileges |
| 14 | - | ✔ | - | - | ✔ | Discrimination based on classification of insurance |

There is no equity in the distribution of health care providers in Riyadh city as most hospitals/clinics are located in the north of Riyadh city. According to health insurance policy, employees were categorised into three groups (A, B and C). Each group has minimum and maximum coverage limits and most executive directors and higher management get "A" classification which gives them more advantages above all other classes such as the entitlement for VIP services in terms of private room and high standard quality services. Some are not required to pay copayment or deductibles such as interviewee (13) who said *"My class is "B" and I do not pay any copayment"* while other beneficiaries with class "C" who earn lower salaries are required to pay copayments and deductibles. Interviewee (14) commented on this aspect by saying *"I suggest that there should be no discrimination in treating patients according to the classification of their insurance"*. Another issue raised by interviewee (12) is with regards to changing the foreign worker job title when they arrive in Saudi Arabia which ultimately will change the benefits status including medical insurance benefits. This action is a clear violation to the Labour law and may affect the status of the employees within the social insurance system as well.

**Most common concerns**

- Misdistribution of resources.
- Discrimination in the provision of services.

#### 8.5.1.5 Prescription drug benefits coverage

There were different views among interviewees concerning drug benefits. Their views are shown in the following table:

**Table 8.6 Views about the Prescription drug benefits coverage**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Prescribed drugs are of low quality |
| 2 | - | ✔ | - | - | ✔ | Medicines are not available |
| 4 | - | ✔ | - | - | ✔ | Medicines are not available |
| 6 | ✔ | - | ✔ | - | - | Prescribed drugs are of good quality |
| 7 | - | ✔ | - | - | ✔ | Medicines are not available |
| 16 | - | ✔ | - | - | - | Physicians always prescribe antibiotics |
| 21 | - | ✔ | - | - | ✔ | Medicines are not available |

Interviewee (1) believes that *"the physicians prescribe cheap medications"*. Interviewees (21), (7) and (4) told the researcher that some medications are not available at the providers' pharmacy and that they have been asked to purchase the medication from another pharmacy which is located far away from the provider. This observation was also confirmed by interviewee (2) who said *"Sometimes I have had to purchase the medication from my own pocket because the prescribed medication was not available at the provider pharmacy"*. Interviewee (16) observed that physicians' always prescribe antibiotics such as Amoxil.

**Most common concerns:**

- Unavailability of prescribed medications.
- Quality of prescribed medications.

#### 8.5.1.6 Respect to patients

As regards patient respect, interviewee (6) said *"I would like the provider to respect me as a patient because both of us are seeking benefits"*.

#### 8.5.1.7 Competency of service staff

Interviewee (6) feels that some *"physicians are not aware of the health insurance policy"*. For instance, they are hesitant to perform procedures until they receive approval from the insurance company.

### 8.5.2 Access and availability of services

Generally, access to health care under the CHIS was viewed as an important aspect of care. Access did not pose a problem to most interviewees.

#### 8.5.2.1 Convenient location

Views about convenient location are shown in Table 8.7.

**Table 8.7 Views about the convenient location of health care providers**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Remoteness of health care provider from place of residence |
| 2 | - | ✔ | - | ✔ | - | Remoteness of health care provider from place of residence |
| 6 | ✔ | - | ✔ | - | - | Closeness of health care provider from place of residence |
| 7 | ✔ | - | ✔ | - | - | Closeness of health care provider from place of work |
| 8 | - | ✔ | - | - | ✔ | Remoteness of health care provider from place of residence |
| 10 | - | ✔ | - | - | ✔ | Remoteness of health care provider from place of residence→ paying for transportation |
| 14 | - | ✔ | - | ✔ | - | Remoteness of health care provider from place of residence |
| 18 | - | ✔ | - | - | ✔ | Remoteness of health care provider from place of residence |
| 19 | ✔ | - | - | ✔ | - | Closeness of health care provider from place of residence |

The majority of respondents stated that health care providers are located far from their place of residence and that most health care facilities are located in the north of Riyadh city. Interviewee (1) stated *"sometimes I pay from my own pocket to receive health care services despite the fact that I am insured because the contracted provider is far from my place"*. In this regard, some other interviewees mentioned that some of the cheaper providers are located in very bad districts; however, the quality of the services they provide is not up to the beneficiaries expectations. For instance, interviewee (18) stated *"I live close to one of the private hospitals in Riyadh but decided to travel to another hospital for the sake of quality services"*. Some respondents expressed concerns regarding proximity of health care facilities from their residence, especially in case of emergency.

**Most common concern:**

- Remoteness of health care provider from place of residence.
- Shortage of health care facilities in some districts in Riyadh City.

#### 8.5.2.2 Ease of scheduling appointments

There was a difference in the views of interviewees with regards to the ease of scheduling appointments under the CHIS. Their views are shown in the following table:

**Table 8.8 Views about the ease of scheduling appointments under the CHIS**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 3 | ✔ | - | ✔ | - | - | Nepotism→ease of booking appointments |
| 5 | ✔ | - | - | ✔ | - | Difficulties in booking appointments→changing health care provider |
| 13 | ✔ | - | ✔ | - | - | No problem in booking appointments |
| 19 | - | ✔ | - | - | ✔ | Difficulties in booking appointments |
| 20 | - | ✔ | - | - | ✔ | Increase in patient volume → difficulties in booking appointments |

Some interviewees stated that it was not easy to book appointments to see the physician. For instance, interviewee (3) said *"I use WASTA (the act of seeking the help from mediators to avoid the routine and facilitate receiving the services) to book an earlier appointment for my wife. Instead of waiting for 45 days she can see the physician whenever she wants".* According to interviewee (5) *"it takes at least two weeks before you can see the physician and if you go to the emergency you have to wait also".* Interviewees (13) (19) and (20) have attributed the difficulty in booking appointments to the increasing number of subscribers in health insurance and the lack of adequate health care resources (facilities, human resources, equipment and money).

**Most common concerns**

- Nepotism
- Lack of staff
- Congestion in health care facilities.

#### 8.5.2.3 Availability of medical specialties

The interviewees' views concerning the availability of medical specialties at the hospitals/clinics are shown in the following table:

**Table 8.9 Views about availability of medical specialties under the CHIS**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | ✔ | - | ✔ | - | - | Large hospitals include all medical specialties |
| 4 | - | ✔ | - | ✔ | - | Lack of rehabilitation in hospitals |
| 6 | ✔ | - | ✔ | - | - | Unavailability of specialties in clinics →referral to hospitals |
| 10 | - | ✔ | - | - | ✔ | Referred to GP instead of specialist |

The results revealed that interviewees prefer to visit hospitals for treatment rather than small clinics as mentioned by interviewee (1) who commented *"I like large private*

*hospitals because services and specialties are available"*. However, if the patient case requires further investigation and more tests which are not available at the clinic then the general practitioner will refer the patient to hospital for further investigations and treatment as indicated by interviewee (6). Interviewees (4) and (10) complained that they have been referred to a general practitioner instead of a specialist where their case requires to be seen by a specialist.

**Most common concern:**

- Lack of medical specialties in clinics and hospitals.

#### 8.5.2.4 Ease of access to the provider by telephone

Providers vary in answering telephone calls depending on their communication system and human resources. For instance, interviewee (5) said *"sometimes it takes a long time to hang on with the hospital operator. You call the health provider several times and nobody answers the phone"*.

#### 8.5.2.5 Adequacy of parking at the service site

Some beneficiaries such as (17) and (18) were concerned regarding the availability of enough cars parking for patients and visitors. For instance, interviewee (18) commented *"sometimes you may miss your appointment when you try to find a parking space for your car"*.

#### 8.5.2.6 Suitability of regular working hours

Sometimes official working hours finish before seeing the physician and the receptionist asks the patient to come at another time which causes patient dissatisfaction. Interviewee (10) said that the regular working hours do not meet his needs. He explained *"I was booked for an appointment with the physician at 8 P.M and I wasn't called to see the doctor until 10 P.M. After the clinical examinations the physician asked me to have an x-ray but I couldn't do it because the hospital working hours ends at 10 PM"*. Interviewee (19) claims that *"even on-call doctors are not available"*.

#### 8.5.2.7 Availability of health provider

Interviewee (1) stated that *"there is a shortage of private specialized health care providers in the Riyadh city"*. This may limit the choice of beneficiaries in selecting their preferred provider.

### 8.5.3 Communication while receiving services

Some interviewees reported that it was not easy to obtain information regarding the services offered by the provider, except by visiting them in person, since there is no list or registry of health care facilities (names, telephones and addresses) beneficiaries can use. When the researcher pointed out that all facilities details are registered at the MOH, Some of them replied that they had no idea about it. The following paragraphs contain some examples of the trends of responses.

#### 8.5.3.1 Ease of understanding procedures

There were different views among interviewees about the ease of understanding health insurance procedures which were explained in section 3.5.2 of chapter three. Their views are shown in the following table:

**Table 8.10 Views about understanding health insurance procedures**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Physicians select cheapest procedures of low quality |
| 2 | ✔ | - | ✔ | - | - | Procedures are clear |
| 6 | ✔ | - | ✔ | - | - | Some providers do not know the procedures |
| 17 | - | ✔ | - | - | ✔ | Some providers do not know the procedures |

As regards the clarity and ease of understanding health insurance procedures, interviewees (2) and (6) were generally satisfied with procedures. Interviewee (6) stated that *"I am satisfied in general because there is flexibility in the insurance procedures, there are capacities and resources, you can choose any health care provider who has a contract with the company and you can choose the physician also"*. However,

interviewees were concerned with the physicians' attitude regarding treating and prescribing medication to insured patients. For example, interviewee (1) said *"Physicians select different treatment methodology with patients covered by CHIS. They are restricted by the limits of the policy. They prescribe the worst medications and the cheapest clinical procedures"*. Interviewee (6) justified the physicians' attitude by saying *"I feel that some physicians are not aware of the health insurance policy. For instance, they are hesitant to perform procedures until they receive approval from the insurance company"*. One of the issues that concerns beneficiaries is that some small health care facilities do not know the procedures of health insurance transactions and this might lead to dissatisfaction as mentioned by interviewee (17).

**Most common concern**

- How health care is delivered under the CHIS.
- Lack of health care provider awareness regarding insurance procedures.

#### 8.5.3.2 Availability of information

There were different views among interviewees regarding the availability of health insurance information. Their views are shown in the following table:

**Table 8.11 Views regarding the availability of health insurance information**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | - | ✔ | - | - | ✔ | Conflict/lack of information about insurance coverage |
| 3 | - | ✔ | - | - | ✔ | Lack of information about coverage limits |
| 6 | - | ✔ | - | ✔ | - | Lack of information about coverage limits |
| 14 | - | ✔ | - | - | ✔ | Lack of information about coverage limits |
| 15 | - | ✔ | - | - | ✔ | Lack of information about complaint procedures |
| 16 | - | ✔ | - | - | ✔ | Lack of information about coverage limits |

Some interviewees were concerned about the availability of information regarding their health insurance. Those who were dissatisfied complained about the lack of information regarding the inclusions, exclusions and the approved providers. Sometimes they received conflicting information from their health care provider due to the provider misunderstanding the insurance policy and/or lack of professionalism. For instance, interviewee (1) said *"I went to hospital X and I showed the medication I am taking to the physician. The physician asked me "who is this '....' Who prescribed this medication to you"? I told him: he is your colleague Dr. Y. then he threw the medication in the trash and prescribed a new medication to me"*. This could be attributed to the fact that has been mentioned earlier in section 8.4.2.10 with regards to non-standard medical procedures and that physicians are of different nationalities and come from different medical backgrounds. In addition, some interviewees such as interviewee (3) is not aware of his coverage limits. Interviewee (6) was not aware that preventive child health immunisations were covered recently. When he visited the hospital, he was informed that he will no longer pay for his child's immunisation as it is now covered by the new policy.

**Most common concerns:**

- Confusion by the complexity of the CHIS and the use of existing resources.
- Lack of information about coverage limits.
- Poor communication and coordination among physicians, health care providers and insurance companies.

#### 8.5.3.3 Clarity of written and verbal language

Interviewee (16) said *"I prefer to receive health care services from certain providers whose physicians are Indians (same nationality) because they speak the same language and they know our background and they are familiar with the mode of diseases in India as compared to Saudi Arabia"*.

#### 8.5.3.4 Ease of understanding documents

Interviewee (20) claimed that *"health insurance booklet is not clear with regard to international coverage when the beneficiary is sick".*

### 8.5.4 Cost of services

Interviewees were asked about their views with regard to the cost of services under the CHIS. Some health care providers accept payment only in cash. Sometimes, this policy caused problems for beneficiaries, since they did not always have sufficient cash. Six interviewees said that they do not pay copayment to their health care services. Interviewees' views about the copayment per physician visit are shown in the following table:

**Table 8.12 Views about the copayment per physician visit**

| Interviewee | Perception of experience | | Satisfaction | | | Reason |
|---|---|---|---|---|---|---|
| | Positive | Negative | Yes | Neutral | No | |
| 1 | ✔ | - | ✔ | - | - | Not required to pay copayment |
| 2 | ✔ | - | ✔ | - | - | Flexibility in upgrading with additional cost |
| 3 | ✔ | - | ✔ | - | - | Not required to pay copayment |
| 5 | - | ✔ | - | - | ✔ | Variation in physician visit copayment |
| 7 | - | ✔ | - | - | ✔ | -Variation in copayment - Cost of uncovered services |
| 8 | - | ✔ | - | - | ✔ | Pay for uncovered services |
| 10 | - | ✔ | - | - | - | Variation in physician visit copayment |
| 11 | - | ✔ | - | - | - | Variation in physician visit copayment |
| 14 | - | ✔ | - | - | - | Variation in physician visit copayment |
| 16 | - | ✔ | - | - | ✔ | Copayment not mentioned in contract |
| 18 | - | ✔ | - | ✔ | - | Pay for uncovered services |
| 19 | ✔ | - | ✔ | - | - | Not required to pay copayment |
| 20 | - | ✔ | - | - | ✔ | Required to pay copayment per visit |
| 21 | - | ✔ | - | - | ✔ | Variation in physician visit copayment |

Interviewees (2), (3), (8), (13) and (19) told the researcher that they do not pay any copayment. Interviewee (3) *said "I only pay when I choose a private room instead of shared room"*. Interviewee (1) said *"we are not paying copayment as our employer pays for full coverage with the exception of urology, cosmetics and plastic surgery"*. Interviewee (2) mentioned that if the needed medication goes above the authorised limits, the physician gives the patient the choice of accepting the prescribed medication from the approved list or to purchase quality medication from their own pocket. Also, the patient will be given the choice to upgrade to a private room and pay for the difference as the majority of insured are entitled only to shared rooms. It was noted that the copayment rate changes as the employer changes to a new insurance company or as the employee moves to a different organisation. There were variations in the percentage paid as a copayment for medication. For example, interviewee (5) said *"I pay only 10% as a copayment for prescription services"*. While interviewees (11) and (7) said that they are paying 20% as copayment for medications. Interviewee (7) commented *"The provider prescribed three medications. Two were available at their pharmacy and I bought one from a private pharmacy but I do not know how they calculated the cost and why should I pay for the medication"*.

Some interviewees, such as (1), paid for services not covered by the health plan such as expensive medicines for the sake of quality. For instance, interviewee (18) said *"sometimes I pay for medication not covered by health insurance when my physician decides that a certain medication is better for my condition than other generic medications covered by the insurance"*. On the other hand, some interviewees who have a single contract and their families are living with them in Saudi Arabia are paying from their pocket to cover the expenses of heath care for their dependents but they usually go to cheap clinics. For example, interviewee (8) said *"When any of my family members suffer from illness I take them to a cheap clinic because I am paying for their medical*

*treatment"*. In addition, dissatisfaction with cost could result in practical steps by the beneficiary to overcome the problem, by shifting to traditional medicine or purchasing medicine over the counter without seeking medical advice as mentioned earlier.

There were wide variations in the amount/ percentage of copayment paid for a physician visit ranging from 15-20% or from S.R 15-50 depending on the terms of the insurance contract between the employer and the health insurance company. For instance, interviewee (16) said *"I pay S.R 30 copayment per visit and I am not satisfied with paying such an amount because it was not mentioned in the contract with my employer"*. Interviewee (7) said *"I have been asked to pay variable copayments for each physician visit, investigation procedures and medications"*. While interviewee (20) commented *"I am not satisfied with the cost of health insurance because I am required to pay 15% copayment for physician visits"*. In addition, interviewee (21) said *"The dentist required costly procedures and in order to avoid being refused by the insurance company he told me that he could split the treatment into sessions so that the insurance company would not notice the huge cost of the treatment*". It can be deduced that most interviewees were not satisfied with the cost of service as they consider it very expensive.

**Most common concerns:**

- Variation in the copayment paid per visit.
- Costs of uncovered services are high.

### 8.5.5 Insurance company

Interviewees were asked about their views with regard to the role of insurance company in their satisfaction with services provided under the CHIS. Their view of interviewees with regard to the role of insurance companies varies. Some interviewees think that gaining profits are the main concern of insurance companies'. Interviewee (17) said that his insurance company is concerned with its reputation in the insurance market and that

is why it provides good services to its customers. Whereas interviewee (20) said that *"there is no credibility for some insurance companies"*.

#### 8.5.5.1 Freedom to choose the health care provider under the CHIS

Six interviewees said that they have the freedom to choose the health care provider from a given list. Each interviewee has his own reasons for choosing a certain provider. For instance, interviewee (2) who is suffering from a heart problem used to be treated with his family in a group practice clinic; however, he selected to change his provider because his wife wants to be treated by a famous female gynaecologist working for a new hospital. Interviewee (7) commented *"If the provider does not offer a good service I may change to another provider"*. While interviewee (19) said that he selected to be treated in a medical centre close to his home. On the other hand, interviewees (3) and (21) stated that they were not free to choose the providers and they have to stick to their provider until the end of the contract. Interviewee (6) said *"If I were responsible for the CHIS, I would ask the employee to pay from 10-15% as copayment and I would give him the choice of any health care provider he wished to go to"*. Interviewee (14) stated that *"I am satisfied with the CHIS as it enables me to choose the health care provider for treatment"*.

#### 8.5.5.2 The waiting time for treatment approval

The results revealed that the time it takes to receive approval for certain treatment or procedures from the insurance companies varies. Some interviewees such as (9) receive the approval within a reasonable time frame while for others, such as (15) and (20), it took longer. For instance, interviewee (5) commented *"before it takes about two days to get the approval and I have to wait. It is better if they shorten this process". He added* "*Now, with high tech communications it takes less time to get the approvals from the insurance company*". Interviewees (8) and (18) stated that it took them one day to get the approval.

### 8.5.6 Employer role

Interviewees were asked about their views with regard to their employer role and their satisfaction with services under the CHIS.

#### 8.5.6.1 Information about coverage limits

Nearly half of the interviewees stated that they did not receive information about the limits of their coverage and procedures. According to interviewees (4), (8) and (14), the role of the employer was limited to disseminating booklets regarding the insurance coverage or sending insurance cards to employees as noted by the interviewee. Some beneficiaries such as interviewee (6) do not know to which category they belong to. Interviewee (5) said *"I do not know if the policy covers teeth cosmetics"*. On the other hand, some high profile organisations such as the bank where interviewee (9) works make sure that employees receive their health insurance card plus a health insurance guide on the first day of their employment. However, interviewee (20's) main concern was that the health insurance guide was not clear with regard to travel insurance and the coverage of the beneficiary when he is sick during a business trip.

#### 8.5.6.2 Freedom to choose health care provider

Some employers are concerned with the satisfaction of their employees with their health benefits. For instance, interviewee (13) commented *"my employer distributed surveys to us asking about our opinions with regard to the services of the insurance company"*. Some employers may refuse changing the type of employment contract from single to married if the employee gets married or decides to bring his family to live with him in Saudi Arabia. For example, interviewee (15) describe his problem saying *"I have been working for X company for seven years and my contract is single because at that time I was not married but when I brought my family from my home country I asked my*

*employer to change my status from single to family contract but they refused"*. This action by the employer has deprived his family from benefiting from the health insurance scheme despite the regulation in this matter being very clear. In certain situations and when the employer feels that the services provided to his staff are not to that expected level he may ask the insurance company to switch to other service providers. For example, interviewee (18) said *"our company updates its information about health care providers for the sake of choosing the best provider for us"*.

#### 8.5.6.3 Denial of access to health care services

Interviewees (1), (5) and (7) stated that they have never been denied access to health care by their employers. Interviewee (1) commented that their *"employer selects the best provider network such as the big private hospitals and clinical centres"*. Interviewee (7) said *"if I am not satisfied with the insurance company I can go to any provider and get full reimbursement from my employer if I present the bills"*.

### 8.5.7 Service experience

Several interviewees felt that medical care has shifted from being a human right to becoming inhuman after the implementation of health insurance. An illustrative example where a beneficiary may be dissatisfied with the CHIS can be drawn from the case of interviewee (11) who is suffering from hypertension and diabetes, and has visited the physician for regular check ups. He said *"the physician asks first for the approval without even seeing me or taking the vital signs or reading my diabetic diary"*. He has been requested to pay cash S.R480 per physician visit. He said *"the health care provider paid me back after they received the approval from the insurance company and the physician wrote the prescription without seeing me"*. He commented *"I consider this act as inhuman"*. Several interviewees reported that they had experienced the

following problems under the CHIS: hesitation of physicians to refer the patients/prescribe medications, low quality of service, physicians always prescribe alternative cheap medications and the lack of knowledge/understanding of health insurance procedures.

### 8.5.8 Expanding CHIS to include Saudis

Nine interviewees (43%) support the idea of expanding the CHIS to include Saudis but under certain conditions. Interviewees (2), (3), (9) and (11) think that there is a need to increase the number of providers and to regulate the provision of health care prior to expanding the scheme. Interviewees (4) and (14) think that the government should be responsible for paying the cost of the scheme. According to interviewee (4) *"most citizens cannot tolerate the high cost of medical care, especially under the world economic crisis which has affected Saudi families negatively"*. Interviewee (13) said that the implementation of the CHIS on Saudis will help in reducing the abuse of the health care system and will lead to changing behaviour with regard to misuse of the medications because under health insurance they will be asked to pay co-payments. Interviewee (18) stated that he supports the implementation of the CHIS on Saudis if the services are improved. Only 10% of the interviewees oppose the expansion of the CHIS to include Saudis. Interviewee (20) attributed his view to his belief that *"the current implemented health insurance is not cooperative, it is commercial and it is forbidden in Islam"*. While interviewee (6) attributed his view to "*changes happening in the community such as change in the mode of diseases"*. He thinks that the new scheme will not cover chronic diseases and that *"health care providers will not pay attention to such patients because they are guaranteed their payment already"*.

### 8.5.9 Problems with the CHIS

Interviewees were asked about their views with regard to the nature of problems they experienced while receiving services provided under the CHIS. Interviewees (9) and (13) reported that they did not have any problem with their health insurance, however, the reported problems were categorised as follows:

As regards **service delivery**, interviewees (1) and (3) stated that some specialties and medical procedures are not covered by the scheme. Interviewee (1) stated that there is a shortage of health care providers in the Riyadh city. This problem has produced other problems such as congestion in health care facilities, delays in the provision of health services and lower quality services which have caused customer dissatisfaction. In the Saudi society, most women preferred to be seen by female physicians; however, there was a shortage of female physicians to treat women-related problems as stated by interviewee (1). In addition, interviewees (2) and (4) indicated that some medications are not available at the providers' pharmacy. Interviewee (4) said *"I have been asked to purchase the medication from another pharmacy which is located far away from the provider"*.

As regards the service **access and availability,** interviewees (3), (14) and (18's) major concern was the location of health care providers. Most providers are located in the north of Riyadh city and it takes the patient at least 30 minutes to reach the provider. There is a problem with regard to the geographical distribution of health care facilities. Interviewee (7) commented *"some people do not have access to transportation in order to get to the provider for treatment, especially in cases of emergency"*. In order to avoid this problem, interviewee (6) decided to visit a private provider and pay for treatment from his own pocket at a discounted rate. He explained *"Sometimes I go to private health care providers whom I have known for years and they grant me 25-35%*

*discount. This is just to save my time instead of driving for at least one hour to reach the hospitals"*. Also there is the problem of lengthy waiting times before patients can see the physician.

As regards **communication while receiving care under the CHIS,** some beneficiaries such as interviewee (1) had received conflicting information from the health care provider staff. Interviewee (3) stated that he was *"not aware of the coverage limits"*. Some companies are sending information about the health insurance policy to their employees via e-mail; however, nobody reads it as per interviewee (5). The understanding and interpretation of the health insurance policy varies among health care providers. For instance, interviewee (17) explained *"I went one day to provider Y to visit a famous visiting doctor but I was denied access to this doctor because I am insured and they stated, "If you want to see this doctor you have to pay". I paid for this visit and I took the receipt to BUPA and they paid me the full amount*".

The **cost of health services** under the CHIS is a major concern. Despite the fact that the health insurance regulations are clear, some providers are still taking advantage of beneficiaries by asking them to pay for additional services such as the cost of opening the file. Interviewee (6) said *"The provider asked me to pay S.R 5 for opening the file"*. According to MOH regulations, providers should open the file to their customers free of charge. In addition, some physicians play around the insurance system by splitting the treatment cost by sessions so that the overall costs can be paid to the provider. An example of that is the case of interviewee (3), he said *"the dentist required costly procedures and in order to avoid the refusal of the treatment by the insurance company he told me that he could split the treatment into sessions so that the insurance company would not notice the huge cost of the treatment"*. While this act by the physician is for the benefit of the customer, it shows a case of abuse of the scheme. In some situations

the beneficiary becomes a victim of misunderstanding between the provider and the insurance company. Interviewee (15), working in the Kingdom on a single contract status, was requested to pay back all the expenses paid by the insurance company for the treatment of his daughter who was suffering from serious illness despite the fact he received an approval for the treatment from the approval office. He is getting a lower Salary of S.R 1,000 and his employer decided to deduct S.R 400 from his salary for 12 months because they reached a compromise solution with the provider to pay them back in this way. He commented *"I would rather take her to one of the best physicians and pay S.R 400 from the beginning than pay S.R 400 to the company for 12 months"*. He added *"I do not know to whom should I complain and now I have asked to resign to go back to my home country because I cannot afford the basic necessities for my family (e.g. food, housing and medicines) here in Saudi Arabia but my employer refused as I have to pay them all the money they have paid"*.

### 8.5.10 Emergent themes

Some emergent themes were addressed across the entire sample which does not fit neatly under any of the foregoing categories. The first concerns the awareness regarding cooperative health insurance. Although this could be considered a communication issue, it is distinct from the attributes discussed in the communication section.

#### 8.5.10.1 Awareness with the CHIS

There is lack of awareness among providers and beneficiaries with regards to the benefits of health insurance in Saudi Arabia. Some providers are not aware of health insurance procedures. For instance, interviewee (17) explained *"I visited a small clinic and after the investigations the physician was hesitant to prescribe a certain type of medication because he told me that it might not be approved by the insurance company.*

*I asked the doctor to prescribe the medication and the receptionist sent an approval form to the insurance company and I got the approval"*. Some people abuse the insurance system even if they are not in need of health care services. Some give their insurance cards to their relatives to take advantage of the insurance; however, they are not aware of the consequences of their act which might lead to death as result of incorrect information about the card holder. Five interviewees reported that they were not aware about their coverage limits. The role of the media is not sufficient with regard to disseminating information about the CHIS. Interviewee (6) commented *"when advocators of health insurance appear in the media they present the advantages of the scheme but they do not explain what it is, so that the general public can understand its elements"*. Interviewee (2) suggests that *"awareness about health insurance should be enhanced"*. Some interviewees think that the lack of strict control in the insurance market have led to fraud and to the request of unneeded procedures. For example, interviewee (6) explained *"I know that some of my Arab non Saudi colleagues take advantage of the system, especially if the physician and the patient are from the same nationality. They used to prescribe unnecessary medications"*. Interviewee (19) observed that *"health care provider delude the patient and convinces him/her of having lots of problems"* and asks for unnecessary procedures.

#### 8.5.10.2 Quality of service

Three of the interviewees focused on the quality of the services offered under the CHIS. They said that the quality of services is very important to them; however, they noticed a general deterioration in the level of quality services after the implementation of the CHIS. For example, interviewee (1) thinks that under the CHIS *"Physicians prescribe the worst medications and request the cheapest clinical procedures"*. Some interviewees think that the implementation of the CHIS has resulted in an increase in

the volume of patients above the capacity of health care providers. According to interviewee (19) *"the private hospitals became very congested and it is very hard to book an appointment and ultimately this has led to lower quality of services and dissatisfaction"*. This conclusion was supported by the view of interviewee (20) who observed deterioration in the quality of his health provider after the implementation of the CHIS. He commented *"The quality of health care services at this centre was great but due to the increased number of customers I observed that the quality is not like before"*.

### 8.5.11 Satisfaction/ Dissatisfaction with the CHIS

This section deals with answering the second research question. Fourteen interviewees (67%) expressed their general satisfaction with the services provided under the CHIS. Each one of them has associated his satisfaction with the CHIS with some factors. For example, interviewee (1) associated his satisfaction to the freedom to choose the provider and he said that he received the service from two hospitals because of "*the availability of various services and specialties*". While interviewee (6) associated his satisfaction to the "*flexibility in the insurance procedures, there are capacities and resources, you can choose any health care provider who has a contract with the company and you can choose the physician"*. In addition, interviewee (14) said that the CHIS *"enables me to choose the health care provider for treatment"*. Two Egyptian interviewees, (10) and (13), expressed their satisfaction with the CHIS as compared to health insurance in Egypt. Interviewee (10) said *"I am satisfied with the coverage because dental and optic services are covered"*. Interviewee (18) thinks that *"satisfaction has a direct relationship with the organisational post. The higher the post the higher the satisfaction as most directors enjoy VIP insurance services and they never pay anything for their medical care"*.

On the other hand, those who were not satisfied with the CHIS had associated their dissatisfaction with varied services such as comprehensiveness of coverage. For instance, interviewee (1) explained that *"my contract states that I have comprehensive coverage, however, when I visited the provider for treatment I discovered that some expensive medications were not covered by health insurance"* and his reaction when he was requested to pay for tooth filings was *"I was dissatisfied and I paid for the tooth fillings from my pocket"*. Interviewee (3) expressed his dissatisfaction with his plan coverage as he compared health insurance offered by his employer with other insurance plans offered by high profile companies in Saudi Arabia such as SABIC or ARAMCO which provides full coverage to their employees. Interviewee (19) associated the dissatisfaction with the quality of services in health care facilities to the increasing volume of patients. He said *"it is very hard to book an appointment and ultimately this has led to lower quality of services and dissatisfaction"*.

Two of the interviewees were not satisfied because of the cost of health services under the CHIS. Interviewee (20) said *"I am not satisfied with the cost of health insurance because I am required to pay 15% copayment for physician visits"*. Interviewee (16) explained his dissatisfaction by saying *"I pay S.R 30 copayment per visit and I am not satisfied with paying such an amount because it was not mentioned in the contract with my employer"*.

### 8.5.12 Priorities for improvement in the CHIS from the interviewees' point of view include the following:

With regard to the **waiting time**, interviewee (5) suggests that the time it takes to approve treatment and procedures should be reduced. This can be achieved by hiring representatives from the insurance company in the service providers' sites to facilitate the approval procedures. With regard to **the comprehensiveness of coverage**, most of

the interviewees want the insurance to cover preventive measures of all family members. Interviewees (20) and (21) think that health insurance should cover them while they are abroad taking their annual vacation or on business trips.

With regard to **regulating and controlling the health insurance market**, interviewees (6), (17) and (18) raised their concern about the need that the government should intervene and should control the health insurance market. For instance, interviewee (6) said "*there should be a control and monitoring on health care providers to prevent fraud and rendering unneeded services*". Interviewee (20) added *"I suggest the establishment of an insurance court similar to the traffic courts to solve the disputes that may arise between the insured, provider and insurance companies".* While interviewees (7) and (17) think that public and private health care facilities must be opened for beneficiaries for treatment. Interviewee (7) thinks that *"the competition between them will enhance the quality of the services for the benefit of the customer".* In addition, interviewee (17) believes that the privatisation of governmental hospitals would allow the private sector patients to be treated by well experienced Saudi physicians who are working for the MOH Hospitals". With regard to increasing the **awareness of the community with health insurance**, interviewee (20) thinks that the awareness about health insurance should be enhanced. The awareness process must start by distributing the health insurance guide to all expatriates prior to their arrival in Saudi Arabia. Interviewee (17) elaborated *"I suggest that before employing workers from outside Saudi Arabia, a booklet which includes brief information about health insurance benefits and copayments and regulations must be given to the employee in his home country, to avoid any surprises after coming to Saudi Arabia".*

## 8.6 The results of open questions contained in the questionnaire

This section covers respondents comments on other aspects which were not covered in the questionnaire. The respondents were asked about their recommendations for improving the services provided under the CHIS. Out of the 571 respondents, 73% gave no recommendation, 23% gave recommendations pertaining to comprehensiveness of coverage (chronic diseases, dental, surgeries, optical service, medical tests, skin diseases and necessary cosmetic procedures), coverage of dependents (including parents) and when travelling abroad, or suggested improvements in accessibility of service.

Table 8.13 shows the most prominent comments mentioned by the beneficiaries which were presented in seven main groups: 38 comments regarding comprehensiveness of health insurance coverage issues, 9 comments on cost issues, 8 comments on availability of services issues, 8 comments on regulating the provision of cooperative health insurance, 7 comments on communication when delivering the services, 3 comments on their perception of health insurance, 2 comments on service delivery issues and a number of suggestions such as the inadequate effort by the media to promote health insurance and disseminate information, the need to train health care providers' staff about the CHIS and to educate the people about cooperative health insurance.

They recommended that the number of health care providers be increased, and accordingly the number of physicians, dentists and nurses. They moreover suggested a need to decrease crowding and the waiting time for approvals and to increase the working hours in the afternoon. They suggested that there should be control on insurance companies and providers and penalties imposed on any hospital or clinic that refuses to provide emergency services regardless of insurance status. They suggested

that the government should operate health insurance and that the implementation of the insurance scheme should be evaluated regularly. A regulated insurance market is good for the customers because it will eliminate companies which do not have adequate capital to meet claim payments. They suggested that insurance companies should provide a full package of services to beneficiaries and contract a wide variety of healthcare providers.

They suggested that insurance companies should not constrain physicians from prescribing the required medicines. In addition, stopping the intervention of insurance companies in imposing certain approved medication lists on physicians will hinder the physicians from prescribing the quality medicines. They suggested that complaint procedures should be clarified. Moreover beneficiaries thought that there is a need to educate the people regarding cooperative health insurance and to train health care professionals on the CHIS. A comprehensive booklet (in Arabic and English) about the CHIS should be printed and distributed to beneficiaries. Respondents argued that national insurance companies will not improve their services unless the government permits competing international competitors to operate in the kingdom.

**Table 8.13 Beneficiaries' comments on other aspects which were not covered in the questionnaire**

| Code | Concept | Statements | Number of statement | Order |
|---|---|---|---|---|
| **1** | **Comprehensiveness of coverage** | Dental care coverage is not comprehensive. | 8 | 1 |
| | | Skin care coverage (non cosmetic) is not comprehensive. | 6 | |
| | | Necessary cosmetic procedures must be covered. | 1 | |
| | | Family members must be covered by insurance because they are more exposed to diseases. | 8 | |
| | | Parents should be covered by the CHIS. | 3 | |
| | | Health insurance should cover the worker when travelling outside Saudi Arabia. | 2 | |
| | | Optical service should be covered. | 3 | |
| | | All medical services should be covered by the CHIS. | 2 | |
| | | Surgery should be covered regardless of the cost. | 1 | |
| | | Radiological tests are not comprehensive. | 1 | |
| | | Medical tests are not comprehensive. | 3 | |
| | | **Total** | **38 (50.7%)** | |
| **2** | **Service delivery** | The time it takes to receive approvals for x-rays and laboratory should be reduced. | 1 | 7 |
| | | The congestion in private health care providers must be solved. | 1 | |
| | | Total | **2 (2.7%)** | |
| **3** | **Availability** | The number of health care providers should be increased to reduce pressure on private sector. | 7 | 3 |
| | | There is a lack of specialists in hospitals. | 1 | |
| | | **Total** | **8 (10.7%)** | |
| **4** | **Cost** | The percentage of copayment should be reduced. | 5 | 2 |
| | | The copayment should be a percentage of the basic salary. | 1 | |
| | | The beneficiary should not pay copayment. | 3 | |
| | | **Total** | **9 (12%)** | |

**Table 8.13 Beneficiaries' comments on other aspects which were not covered in the questionnaire (con't)**

| Code | Concept | Statements | Number of statement | Order |
|---|---|---|---|---|
| **5** | **Communication** | Health care providers should speak English. | 5 | 5 |
| | | A comprehensive booklet (in Arabic and English) about the CHIS should be printed & distributed to beneficiaries. | 1 | |
| | | An up-to-date network list of provides is needed. | 1 | |
| | | **Total** | **7 (9.3%)** | |
| **6** | **Perception of health insurance** | Some providers provide cash patients with better services as compared to insured patients. | 1 | 6 |
| | | Health insurance companies and providers are searching for profits and they do not care about humanitarian issues. | 1 | |
| | | The government should operate the insurance because insurance companies' goal is profit. | 1 | |
| | | **Total** | **3 (4%)** | |
| **7** | **Regulations** | There should be control on insurance companies and providers. | 3 | 4 |
| | | The implementation of the insurance scheme should be evaluated. | 2 | |
| | | Complaint procedures are not clear. | 1 | |
| | | There is a need to impose penalties on any hospital or clinic that refuses to provide emergency services regardless of insurance status. | 1 | |
| | | National insurance companies will not improve their services unless the government permits international competitors to operate in the kingdom. | 1 | |
| | | **Total** | **8 (10.6%)** | |
| **8** | **Suggestions** | Insurance companies should not restrict physicians from prescribing the required medicines. | 1 | |
| | | There is a need to educate the people about cooperative health insurance. | 1 | |
| | | There is a need to train the health care providers' staff about the CHIS. | 1 | |
| | | **Total** | **3** | |

## 8.7 Conclusion

The aim of this chapter was to develop a deeper understanding of beneficiaries' satisfaction with services provided under the CHIS, by analysing the qualitative data obtained from observation and twenty one interviews conducted in Riyadh city, and open questions from the survey. Coding was explained as a major issue in qualitative data analysis. General analytical procedures were used to analyse qualitative data. The qualitative findings were presented. The linkage between the analysis and the steps of general analytical procedures was explained.

Section 8.2 contained a summary report of the researcher's observations in relation to the services on which this study focuses, setting the scene for the interview data presented later in the chapter. Section 8.3 briefly presented general information on the interviewees and their demographic data. Comparisons with the general information on respondents in the survey were made. Section 8.4 of the chapter gave details in several categories regarding beneficiaries' perceptions of services provided under the CHIS. In the first category, *service delivery* issues, respondents were generally satisfied, but wanted the insurance plan to be comprehensive by including dental, optical, and skin services. In addition, the wish was that the plan take into consideration the chronic diseases and cover all of the family members including the parents of the subscriber. In the second, concerning *availability and accessibility of services*, respondents were generally satisfied with the location and availability of signs/directions in the health care facilities. However, they wanted the providers to allocate enough car parking for visitors and that the providers offer other methods of access such as the internet and e-mail to facilitate their care procedures. In the third category, *communication while receiving the services,* respondents were generally satisfied, but they wanted the providers to be more responsive to their complaints and comments and they need to get the correct information regarding their insurance coverage as the information on this

was said to be difficult to obtain. As regards the fourth category, *the cost of health care service,* the respondents expressed their dissatisfaction with the cost of services not covered, and with the copayment they pay for tests (laboratory and radiological) and also with the copayment of the physician visits. The cost of health care is, in general, considered high. Two emergent issues not covered explicitly in the interview were also introduced: the perceived inadequacies of the media role in raising awareness and providing information about health insurance; and the inadequate availability of health facilities in some districts in Riyadh city. In each of the foregoing categories, unsatisfactory service attributes were shown to produce negative consequences and dissatisfaction.

It is worth mentioning that the values, beliefs, and attitudes of the researcher and interviewees have influenced the outcome of this research. The same can be said about every stage from the outset where the subject for investigation was chosen, through data collection, analysis and presentation of results. It is not possible for research to be value neutral. In this research something of my personal values and experiences were stated. In addition, interviewees were much more influenced by their values, beliefs, and attitudes.

Finally, it should be noted that the purpose of qualitative analysis was not to develop new theories about consumer satisfaction. However, theories already exist and the researcher has supported the results of the quantitative analysis in order to enhance our understanding with regard to beneficiaries' satisfaction with services provided under the CHIS in Saudi Arabia which has a different culture. This understanding will be discussed in the next chapter.

# CHAPTER NINE

# Discussion, Conclusion and Recommendations

# 9. Discussion, Conclusion and Recommendations

## 9.1 Introduction

The main aim of this study was to investigate beneficiaries' satisfaction with health care services delivered under the CHIS in Riyadh city. This chapter discusses the findings of both quantitative and qualitative data in the light of the literature review and highlights their implications for theory and practice. The discussion is presented according to the research questions set out in Chapter One. This is followed by consideration of the limitations of the research findings and suggested ideas for future research. The chapter ends by drawing attention to the contribution made by the study and recommendations.

## 9.2 Satisfaction with and the importance of the main dimensions of services provided under the CHIS (Research Questions 1 and 2)

Many factors contribute to the formulation of beneficiaries' satisfaction or dissatisfaction with services provided under the CHIS. These factors include personal characteristics, service delivery, accessibility and availability of facilities, communication while receiving service, cost of service, the employer role, insurance company role, expectations concerning the services they will get and perceptions about the services actually received. Every single issue in the beneficiaries` satisfaction components is affected by decisions, policies and procedures made, or approved, by health care providers and insurance companies. Health care providers may have a conflict of interest with beneficiaries on certain aspects of the health care process. Some healthcare providers have created misconceptions about health insurance as they complicate procedures unintentionally. This is because they lack clear vision about accurate insurance coverage, especially for pre-existing health problems. These problems can create a negative response towards the insurance sector as a whole. This misconception will be dispelled once people realise the benefits of the CHIS.

The questionnaire results showed that there was no variation in the level of beneficiaries' satisfaction with the provided services in general and that their overall satisfaction with the CHIS in Riyadh city was moderate. This does not mean they did not have negative perceptions towards some of the services (items) provided to them. In fact, what was notable in the findings generally was the remarkable similarity in perspective between different segments of Saudi respondents in the judgment they attached to health insurance and in their perceptions of their health service experience under the CHIS. This may perhaps be explained by the remarkable homogeneity of Saudi culture, in which strong traditional values still prevail and create common expectations. Culture is bound to affect service expectations, perceptions and satisfaction. This finding is consistent with the emphasis of Evangelos (2007) who argued that the importance of service quality dimensions to customers is related to their cultural profile.

Beneficiaries can have varying levels of satisfaction with different aspects of care. This supports the views of the multi-dimensionality of the satisfaction construct as discussed by Andaleeb et al. (2007), Al-shahrani (1999), Luft (1981) and others. Beneficiaries' overall satisfaction with the CHIS is a construct composed of the levels of satisfaction with the individual components of a service, i.e. it is not a direct result of a known variable; instead, it is a combination of responses towards several variables and the individual service features vary in importance. This finding is consistent with the finding of Fisk et al. (1990).

The results from interviews, observation and the survey revealed that beneficiaries were dissatisfied with the cost of health insurance because they perceived it to be high. Likewise, respondents were not satisfied with health costs not covered by insurance. For the beneficiaries, cost is a perception of what is sacrificed to obtain the service.

Usually the lower the perceived cost, the lower the perceived sacrifice is. Then, more satisfaction with the perceived cost and overall transaction are created. However, the lower perceived cost does not guarantee higher satisfaction. The interview results revealed that some interviewees are willing to pay more for the sake of quality services. Beneficiaries may evaluate the cost and the quality of service by using the "equity" concept and then generate their satisfaction or dissatisfaction level.

### 9.2.1 Beneficiaries' level of satisfaction with various services under each dimension (item) of the services

**The 1st dimension: Beneficiaries' level of satisfaction with service delivery under the CHIS**

Receiving courteous treatment at a provider's facilities appeared to influence how beneficiaries rated the CHIS. In some cases, beneficiaries' dissatisfaction was the result of perceived unreliability or incompetence of personnel in delivery of the expected service. Experiences of this kind result in a lack of trust between customers and personnel in the service field because the providers cannot provide the services dependably and accurately as agreed. To form an impression about the relative inferiority/superiority of a service provider and its services (Bitner and Hubert, 1994), customers compare the level of the service delivered to them with their own personal expectations, shaped by past experience (Grönroos, 1982, 1984; Lehtinen and Lehtinen, 1982; Lewis and Booms, 1983). If the services delivered to the beneficiary under the CHIS fail to conform to his/her expectations, this will have a negative impact on beneficiary satisfaction. Negative service experience may constitute a failure on the part of the service provider to fulfil an express or implied insurance contract and therefore cause disconfirmation of an expectation created by the customer. Several of the theories of customer satisfaction reviewed in Chapter Four (e.g. Oliver, 1981; Oliver, 1993; Oliver and Swan, 1989; Davidow and Uttal, 1989; Newsome and Wright,

1999) highlight the negative consequences of such disconfirmation, in terms of customer dissatisfaction.

Waiting time was reported as an item of dissatisfaction by several researchers. This result is consistent with the claims of previous studies such as the study by Mansour and Al-Osimy (1996) and Pradnya (2009). The majority of time spent receiving the health service is not only directly related to health care. Administrative and financial procedures have complicated the situation as explained in section 3.5.2. Most of the time is spent paying for services, filling out multiple forms, moving from one station to another and waiting to see the doctor. Long waiting times may reflect a shortage of health professionals and financial resources faced by the health care organisations. In addition, the moderate satisfaction may be due to understaffing, lack of health care facilities and ineffective distribution of work-load.

**The 2nd dimension: Ease of access and availability of facilities under the CHIS**

The results of the interviews showed that beneficiaries thought that they had a right to access good, capable medical care regardless of their ability to pay for health care. Most of the respondents preferred to be treated in hospital because they thought that health care centres provide inferior health services and lack the specialised staff and necessary medical equipment to diagnose their cases. This result is consistent with the finding of Mawajdeh et al. (2001), that the type of health care facility affects the client-provider relationship. Private health care facilities are available. However, beneficiaries may have been deterred from visiting some health care facilities because of their poor quality of service and/or inconvenient location (as supported by the interviews and noted in the researcher's observations). The distance from the health care provider was a significant factor for some beneficiaries. Those who experienced access problems were much less likely to give favourable ratings to health plans.

Satisfaction with the availability of services may be related to expectation and the type of health care facility as indicated by Mawajdeh et al. (2001). In this study beneficiaries were highly satisfied with the availability of signs that were easy to understand. The result is also consistent with the view of Alaiban, et al. (2003) regarding the satisfaction of employed patients with how close their health care facility was to their place of residence. Most hospitals and health care centres are located in the northern area of Riyadh City. Patients may live far from a care provider and have limited access to transport. Transportation services are not easily available, and if they are available, are very expensive for low and middle income persons. Difficulties in travelling to health services reflect a weakness in strategy for the planning and distribution of health care facilities. The result is consistent with Dossary's (1991) viewpoint concerning the problems of the Saudi Health Care System, where attention was drawn to the lack of health care planning and health care coverage and distribution. However, this problem still persists and no action has been taken to solve it or at least encourage health care investors to concentrate on other areas of the city.

The availability of physicians and certain specialisms can influence beneficiaries' satisfaction levels. Beneficiaries prefer to be seen by a specialist instead of a general practitioner. However, according to Article 107 of the Rules of Implementation of the CHIS, "the beneficiary shall bear the difference in cost in the event of his/her calling directly on a specialist or consultant for check up". Those who complained about the absence of specialist clinics did not fully understand the capabilities of the system (El Shabrawy and Mahmoud, 1993). The Saudi Health Care System has been short of physicians and facilities, as mentioned in Chapter Two, and such facilities have been established without much regard to patients' preferences. This usually meant that patients were almost forced to receive their medical care from understaffed and marginally equipped health service facilities. On the other hand, the subtle increase of

physicians and availability of state-of-the-art equipment and supplies, and increase in available subspecialties, resulted in an increased number of procedures and new services and consequently further costs. Such changes can have a significant impact on the escalation of service quality and costs (Wright, 1995:54). This study has shown that beneficiary expectations correlate with satisfaction. This result is consistent with the finding of Mawajdeh et al. (2001). This study has demonstrated that beneficiaries with higher levels of expectation were less satisfied than beneficiaries with lower levels of expectation. Beneficiaries with higher expectation levels wanted to receive a higher quality of health services under the CHIS, but they failed to get it.

Beneficiaries were concerned about the availability of physicians at weekends and after normal working hours. Lack of availability of physicians has been found to decrease satisfaction. This result is consistent with previous studies (Ware et al., 1976; Albaz, 1992) which found that the lack of accessibility and availability of doctors after normal working hours was associated with decreased patient satisfaction. However, the accessibility of health care has been found to lead to patient general satisfaction, as reported by Arishi (2000). Barriers to obtaining health care including difficulty obtaining information or contacting the insurer by telephone or any other means available lessen beneficiaries' satisfaction with the CHIS. From a social equity perspective, the question remains as to whether or not the implementation of the CHIS is heightening social differences in accessing and consuming health services. Dispersion of satisfaction is indicative of social inequality (Veenhoven, 1996:16).

**The 3rd dimension: Communication while receiving service under the CHIS**

Medical personnel should be aware of the importance of communicating with patients and understanding their needs. John (1991) argues that medical personnel are considered more courteous and understanding of patients' personal needs and more accessible when

they are perceived by patients as more able to communicate with them. However, due to overcrowding and excessive workload of health care facilities after the implementation of the CHIS, physicians tend to interact with patients as cases rather than as humans and some of them may find little time to explain the diagnosis of the disease and the prescription for the patient. The psychosocial component of the patient's life and patient education are largely neglected. A short visit to the physician undermines the human interaction between the patient and the physician and undermines comprehensive treatment. It seems that if the patient visit with a doctor is longer, patients have more chance to discuss their diseases and treatments, to get more information regarding prevention, and to become more familiar with the professionals. These indicators of professional responsiveness are very important to patients and are sources of satisfaction (Albaz, 1992). Moreover, medical personnel who are competent in terms of medical performance might well contribute to the beneficiary's low level of satisfaction with the CHIS if they lack suitable interpersonal behaviour. These results are consistent with previous studies such as the study of Al-Shekh (2003) who found that there is a direct relationship between patient satisfaction and physician interpersonal behaviour. Albaz (1992:116) argued that taking care of psychosocial needs is one component of treating the whole person and is considered the most effective treatment.

The moderate levels of beneficiaries' satisfaction with the availability of information regarding their health insurance coverage may be related to the lack of health insurance guides. The researcher observed that information on health insurance was deficient and was less satisfactory to those more educated than less educated respondents, and to those with higher income. It may be that those groups had higher expectations than others and so, in line with the expectancy disconfirmation and contrast (Cardozo, 1965) theories, were more prone to dissatisfaction. The expectancy disconfirmation model suggests that this would cause dissatisfaction, while contrast theory indicates that when a product or

service falls short of expectation, the customer maximises or exaggerates the difference; therefore, health care providers need to provide beneficiaries with all the information related to their illnesses and insurance coverage in an understandable manner without succumbing to the use of complex jargon.

Concerns were also raised that employers, health insurance companies and the media did not do enough to inform beneficiaries about CHIS benefits. This is despite the fact that according to Article 80 of the CHIS policy issued by Minister of Health resolution No.460/23/DH dated 8th of June 2002, the *"employer shall explain and clarify policy contents and the limits of coverage of beneficiaries included in the policy"*. It is three years since the inception of health insurance in Saudi Arabia. However; there is a lack of insurance information. It is not surprising, therefore, that those beneficiaries who had obtained information about health insurance had relied predominantly on their co-workers or past experience.

The finding of a significant association between satisfaction and availability of information may point to ways of providing information and developing health insurance awareness strategies in the future. Understanding health insurance information may help in modifying unrealistic expectations through beneficiary education, so that beneficiaries can adjust their expectations to the limits of the health insurance package. These results are consistent with previous studies such as that of Bowers et al. (1994), which found that communication was a significant predictor of patient satisfaction. Communication skills may include the type and level of information provided regarding health insurance coverage. Effective communication is essential for building a trusting physician-patient relationship (Albaz, 1992).

In terms of motivation theory (Rogers, 1983), the lack of responsiveness of health care providers to beneficiaries' complaints and comments can be seen as a failure to meet the

beneficiary's social need for warmth, friendliness and care from others. Moreover, beneficiaries may feel that they are not valued as individuals, that they are being treated with disrespect. Thus, their esteem needs are also not being met. From the perspective of satisfaction theories, perceived disrespectful treatment may cause customers to feel particularly dissatisfied if they feel they have been treated worse than others (comparison theory; Thibaut and Kelley,1959) or not received what they feel is due to them (equity theory; Adams,1963). A number of respondents appeared to have such feelings, which led to a low level of satisfaction with the services offered.

Service staff (physicians, nurses, administrators, accountants and others) interaction with the beneficiaries contributes to the health care delivery service and acts on it in many ways. These actions can enhance the beneficiary's image of the facility and his/her satisfaction, or may discourage him/her from seeking medical care and create a feeling of dissatisfaction. For example a positive physician relationship plays an essential role in patient evaluation of care. Hence, the manner of communication established by the health care provider, in addition to waiting time and the length of time devoted by the physician to listening and providing instructions, influence beneficiary's satisfaction (Al-Shahrani, 1999).

The findings of the interviews were consistent with the researcher's observations and experiences with regard to difficulty in understanding the language, despite employment of non Saudi Arabic-speaking interpreters. Many physicians in the private health care sector are foreigners, often from non-Arabic speaking countries. The differences in language, culture and tradition create communication problems between the patient and the health care provider. There is a shortage of Saudi physicians in the private sector. Older patients who speak local dialects have difficulty communicating with non Saudi physicians. Another aspect is the fact that most staff (medical and non-medical) working

for the health care providers are non-Saudis and in many instances are of the same nationality as non Arab patients, which creates better grounds for communication, understanding and satisfaction. This is consistent with the finding of Laveist and Nuru-Jeter (2002:296) who stated that *"for respondents in each race/ethnic group, patients who had a choice in the selection of their physician were more likely to be race concordant"*. In addition, Hsieh et al. (1991) argued that patients' expectations are usually derived from different sources that may include social and religious beliefs, such as confidence in specific doctors due to their gender, age, or even ethnicity. They can also be driven by a prior knowledge of health personnel that may be either positive or negative.

**The 4th dimension: cost under the CHIS**

Under the CHIS, patients are no longer the best judge of how their money should be spent because they do not bear the full cost of their medical care. However, the majority of respondents (81.4%) are required to pay approximately 20% of the cost of services as a contribution or to pay the full amount to cover services not included in the basic insurance package. The findings of the study show that beneficiaries attached importance to the cost of the provided services under the CHIS, as reflected in interview comments and confirmed by the survey data. There is a belief that health insurance would encourage people to be more aware of the costs of health care as they pay a certain amount (contribution) before receiving health care services. In certain circumstances, where the conditions of insurance coverage are unclear, health care providers usually ask the patients to pay cash from their own pocket and claim their money back from the insurance company. The high cost of medical treatment has deterred an increasing number of private sector employees from visiting the health care providers except in emergency cases. In view of their inability to pay for health care and

the limited availability of cheaper health care services, some beneficiaries have shifted to alternative sources to treat their illnesses, such as using alternative medicine or going to any pharmacy to get medication without the need for a prescription. Dissatisfaction with the cost can be explained by equity theory (Adams, 1963) in terms of disproportion between input (cost) and the value of received services. Some beneficiaries suggested that the CHIS contributions should be based on a percentage of the beneficiary's gross income (rather than risk rated, as with private insurance).

## 9.3 Beneficiaries' satisfaction with the services provided under the CHIS based on their personal characteristics (Research Question 3).

A beneficiary's perception may be influenced by his/her personal characteristics which in turn would produce differences in levels of satisfaction experienced. For this reason, the data were examined for evidence of differences related to respondents' gender, age, monthly income, marital status, number of family members, educational level, nationality, occupation and type of health insurance.

### 9.3.1 Differences in beneficiaries' level of satisfaction based on gender differences

The results of the survey showed that there is no statistically significant difference in beneficiaries' satisfaction with the services based on their gender with the exception of cost. This result is consistent with the finding of Mansour and Al-Osimy (1993); Al-Juhani (1994); Alaiban, et al. (2003:419) and Arishi (2000). Beneficiaries' perceptions of the cost of health services under the CHIS varied with gender. Men's level of satisfaction with the cost of services was significantly lower than that of women. Other researchers such as Hulka et al. (1975); Pandiani et al. (1982) and Albaz (1992:48) also found that women were more satisfied than males with their health care services.

In the Saudi context and in accordance with Islamic traditions, men are responsible for all household expenditure and they are traditionally more likely to make the financial decisions in the family. Married women rely on their husbands and non married females rely on male members of their family, in various aspects of the procedure of obtaining health care and to advocate on their behalf in case of mistreatment, thus reducing their contact with the health care provider and the possibility of encountering problems which may lead to their dissatisfaction.

### 9.3.2 Differences in beneficiaries' level of satisfaction based on differences in their age

The majority of survey respondents (60%) were under 35 years of age. This can be interpreted by the fact that the population structure of Saudi Arabia is still more like a developing country than a developed one - skewed heavily towards the under 40's. In addition, expatriates, mainly drawn from outside Saudi Arabia come for a limited period then return to their home countries. The significant relationship and the direct weak correlation found between beneficiaries' level of satisfaction with service delivery, access and availability of facilities, communication while receiving service and age means that beneficiary level of satisfaction increases with age (older people are more satisfied with the CHIS). This result is consistent with the findings of Albaz (1992) that satisfaction has a direct relationship with age; as age increases satisfaction increases. Older people tend to have more positive attitudes (lower expectations) as compared with younger people who are more ready to criticise and have negative attitudes (higher expectations) as confirmed by previous studies such as the study of Hall and Dornan (1990) and Sitzia and Wood (1997). Younger beneficiaries have lower levels of satisfaction as compared to older beneficiaries. The low level of satisfaction is related to the level of expectation that these groups have. Satisfaction can be defined as the realisation of an individual’s expectations based on health care experienced, which

explains why older individuals seem to be more easily satisfied as compared to young individuals. This finding corresponds with a survey carried out in New Zealand that described patient satisfaction with access to general practitioner services and found that patients' overall satisfaction was lowest among the 18-28 year old category, as reported by Gribben (1993).

The interview results and the researcher's observations show that the CHIS serves beneficiaries in good health better than those whose health is poor (i.e. patients with chronic or severe illnesses, etc.). Different age groups may have different perceptions based on experience, the nature of the medical problem and other factors. The elderly usually have chronic medical problems that require continuous follow-up and daily intake of medicines, with poorer response, as compared to the young who tend to have acute painful medical problems that can be cured with fewer follow-up visits and a limited course of medication (Al-Shahrani, 1999:135). This means that elderly people are frequent users of the health care system and know how to deal with it. Special social respect is given to older people in the Saudi culture as an Islamic society, and this respect may be reflected in the provision of health services to older people.

### 9.3.3 Differences in beneficiaries' level of satisfaction based on differences in their monthly income

The findings revealed that beneficiaries with high monthly income were more satisfied than those with lower income. This finding is consistent with that of Carlson et al. (2000); Alaiban, et al. (2003:419); Mainous et al. (1999) and Ware et al. (1976) who found that low-income people are more dissatisfied than high-income people with the care they receive, regardless of their insurance type. The implementation of health insurance policies is inconsistent and varies from company to company. Some companies extend coverage to include exempted diseases for additional cost. Other

companies strictly adhere to the provisions of the Unified Policy and exclude exempted diseases from their insurance schemes. Diseases excluded from the Unified Policy are the responsibility of the insured. Health care providers treat patients based upon their insurance policies and conditions of the insurance contract. Beneficiaries who were more satisfied with the service provided under the CHIS tended to have comprehensive health coverage. Those beneficiaries may not necessarily receive health care from large private hospitals. This suggests that there may be wide variation in the delivery of care within health care facilities and that some health care facilities would provide better services than others regardless of the insurance contract.

Usually employers pay for the premiums; however, employees are required to pay for deductibles and/or copayments. Senior managers and lower level employees had the same defined amount of deductibles and/or copayments; however, health providers give the higher income group special attention because their opinions are critical in extending the contract with the providers during the reassessment of the health care provider performance. The high income groups were more aware of what is available to them and more ready to criticise and have negative attitudes (higher expectations) (Hall and Dornan, 1990; Sitzia and Wood, 1997). Health care providers may treat lower class groups differently because these groups do not have the power to challenge the providers (Albaz, 1992). This shows a clear discrimination against low wage beneficiaries. In Saudi Arabia, with the development of economy, the quality of life has been improving. As the lower-order level needs are satisfied, people are seeking the higher-order level needs as explained by the hierarchy of need theory (Maslow, 1954). Therefore, knowing what employees want, makes the next steps easy to satisfy (Wang, 2006). The CHIS has imposed financial burdens on employers. Although the CHIS is compulsory in theory some employers in private firms can avoid participating in the system. Some employers are trying to undermine the law, sometimes in collaboration

with some insurance companies. Some employers hire employees on a part time basis in order to evade responsibility for their insurance benefits as per the health insurance Act.

### 9.3.4 Differences in beneficiaries' level of satisfaction based on difference in marital status

Taking into account that 63.4% of the respondents were married, the results of the survey found that married respondents were more satisfied with costs than single people. This result is consistent with the finding of Albaz (1992) who found that in Saudi Arabia married patients are more satisfied than unmarried patients. The cost was perceived as more expensive by single than by married respondents. The employer is responsible for the health insurance expenses of its employees and their dependents, regardless of the type of employment contract, whether it is for a single or married person. This satisfies the requirements of Article (36) of the by-laws of the CHI Regulations. Article (12) of the by-laws reads *"the insurance coverage includes pregnancy and maternity for employees contracted on a family status within the limits defined in the policy"*. Married beneficiaries are frequent users of health services because of women's and children's diseases; however, single beneficiaries use the services when there is a necessity. Married beneficiaries usually visit the health care provider and request tests and procedures and perceive that they should receive the services whenever they need it. For this reason, they think that the cost is not too high as compared to the number of visits; therefore, they are satisfied with the cost of services under the CHIS.

### 9.3.5 Differences in beneficiaries' level of satisfaction based on differences in the number of family members living with married respondents

The result of the Pearson coefficient showed that there is no statistically significant relationship between beneficiaries' level of satisfaction with the health insurance services in general and the number of family members. However, the findings of the

stepwise multiple regression shows that the number of family members was one of the important factors explaining beneficiaries' satisfaction with the CHIS. The inconsistent results could have been due to differences in the utilised statistical techniques. When the family members of the beneficiary are not covered by the CHIS, his/her overall satisfaction with the CHIS decreases. This is consistent with the finding of Alaiban et al. (2003) that patients coming from large families tended to be more satisfied with the service they received. In addition, the number of dependents was one of the variables predicting satisfaction with health insurance in Lust and Danehower's (1990) study. Expanding health insurance coverage to include all family members living with the beneficiary would remove the direct financial burden for treating beneficiaries' dependents and would contribute to beneficiary satisfaction.

### 9.3.6 Differences in beneficiaries' level of satisfaction based on nationality

The findings of this study show that Saudis' level of satisfaction with access and availability of facilities was significantly lower than that of non-Saudi beneficiaries. This result is consistent with the finding of Al-Juhani (1994). The comparison theory seems to help explain non Saudis' rate of satisfaction as they had experienced other health care systems in their home countries, especially those coming from under-developed countries with relatively under-developed health care systems. They may have had different expectations when arriving at a modern hospital in Saudi Arabia and more easily feel satisfied. In fact, receiving medical care from a recognised hospital or medical care facility is a great achievement and a cause of satisfaction for such patients. They have predefined positive expectations of the care they will receive, as compared to their previous experience. When their experience fulfils these expectations, they are likely to be satisfied.

On the other hand, non-Saudi beneficiaries' level of satisfaction with the cost of services was significantly lower than that of Saudi beneficiaries. This can be explained on the basis that the majority of non-Saudi beneficiaries come from countries where the cost of health insurance is less than the cost of health insurance in Saudi Arabia; therefore, it is natural that they express their dissatisfaction with the cost of health care under the CHIS. Or it could be that they tend to earn less, so any copayment is harder for them to afford.

### 9.3.7 Differences in beneficiaries' level of satisfaction based on differences in their educational level

The results of the survey found that the satisfaction of those educated to secondary level was less than that of beneficiaries who held bachelor degrees. The dissatisfaction of lower educated beneficiaries may be attributed to this group's values, attitudes and beliefs concerning services provided under the CHIS. Consumers in Saudi Arabia have become well educated and well informed and their satisfaction or dissatisfaction is based on more objective criteria than ever before (Albaz, 1992). This enlightenment has led them to demand better services from the health care industry. Educated clients may form their own views of what an ideal relationship between patients and health providers should be. Beneficiaries with a higher level of education tend to have higher expectations than the others and if the services provided to them under the CHIS fall short of the expected level; they tend to criticise and have negative attitudes toward the delivered services (Carlson et al., 2000; Hall and Dornan, 1990; Sitzia and Wood, 1997). Health care providers pay more attention to highly educated people because they are more aware of treatment than ever before and can better evaluate medical treatment (Albaz, 1992) and know their rights and may make problems for the health care providers if they do not receive quality service. In addition, the result may be attributed to the fact that beneficiaries who held bachelor degrees attained higher income as

compared to other groups or may be due to the higher proportion of beneficiaries who held bachelor degrees in the sample. The finding of this study showed that the higher the educational level of the beneficiary, the higher their satisfaction with the cost of services under the CHIS. This can be interpreted based on the fact that better educated patients are more likely to be working for high profile companies who pay them better salaries. For those groups, the percentage of copayments does not affect their income as compared to other groups. The perceptions of satisfaction of those educated to secondary level are much higher than they were a few years ago. This finding is consistent with that of Alaiban et al. (2003), that the relationship between education level and patient satisfaction were consistently and significantly positive in direction. Patients with more years of education tended to be more satisfied with cost of care.

### 9.3.8 Differences in beneficiaries' level of satisfaction based on differences in their occupations

In this study it was found that beneficiaries employed in manual labour were less satisfied with the cost of health services than other groups. This may be due to the lower proportion (4.6%) of manual labour beneficiaries in the sample. Another explanation may be due to the fact that this group is lower paid as compared to other groups. Some low-wage workers told the researcher that they were not even able to pay deductibles or copayments because they cannot afford the money as their salaries are too low. This is consistent with the finding of Baicker et al. (2006) who argued that low-wage workers whose wages cannot be lowered may lose their jobs as the cost of benefits increases. The problem can get worse if the worker is married and the health status of his/her family is poor. As the costs of premiums rise, the reaction of firms would be ending the employment contract. This is clear discrimination by the employers.

### 9.3.9 Differences in beneficiaries' level of satisfaction based on the type of health insurance coverage differences

Despite the fact that 63.4% of the beneficiaries were married, the results showed that more than half (57.9%) of the respondents had single health insurance coverage, while 42.1% of the respondents had family health insurance coverage. Approximately 21% of the respondents were married but without family coverage because they were hired on a single status contract. From the researcher's observations and from the interviewees' comments, there is resistance on the part of the employers to change the status of their employees from single to married contract because this action will increase the premiums paid to the health insurance company. Several interviewees stated that they had been promised a change in status but no action was taken and that they pay from their pocket to treat their family members when needed. The results of the interviews revealed that beneficiaries felt dissatisfied because they thought they had been treated worse than their co-workers and not received what they feel is due to them as per the CHIS (equity theory; Adams, 1963). The reported experience of discrimination reduced the odds of satisfaction with service. A number of interviewees, especially non-Saudis, appeared to have such feelings and were distressed, which led to a low level of satisfaction with the services offered as beneficiaries feel that their input to their organisations has not been appreciated and rewarded as compared to their co-workers who have health insurance coverage on a married status contract (Oliver and Swan, 1989; Festinger, 1954).

## 9.4 Possible differences (gaps) between beneficiaries' perception of the importance of the services provided under CHIS and their level of satisfaction with the elements of these services (services requiring improvement) (Research Questions 4)

Beneficiaries' views with regard to the importance of the different service dimensions are very important**.** The perceptions of satisfaction are the result of the beneficiaries' personal characteristics and of the health care systems they enter. The beneficiaries who participated in this study also had negative perceptions regarding the extent to which their needs were satisfied by the CHIS. Those shortcomings were perceived as a failure in the provider-beneficiaries relationship under the CHIS. Some beneficiaries criticised the status of the CHIS, and stressed that the current situation of insurance is not compatible with the concept of cooperative insurance approved by the government in the light of its compatibility with the legal frameworks and Islamic principles as it is currently considered commercial and not cooperative in the beneficiaries' view.

Patient perceptions of the service can be managed in two ways: by communicating patient-specific expectations to contact personnel, who can then tailor the service accordingly, and by continuous service auditing to determine deviations in service performance from patient expectations (John, 1991). The importance-performance (Martilla and James, 1977) theory of satisfaction suggests that dissatisfaction is stronger when shortcomings appear in areas that are particularly important to customers, and that service providers should therefore pay particular attention to such areas.

### 9.4.1 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under the CHIS and their satisfaction with the "service delivery"

Private health care facilities in Saudi Arabia are building demand for their services in order to stay in business. It is observed that nearly 80% of their customers are insured patients who are prime prospects for future visits, provided that the insured patients are satisfied with the service received. It is believed that an increase in patient satisfaction can be achieved by improvement of services that receive low satisfaction scores. Several researchers have found that humaneness of care has a high rate of satisfaction among patients (Mansour and Al-Osimy, 1993). However, the findings of the interviews showed that health care providers have become demoralised after the implementation of the CHIS. Beneficiaries feel that some health care providers consider them as numbers from a business perspective and they ignore the human aspects of health care.

The level of service importance was higher than the satisfaction level from the beneficiaries' point of view. The findings revealed that comprehensiveness of covered health services was a major concern. Comprehensive health care is that which is not limited to the curative, but includes the preventive aspect, health education and awareness programmes. The researcher found that the health insurance package did not suit the Saudis as it excludes chronic diseases and some necessary preventive procedures such as circumcision for newborn boys as is mandatory by Islamic traditions.

Misunderstanding of beneficiaries' questions and impolite behaviour towards them were common complaints reported by the participants. The social pattern of behaviour during the insurance transaction can be tolerated if enough respect is given to the beneficiary. Health care personnel specialising in health insurance transactions were found

inadequate in this respect. The majority of workers in the field of health insurance, as observed by the researcher, are non-Saudis and they face linguistic problems with the different dialects in Saudi society. The perceived shortcoming in assurance provided by personnel is a disappointing result, because the personnel are considered the backbone of the service and the customers' main point of contact with it. The Saudization requirements mandated by the new law are likely to compound this situation. Some health care employees are lacking the expected standard of health insurance knowledge. Employees' lack of knowledge leads to poor information offered to the customers, as many participants reported.

A long waiting time may be a result of over crowdedness and reflect a shortage of health professionals and financial resources faced by health care organisations and complicated administrative and financial procedures. This is particularly true during the evening shift. In their study of the adult U.S. population, Ware et al. (1976) found a positive relationship between waiting time and low patient satisfaction. Experiences of long waiting time can become a barrier to seeking and utilising health care services. Such experiences increase the potential use of non-professional health care and the use of hospital emergency rooms for primary care (Albaz, 1992).

### 9.4.2 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under the CHIS and their satisfaction with the "access and availability of facilities for the provision of health services"

From the beneficiaries' point of view priority for improvement must be given to solve the parking problem as most of health care facilities are located in a very congested area of the city (the north) and providers did not pay attention to this problem which created an obstacle to obtaining care for some. This is clearly due to the lack of planning and maldistribution of health care facilities as mentioned in section 2.3.8 (chapter two). This

problem can be solved by intervention and strict regulation from the MOH. Good physical environment of the health care setting, including cleanliness, good appearance, parking, and comfortable and convenient facilities increases patient satisfaction (Steiber, 1988; Tessler and Mechanic, 1975; Albaz, 1992). Most beneficiaries are concerned about the availability of services as they prefer to take particular problems directly to specialists (Ron et al., 1990). If a patient expects to see a consultant, then satisfaction occurs if he does. If he does not expect to meet one, then it causes dissatisfaction.

In Saudi society, measures are taken to segregate patients based on their gender. Female patients prefer to be seen by a female doctor and males prefer a male doctor. A male doctor or nurse cannot examine a female patient unless he is accompanied by a female nurse/assistant or she is accompanied by a male relative (Al-Shahrani, 1999). To satisfy Islamic segregation requirements**,** there should be two separate waiting rooms for each department or clinic, one for men and another for women, where neither can see each other. Overriding these policies can be a major source of complaint and dissatisfaction.

### 9.4.3 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under "communication while receiving health care service" and satisfaction with these services

The responsiveness of health care providers to beneficiary complaints and comments was ranked first with regard to importance of service. There are gaps between what beneficiaries wished for and expected and what they perceived during their visit to the health care provider. These gaps in service provision reflect the way service providers have concentrated on their operations to serve insured patients, but have not given enough thought to the other services and how to promote a range of factors that all

contribute to beneficiaries' overall experience, and satisfy important values. Satisfaction theories and contrast theories suggest that such mismatches are causes of dissatisfaction.

Disappointment and dissatisfaction are likely to be the strongest when they occur in areas to which customers attach high importance, as indicated by value percept theory (Locke, 1969). The existence of such shortcomings is consistent with the Gaps Model of service quality presented by Zeithaml and Bitner (2003), who emphasised that service providers must ensure that they deliver what is promised to their customers, and be able to achieve customers' satisfaction through offering services that exceed customer expectations, or at least are not less than they expected. It is worth noting in this respect that, although beneficiaries described negative attributes of services and expressed dissatisfaction, the 'consequences' reported did not include complaining, perhaps due to a cultural dislike of confrontation. Dissatisfied customers, instead, took avoidance action by not returning, or changing their health care providers. Tseng (2003: 291) states that *"cultural factors influence how a person communicates with others, which has an impact on the clinical setting"*. The source of customer misunderstanding of instructions may stem from a number of sources. For instance, the instructions may be ambiguous, inconsistent or even incomplete. Additionally, some customers may have poor literacy skills and therefore may be unable to understand the instruction information (Kirsch et al., 1993). Other customers may lack the motivation or not recognise the need to become familiar with service instructions. Health care providers and insurance companies should be aware of the important role that service instructions and handbooks can have on beneficiary satisfaction with the services provided under the CHIS. Instructions educate beneficiaries on the benefits of the service as well as document what beneficiaries can expect from a service provider. Beneficiaries who have knowledge of the services are expected to have fewer problems and higher levels of satisfaction with the services.

### 9.4.4 Possible differences (gaps) between beneficiaries' perception of the importance of services provided under "cost" and their satisfaction with these services

The cost of health care uncovered by insurance was given higher priority for improvement from the beneficiaries' point of view. Medical insurance has contributed in raising the cost of private medical services and for some general practices imposes great financial cost on insurance companies. Some medical services providers still consider insurance patients as different from those who deal with cash money (Nadim, 2008). Some researchers such as Zeithaml and Bitner (1996) consider price as an antecedent of customer satisfaction. Others view price as a dependent variable of customer satisfaction and service quality in the sense that satisfied customers are willing to pay more when purchasing services (Schlesinger and Graf von der Shulenburg, 1995; Banham, 2000). For the customer, price is a perception of what is sacrificed to obtain a product or service (Zeithaml, 1988) usually referred to as "perceived price". Costs other than price are also included in the sacrifices that must be made to obtain the product (Evangelos, 2007). Fornell (1992) proposes that in order to examine the impact of price on customer satisfaction, price should be considered in the light of service quality. It is difficult to manage the cost of quality if quality cannot be measured (Anderson and Zwelling, 1996). Anderson et al. (1994) also emphasise price as an important factor of consumer satisfaction, because whenever consumers evaluate the value of an acquired service, they usually think of the price (e.g., Anderson and Sullivan, 1993; Athanassopoulos, 2000; Cronin et al., 2000). Cronin and Taylor (1992) propose that price can improve the satisfaction of customers and influence their behaviour. Usually the lower the perceived price, the lower the perceived sacrifice is (Zeithaml, 1988). However, lower perceived price does not guarantee higher satisfaction. Oliver (1997) suggests that consumers usually judge price and service

quality by the concept of "equity," and then generate their satisfaction or dissatisfaction level (Evangelos, 2007:76). Alaiban et al. (2003) found that individuals who paid for care from personal resources or those of the family were most dissatisfied with the facilities they attended. Private-pay patients were significantly dissatisfied with the availability of specialists, the ease of registering and the quality of doctors available.

## 9.5 Beneficiaries' views about their employer's and health insurance companies' roles in their coverage with the CHIS (Research Question 5)

### 9.5.1 Beneficiaries' satisfaction with the employer's role in their coverage with the CHIS

It is observed that there is a link between employee health and job satisfaction. Employers should understand that a healthy labour force is more productive. It is anticipated that employer support for the CHIS will generate worker loyalty, and it is simpler and often cheaper than bearing the responsibility for providing or paying for medical care for the worker as it is needed (Ron et al., 1990). The findings of the study showed that there was no large variation in the views of respondents towards the employer's role and that their overall satisfaction with the employer's role in their coverage with CHIS was high. However, the relatively high rates of health care satisfaction among all participants to whom insurance was available suggest that employers that offer health plans may be doing an adequate job of satisfying their employees' health care needs.

Adequate medical insurance is an important basis for employee satisfaction. Emphasis on improved health and keen interest in reducing occupational accidents and diseases will lead to better protection for staff members from health risks; this in turn should improve their morale and lead to higher rates of job satisfaction among their employees, and a significant improvement in performance and productivity. However, the

employer-based health insurance system has numerous deficiencies as a foundation for health insurance in Saudi Arabia as it leaves out the self-employed and the non-employed. People are unwilling or unable to migrate to a better job because of unavailability of health insurance. People are often forced to change doctors when they change jobs because the new employer does not offer their previous provider. The beneficiary is likely to have reduced options regarding where care is delivered (e.g., clinic or hospital). This can negatively affect clinical outcome and satisfaction measures due to a delay in access to care, which ultimately results in suboptimal outcomes.

### 9.5.2 Beneficiaries' satisfaction with the health insurance companies' role in the provision of their health insurance coverage

The overall level of beneficiaries' satisfaction with the role of the insurance company in their coverage with health insurance was moderate. Insurance companies do not necessarily have direct interaction with the insured; on the contrary, they are in more effective communication with the employers and health care providers. However, decisions made by them have a direct effect on beneficiaries` satisfaction with the CHIS. Insurance companies do not play a significant role in the insurance education of customers. Some beneficiaries thought that their insurance companies contracted lower class health care providers in order to reduce the premiums they pay per beneficiary and maintain high levels of net profits for the insurance company. This has affected the quality of the delivered health care services and produced varying degrees of dissatisfaction.

Some interviewees stated that when the health care provider sends a letter to the insurance company to ask for approval for a procedure, they wait for an hour for the insurance company response. Some organisations are the victims of new insurance companies that are working for the first time, taking advantage of weak oversight.

According to the regulation of the CCHI, if the health care provider does not receive a reply within one hour's time, then the request is considered approved. The General CCHI confirmed that all health insurance applications for approval to conduct radiological and laboratory tests that are sent by hospitals and health centres to insurance companies are considered approved if the health care facility does not receive any response within 60 minutes of sending the fax (Alhaidar, 2009).

The rights and responsibilities of the three parties to the CHIS, namely the beneficiary, health care provider and the insurance company have not yet been outlined, which results in many problems in the care of the beneficiary. For example, if the beneficiary visits the hospital and the treating doctor uses certain procedures for treatment and the insurance company refuses the mode of treatment, then the beneficiary will be asked to pay and this may lead to his/her dissatisfaction. It is necessary for insurance companies to orient the beneficiary, through orientation courses or pamphlets, so that he/she would know and understand his/her rights and responsibilities. Unfortunately, however, this does not happen. Leste and Wanderley (1997) reported as contended by Evangelos (2007:67) that:

> *The gaps between the expected and actual results in quality improvement programs are due to the absence of a service-oriented culture in insurance companies that are not involved in the maintenance of satisfaction of their customers*

## 9.6 The required service improvement priorities in the CHIS (Research Question 6)

The study has provided insight into service improvement priorities of various health insurance service dimensions to beneficiaries, which could inform future planning initiatives for health insurance development. Ignorance of beneficiaries' health insurance needs (the inability to match customers' perceptions with expectations) and

the lower quality of health services may account for dissatisfaction with the services provided under the CHIS. Services related to cost, access and availability of health care facilities, comprehensiveness of coverage must be given priority when improving the CHIS. This is consistent with Asefzadeh's (1999) study who found that while the quality of services provided by the insurance system was not satisfactory, 39% of people consider quality of service to be the first priority when choosing a medical centre.

## 9.7 Problems encountered while receiving health care services through the CHIS (Research Question 7)

Beneficiaries indicated that they were not aware of their right to complain to the regulator and that they did not know to whom they could complain if they encountered a problem related to their health insurance coverage. Health insurance awareness may reduce feelings of dissatisfaction, helplessness, or resentment that consumers might have when dealing with a health insurance company.

Many of the service problems reported, such as conflicting information from different people, denial of provision of some health services and determining the length of hospital stay by the insurance company all of which were also observed by the researcher and have also been reported in previous studies appeared to be problems prevailing throughout the health insurance system in Saudi Arabia. Nearly half of the respondents (48.3%) indicated that they had been denied some services under the CHIS. Any limitation in accessing medical care, such as refusal to cover certain types of care, refusal to refer a patient to a specialist and review of prescriptions or medical procedures, is perceived by patients to strike a blow at care quality. 22.8% of the respondents indicated that they had received conflicting information, 14.9% of the respondents indicated that their length of hospital stay had been determined by the insurance company, while 14.1% of the respondents indicated that they had encountered

a variety of problems included in the ‘other’ category, including language barriers and timeliness of service. The language barrier is a well-known difficulty for both Saudis and non Saudis. Most of the health care staff, including physicians, nurses and accountants, in the private health care sector are not Arabic speakers. The language in Saudi society is Arabic, so it is very important to communicate with patients in Arabic, because most patients cannot speak English, and they prefer to speak their native language, which for them is a source of pride. Non-Arabic speaking doctors should have a bilingual nurse or an interpreter to communicate with the patient (Al-Shahrani, 1999). This, however, adds to the cost of the health care system, and recruiting translators may impose an even greater financial burden. This difficulty can be solved, in time, when enough Saudi bilingual physicians, accountants and health insurance specialists eventually graduate, or by recruiting health care staff from Arabic speaking countries.

Health care providers must be aware of the special needs and expectations of the beneficiaries. Contact personnel must accommodate the specific needs and expectations of each patient without giving the patient an opportunity to be dissatisfied. If the expectations are not realistic, the contact personnel can educate the beneficiary about what can be realistically expected from the health insurance benefits, thus ensuring that expectations can be met. With patient-specific information, hospital personnel are in a better position to be proactive and adjust or modify the delivery of services to meet the expectations of each patient. The specification and citation of health services that are encountered by the insured at the health care facilities make it possible to identify the services that are at higher risk of beneficiaries' complaints, such as comprehensiveness of insurance coverage and appointments scheduling, so that corrective action can then be taken.

The problems of the CHIS may be related to the type of health services agreed upon between the insurance companies, which may be of low quality. The CHIS benefits render services to patients without examining whether the services are acceptable and accessible. This has led to problems with many aspects of health care services. These include waiting time to see a doctor, length of visit to a doctor, health professional behaviour and communication, shortage of health professionals, shortage of medical equipment and inaccessibility of services and the refusal to provide some services. These problems may generate a state of discontent and dissatisfaction among beneficiaries, particularly those of low socioeconomic status who cannot afford supplementary health insurance. Patients who cannot afford supplementary private health care often resort to non-professional health methods to cure their illness. These methods include non-prescribed drugs, traditional medicine, home remedies, or avoidance of treatment altogether. Furthermore, there are no government regulations which govern non-professional methods. For example, drugstores can sell anything from a vitamin to a powerful antibiotic without a medical prescription. As a result, there could be many mishaps and even deaths, as a result of using non-professional health methods (Albaz, 1992).

Interviewees considered that health insurance in Saudi Arabia is characterised by a lack of professionalism. Some interviewees thought that health care providers are interested only in making profits and exploiting patients by asking for unnecessary radiology and laboratory tests (Alhaidar, 2009). Health care providers were considered not to respond to requests as expected; they did not show willingness to solve patients' problems, did not understand their needs, did not give individual attention or did not explain much about the nature of services.

The majority of survey respondents and interviewees reported difficulties in booking an appointment, and the researcher's observations confirmed this as it is sometimes impossible to book over the phone. In the CHIS, health care professionals sometimes require approval from the insurance companies to provide certain services or conduct tests. This may lead to delay in needed treatments and eventually to lower beneficiary satisfaction. As a result of insurance limitation, physicians may provide only the basic services and prescribe low cost medication as they fear to take any kind of responsibility or action. This approach impedes comprehensive health care. Unless physicians are given more discretion in performing their jobs, 'problems with the health care system will occur and patient dissatisfaction will increase' (Albaz, 1992:34). Those interviewed called upon the health insurance industry to provide more specialised services, hire and train specialised bilingual manpower and invest more to offer better health insurance programmes. The participants also called for affordable insurance copayments, a high quality of services and better customer services. These suggestions are consistent with the findings of Altassan's (2003) study.

### 9.8 The utilisation of health care services under the CHIS

Lack of service consistency poses real challenges to health insurance businesses in Saudi Arabia. As expected, being married, which is correlated with having children, makes the CHIS for the whole family a necessity. Survey results show that women use health services under the CHIS more frequently then men. This result is consistent with the findings of Hogg (1999) as women use the services for themselves and their children. There is a significant increase in the utilisation of health care services under the CHIS as compared to the situation prior to the implementation of the CHIS. The health insurance market in Saudi Arabia is not yet ready to bear the consequences of insurance for seven million foreign workers and their families. The implementation

of the CHIS has led to additional work pressure on health care facilities. Alhaidar (2009:23) stated that:

> *"some large hospitals used to receive up to 500 visitors per day before the implementation of the CHIS, while now they welcome up to 1500 visitors per day, which is equivalent to three times the previous record. As against 200 letters of approval to insurance companies before, they now send up to 600 letters"*

The survey results indicated that 43.9% of the respondents had visited a clinic or hospital in the last year either 10 times or more or from 5-9 times. These results are consistent with the finding of Jang et al. (2005) that *"health insurance coverage was found to be a significant enabling factor for hospital visits"*. There is concern in theoretical economic literature that health insurance creates a moral hazard problem. Persons with health insurance are less likely to take health precautions, resulting in health problems and increased health care usage (Wranik, 2004). It is possible that more satisfied patients would overuse the health service system, which would increase service cost and reduce accessibility for the neediest patients. There is evidence to show that satisfied patients are more likely to continue using health care services, value and maintain relationships with health care providers, adhere to treatment and have better health outcomes (Pradnya et al., 2009; Larsen and Rootman, 1976).

The social structure and cultural values of a community help define the health care system. Veenhoven (1996:6) stated that *"satisfaction draws on cultural specific standards of success, which have no relevance in different value-contexts"*. Moreover, health care behaviour and beliefs are much more emotion-laden than are the same attributes of consumer behaviour in other industries (Turner and Pol, 1995). Socio-cultural factors determine the pattern of utilisation of health services, through their influence on the consumers of services. They affect the behaviour of patients and therefore influence the success or failure of health services provision to meet their

objectives (Alshammasi, 1986). Gerdtham and Jonsson (2000) argued that insured patients are more likely to seek unnecessary testing and treatment, thereby increasing health care costs with no benefit to health. Such behaviour would be expected to lower health system efficiency.

## 9.9 Research Limitations

All research studies have limitations or constraints imposed or recognised at the outset and this study is no exception. The following limitations apply in this case:

The sample concentrates on employees working for large-size companies/ establishments (500 employees and above), such that generalising the results to other companies/establishments may be ill advised. This study took place in 28 private companies/establishments operating in Riyadh city. The population and sample of this study was limited to Riyadh city because of the limited time and resources available to the researcher. The results were limited by the time period in which the study was conducted. The Saudi culture imposed certain constraints on the data collection procedure and, hence, the sample that could be gathered, notably the numerical imbalance between male and female respondents, and the difference in gender distribution between the survey and interview samples. The data was collected from a limited sample size in a limited geographic location; therefore, there are limits to the generalisability of the research results to the context of the entire country.

The study was limited to measuring the beneficiaries' level of satisfaction with health insurance services and their views on priorities for improvement. One major difficulty with this research is that there were no studies undertaken previously regarding customer satisfaction with health insurance in Saudi Arabia. Although this adds to the originality and value of this study, the research did not have the benefit of learning from others' mistakes. Expatriates come from diverse nationalities and ethnic backgrounds

and they speak different languages; therefore, the study was limited to Arabic and English speaking expatriates. Some beneficiaries clearly have differences in choice of providers. This may have played a role in their interpretation of such issues as quality and service. Another limitation is the difference of expectation between beneficiaries. Other limitations that could have affected the results concerned the problems occurring in public opinion surveys in general, such as the structure of questions, cognitive bias and survey duration.

## 9.10 Future research

Based on the results of this investigation, some suggestions can be made for further research in the future, as follows:

- Although the results may/may not support satisfaction with CHIS within a limited geographical area, additional studies need to be carried out to establish the reliability and validity of the results. Further study of beneficiaries' satisfaction with the CHIS is needed in other cities in Saudi Arabia, for comparison with this study, as it is possible that different locations will represent different customer segments, and so elicit different views.
- Studies are needed to examine the influence of political elements, the commitment of the higher authorities of the MOH, and the cooperation and coordination achieved with affiliated ministries. Changes in attitudes and practices at these higher tiers of the health design and delivery system, where human, financial, technical and policy matters are negotiated, are essential for the health care system to respond optimally and provide the needed services to deliver patient satisfaction.
- One of the key considerations is the need to consult a wide variety of stakeholders when conducting research. Therefore, another study is needed to

investigate the perceptions of providers of health services and insurance companies, with a view to exploring whether their views are concordant with the perceptions of beneficiaries.

- Research is needed to investigate the role of instructions on satisfaction outcomes in a services setting. Such an investigation is needed, given the relative complexity of some services and the heavy reliance on customer participation in service settings.

## 9.11 Contribution and Implications of the Study

Despite its limitations, this study contributes to the literature by offering a unique field study, interesting results, and valuable managerial implications. Most of the theoretical and empirical research on which customer satisfaction with health insurance literature is developed was conducted in the United States, Canada and Europe. Hence, this study enriches the literature as it draws evidence from the Saudi context which has a different culture. The study attempted to fill an existing gap related to beneficiaries' satisfaction with health insurance systems in the literature in general and particularly in Saudi Arabia. This is the first attempt to investigate beneficiaries' satisfaction with the services provided under the CHIS in Saudi Arabia.

This study may increase our understanding of the attributes that contribute most to beneficiaries' satisfaction with the CHIS and help the development of policies that can improve the implementation of health insurance, to make it more acceptable to the public. The study contributes to the determination of the role of the main actors in health insurance which previous studies had failed to do. In addition, previous studies conducted in the Saudi context have excluded the cost dimension because health care was provided free of charge. This is an area, therefore, where the present study can contribute new knowledge. This study has theoretical and practical contributions. The

CHIS needs to strike a balance between satisfying beneficiaries and managing the cost of health care provision experience to demonstrate true value to their members as well as to employers. A study such as this was designed to help in understanding those drivers that most affect satisfaction with the CHIS.

### 9.11.1 Theoretical contribution and implications

The service delivery process model has been applied previously in measuring customer satisfaction with services in the public sector, but has never been applied to health insurance in Saudi Arabia. This study therefore, provides the first evidence of the applicability of this model in a very different cultural context. The service dimensions selected for investigation have all been proven important to beneficiaries' satisfaction and priorities among them were established. Use of both quantitative and qualitative methods proved to be very fruitful in this study and can be recommended to researchers who engage in patient satisfaction studies. Each approach has strengths and weaknesses, and the aim is to take advantage of strengths and to make the most efficient use of both in attempting to understand social phenomena. By combining quantitative and qualitative methods, the study provided validation of the satisfaction dimensions suggested by the interviews. Overall, the findings support the theoretical position that beneficiaries satisfaction with health insurance is not simply a trade-off of costs and benefits, but a multidimensional construct, encompassing rational and economic decisions on functional service attributes such as cost, service delivery, service availability and accessibility, communication while receiving service, personal characteristics, past experience and values. Also this study adds to the literature by presenting a detailed practical account of using the NVivo software in analysing the qualitative data.

### 9.11.2 Managerial Implications and strategies for Health insurance

Identifying customers' perceptions of access and availability of facilities for the provision of health services, communication while receiving health care service, cost of health care and delivery of services allows concerned parties to tailor their efforts to ensure that customer needs are better met. As a result, they can recognise, prioritise and improve areas of service weakness and allocate important resources to the most effective areas. Thus, the results from this research may have some significant implications for health care providers, insurance companies, employers and health care policymakers. Health care organisations should focus on the importance of the care process from the patient's viewpoint, by proclaiming patient satisfaction as their mission, with an underlying emphasis on providing the best possible care for their patients. To do so, the management team must rearrange their infrastructure to reflect patient needs and demands. Satisfaction surveys are a stepping-stone to evaluating customer needs and expectations, thus allowing for the formulation of a policy to accommodate their perspectives.

Health care managers should invest in health information technology as its utilisation could improve the effectiveness of services rendered to beneficiaries, for example by facilitating appointment booking and receiving approvals for medical procedures from insurance companies. Attention must be paid to the location of facilities and quality of services, as well as to the price of medicines and diagnostic procedures, since each of these elements is considered important by the beneficiaries.

There is a need to examine beneficiaries' expectations and tailor services accordingly since satisfaction measures can only diagnose a problem while expectation assessment can identify beneficiaries' needs, and thus programme managers can better design health

services delivery (Mawajdeh et al., 2001). On this basis, health care planners would do well to pay particular attention to comprehensiveness of insurance coverage and to the training of personnel both in technical insurance skills and, where necessary, through any means that can help in delivering the expected service and lead to the greatest satisfaction. In addition, health care providers need to focus on the development of human relations skills among their staff. Such skills can effectively be strengthened through appropriate training. In the case of non-Saudi personnel, such training should include induction into important aspects of Saudi cultural values and their implications for staff behaviours. To tackle dissatisfaction issues effectively, the management team at each health care facility needs to establish a strategic plan for evaluating performance. The plan should contain calculated guidelines for each department to follow, by which they can systematically measure their compliance levels. Subsequently, a regular reporting mechanism should be instituted, one that involves department heads, and in turn, the board of directors. Monitoring performance levels helps in understanding how the organisation is performing, and how it can operate better in the future (Alaiban, et al., 2003).

## 9.12 Recommendations

In the light of the foregoing discussion, specific recommendations are offered for the improvement of the implementation of the CHIS based on the empirical findings.

### 9.12.1 Government

- The implementation of CHIS requires the development of a health insurance infrastructure in the kingdom in all aspects with the emphasis on raising the level of awareness of CHIS, qualifying healthcare providers and the development and implementation of unified quality standards in the health insurance market. The number of health care providers (hospitals, dispensaries

and clinics) that provide comprehensive services should be increased to cope with the growth and the rise in the needs, to cover most of Riyadh City and enable a widespread network of providers to patients for whom transport or language may be difficult.

- The government should have strict control on the health insurance operations. Monitoring the pricing of health care is required to protect patients from greedy health service providers. Stricter regulation of medical procedures is also needed to ensure proper metering and fair pricing. Close governmental follow-up and supervision of the CHIS and the support of concerned authorities are needed to ensure better access to care and improve patient satisfaction.
- The MOH should stress to health care providers that they should be responsive to patients. In addition, the penalty system for those who violate the CHIS regulations must be activated to protect the community and beneficiaries' rights.
- Universities and health care institutions should sponsor strong programmes for health insurance specialisation. In addition, more colleges could offer diplomas and bachelor degrees in health insurance studies. Such courses should combine theoretical understanding of health insurance with practice on the ground.
- The Ministry of Labour should move ahead with the Saudisation of the insurance sector and hire more trained Saudi graduates.

### 9.12.2 Council of Cooperative Health Insurance (CCHI)

- The CCHI should determine and clarify the rights and responsibilities of beneficiaries, the employers, the health care providers and the insurance companies in order to avoid problems in the care of beneficiaries, especially any matters concerning beneficiaries' expectations with regard to comprehensiveness of coverage of different services. The CCHI should control the quality of

services provided to beneficiaries. There is a need to adopt, standardise, publish and monitor medical insurance industry standards in collaboration with major insurance companies and medical providers in the Kingdom. The aim is to recommend strategies for the production and maintenance of national standards and their implementation.

- The CCHI should systematically monitor beneficiaries' satisfaction with the CHIS over time and document baseline satisfaction measures for key services using the CMT. This can provide useful diagnostic information on a periodic basis to policy makers, health care providers and insurance companies. The information can be used to identify areas of improvement that would increase beneficiaries' satisfaction, develop long-term relationships between the health care providers and beneficiaries and improve profitability for both providers and insurance companies in relation to this aim. There is a need to establish a minimum percentage improvement target for beneficiaries' satisfaction with health insurance service quality over a given period. Annual service improvement plans should be prepared, based on beneficiaries' priorities for service improvement.
- A clear complaints procedure and a disciplinary system to encourage compliance must be set up. A mechanism for settlement of disputes arising out of health service contracts between the service providers and insurance company regarding co-payments and premiums must be established and activated by the CCHI.
- The CHIS should be reviewed to reconsider coverage and benefits. Expansion should be considered to include some excluded health services that are necessities and priorities of health care such as preventive, diagnostic and therapeutic services, including dental care and chronic diseases.

- The CCHI must ensure that all parties involved in the implementation of the CHIS are properly linked. Health insurance companies should be linked electronically with health care providers for rendering the services and streamlining the operation. This can be achieved through the establishment of a database between health care providers and insurance companies.
- It is assumed that the expansion of the implementation of the scheme would increase the rejection of claims by health insurance companies. Therefore, it is advisable to reduce the number of insurance companies for the sake of high quality and monitor the performance of the qualified ones in order to improve health insurance operations in Saudi Arabia. In addition, it is worth mentioning that reducing the number of insurance companies would contribute to lowering the premium costs of health care as the proportional number of subscribers becomes higher.

### 9.12.3 Providers

- Health care providers should focus on the controllable physical cues, as well as the tangible and intangible human components of health services delivery. Their health care facilities should be equipped with the most advanced machines, equipment and cadres. They should provide the insured with a quality service that meets their needs, on-time delivery and outstanding service. They need to examine their quality system to see if it is responsive to ever-changing customer requirements and expectations.
- Booking appointments to see the physicians should be made easier.
- Adoption of a continuous improvement planning and implementation approach to service improvement and beneficiaries' satisfaction is desirable.
- There is a need to increase the number of physicians to overcome congestion

and long waiting periods. This would enable physicians to spend more time with the patients, would get to know them better, and would examine them thoroughly, which in turn would increase beneficiaries' satisfaction.

- Deficiencies in the numbers of staff should be corrected by hiring qualified bilingual staff - especially bilingual physicians are highly desirable - so that they can communicate with the patients without the need for translators.
- Extending working hours for the evening shifts would increase the availability of physicians and would lead to more accessible health care services and would also reduce the problem of overcrowding in health care facilities.
- Training programmes should be intensified for health care physicians and medical ethics should be a part of such training. Physicians are also expected to learn about interpersonal and psychosocial aspects of health care. Training non Saudi physicians about the Saudi culture is necessary because the nature of the provided services requires physicians' acquaintance with the Saudi cultural values, social traditions and language.
- Waiting times should be closely monitored as part of an insurance quality programme and to enable medical services to be provided within a reasonable timeframe.
- Health care providers must be encouraged to develop their own systems and levels of services in accordance with common quality standards.
- With the expected increase in the number of the cooperative medical insurance subscribers, electronic medical solutions have become a necessity for almost all medical services providers to facilitate administrative and financial procedures. This will increase the provider’s ability to serve as many patients as possible, reducing costs and also assisting in the decision making process.

- Innovative electronic services such as confirmation of insurance approval through SMS to beneficiaries' mobiles and web-based comprehensive services should be considered in order to facilitate communication in the delivery of health care services under the CHIS.

### 9.12.4 Insurance companies

- Health insurance companies should invest adequately in producing easy to understand instructions as well as encouraging customers to read the instructions as soon as their insurance starts.
- A call-centre for health insurance claim enquiries should be established to keep beneficiaries informed about health insurance and solve problems resulting from misapplications of the health insurance law**.**
- Health insurance companies should provide clear information to the customers on their rights and responsibilities and health care provider policies and procedures.
- A health insurance awareness programme for the community should be a part of the responsibility of insurance companies. Efforts to increase the awareness about the benefits and advantages of CHIS must be directed to the public and medical providers through flyers, newsletters, posters, seminars and presentations. A health insurance guide with full details (inclusions, exclusions, network providers and so on) could be delivered as hard copy (printed copy) to consumers, to raise their awareness about CHIS.
- Companies that provide electronic connection and develop and implement unified systems for the insurance companies' clients provide added value that would remove many insurance market obstacles. Such systems would also help to minimise administrative expenses, including document printing and the cost

of mailing or faxing to medical service providers. This would have a positive effect on the level of service provided to the patient, since the system would facilitate information flow between the insurance companies, service providers and the clients.

### 9.14.5 Employers

- Employers must base their decision on choice of insurance company according to the company's excellence in the provision of service through their network of extensive integrated health care facilities.
- The employment contract must state clearly the amount that the employee will bear for his/her treatment under the CHIS.

### 9.12.6 Concluding Remarks

Overall, as explained earlier, this study is a first attempt to understand beneficiaries' satisfaction with services provided under the CHIS in Riyadh city. In this study it is concluded that the majority of beneficiaries are moderately satisfied with the services provided under the CHIS and that health insurance has had a positive effect on access to the health care system. The results also further revealed areas which need improvement such as cost of health care not covered by insurance, comprehensiveness of coverage, waiting times to receive the service, denial of the provision of some services under the health insurance policy and responsiveness to beneficiary complaints and comments.

Saudi Arabia is moving towards expanding health insurance to include Saudi citizens. This approach may be harmful to the Saudi health system if it is created without careful planning and research. The insight into beneficiaries' satisfaction with the CHIS provided by this study offers a framework for taking the health insurance industry forward, to the benefit of consumers, the health insurance companies, providers and the Saudi economy in general and if providers and insurance companies are to survive and

compete in the health care market, they will need to benefit from satisfaction theories to improve their services.

Health insurance systems should prevent any restrictions on insurance policies such as the exclusion of pre-existing conditions and the capping of expenditure or the refusal of insurance; they should also introduce and enforce strict regulations and careful monitoring of quality in the private sector. In addition, to promote success, the CHIS should be structured to meet the goal of providing affordable and accessible quality health care to the population, based on Islamic principles. More efforts must be directed towards increasing the community awareness about the benefits of the health insurance plan. Cooperative health insurance can be an answer to the current problems facing the health care system in Saudi Arabia as long as it remains cooperative rather than competitive.

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# Appendices

# Appendix A

## Elements under the main dimensions

| Dimensions | # | Items |
|---|---|---|
| Service delivery | 1 | Number of visits required to receive the treatment for each case |
| | 2 | The waiting time to receive the health service |
| | 3 | Number of people dealt with to get health service |
| | 4 | Fairness in the provision of health services |
| | 5 | Courtesy of service staff |
| | 6 | Competency of service staff |
| | 7 | Service staff respect to patients |
| | 8 | Meeting beneficiary safety and security needs |
| | 9 | Protecting beneficiary privacy/confidentiality |
| | 10 | Accuracy in filling medical reports for the purpose of requesting approval for treatment |
| | 11 | Comprehensiveness of covered health services |
| | 12 | Prescription drug benefits coverage |
| Access and availability of facilities for the provision of health services | 1 | Ease of accessibility by telephone |
| | 2 | Convenient location |
| | 3 | Adequacy of parking |
| | 4 | Comfortable waiting areas |
| | 5 | Ease of understanding signs |
| | 6 | Ease of scheduling appointments |
| | 7 | Availability of health information system |
| | 8 | Offered other methods of access (i.e., fax, internet, e-mail) |
| | 9 | Suitability of regular working hours |
| | 10 | Availability of all medical specialties |

## Elements under the main dimensions

| Dimensions | # | Items |
|---|---|---|
| Communication while receiving health care service | 1 | Answering beneficiary questions |
| | 2 | Availability of information needed by the beneficiary |
| | 3 | Clarity of written and verbal language |
| | 4 | Ease of understanding documents and other information |
| | 5 | Ease of understanding and filling out forms |
| | 6 | Ease of understanding procedures |
| | 7 | Responsive of health care providers to complaint and comments |
| Cost of health care | 1 | Convenience of payment methods |
| | 2 | The copayment (percentage of the fee) for physician care paid at each visit |
| | 3 | The copayment paid for medicines |
| | 4 | The copayment paid for laboratory tests and radiography |
| | 5 | The cost of health care not covered by insurance |
| Employer role | 1 | Denial of access to health care services under the CHIS |
| | 2 | Supplying with a list of available providers |
| | 3 | Informed about coverage limits |
| | 4 | Freedom to choose health care provider |
| Insurance company role | 1 | Responsiveness of insurance company to complaints and comments |
| | 2 | Appropriateness of waiting time for the insurance company answer if pre-authorisation was requested |
| | 3 | Competency and qualification of insurance company staff |
| | 4 | Courtesy of health insurance representatives |
| | 5 | Satisfaction with the way of processing claims |

# Appendix B

## Organisations employing 500 expatriates and more in Riyadh City according to Ministry of Labour lists

| S.N | Organisation Name | Number of Saudis | Number of Non-Saudis | Saudization Rate |
|---|---|---|---|---|
| 1 | Asaad Saeed Contracting Est. | 92 | 2077 | 4.24% |
| 2 | Tawkelat aljazeerah Co. for cars | 108 | 507 | 17.56% |
| 3 | Alawaidah Contracting Co. | 31 | 549 | 5.34% |
| 4 | Fahad Alrasheed commercial est. | 91 | 3167 | 2.79 |
| 5 | Ayaed Alhumood & partners Co. | 104 | 1175 | 8.13% |
| 6 | Alrussan Contracting Est. | 124 | 1407 | 8.09% |
| 7 | Alatifyah Contracting & commercial Co. | 93 | 2388 | 3.74% |
| 8 | Saudi Company for paper recycling | 19 | 1048 | 1.78% |
| 9 | Saudi Co for military uniforms & supplies | 232 | 911 | 20.29% |
| 10 | Meed commercial Company | 300 | 626 | 32.39% |
| 11 | Alsalam Aircraft limited Company | 1627 | 1273 | 56.1% |
| 12 | Makshaf limited Services Company | 25 | 833 | 2.91% |
| 13 | Hajerh Contracting Est. branch | 43 | 659 | 6.12% |
| 14 | Abu Haitham Group Branch | 23 | 1329 | 1.7% |
| 15 | National United Co. for distribution | 106 | 1067 | 9.03% |
| 16 | Mutlaq AlGhuayrai Contracting Est. | 95 | 1234 | 7.14% |
| 17 | Alturays Saudi Co. for Contracting, industry and Trade | 165 | 2674 | 5.81% |
| 18 | Abdulrahman Alqussaibi for public trade | 172 | 616 | 21.82% |
| 19 | Alsharq Contracting & trade Co. | 231 | 1874 | 10.97% |
| 20 | Almashriq Contracting Co. | 230 | 4430 | 4.93% |
| 21 | Safari Limited Co. | 1138 | 6903 | 14.15% |
| 22 | Riyadh Co. for operation & maintenance | 340 | 1738 | 16.36% |
| 23 | United Food Factory Co. | 282 | 1102 | 20.37% |
| 24 | Arabian Co. for maintenance and technical services | 160 | 1581 | 9.19% |
| 25 | Alrajhi Industrial Co. and trading | 245 | 1229 | 16.62 |
| 26 | Albilad Bank | 1084 | 562 | 65.85% |
| 27 | Asia Limited Co. for Hotels | 14 | 544 | 2.5% |
| 28 | Mhammed Alareedh Contracting Est. | 57 | 588 | 8.83% |
| 29 | Contracting Materials& Trading Co. | 56 | 741 | 7.02% |
| 30 | Mideast engineering & development Co. | 327 | 2834 | 10.34% |
| 31 | Fen Almemar maintenance Limited Co. | 268 | 2593 | 9.36% |
| 32 | Almoqawel Alarabi Co. | 152 | 1549 | 8.93% |
| 33 | Contracting facilities Co. | 29 | 916 | 3.06% |
| 34 | Alrashed and Almanqour Trade Co. | 54 | 958 | 5.33 |
| 35 | Mouwafaq Contracting Limited Co. | 91 | 758 | 10.71% |
| 36 | Nashat Alotaibi agricultural Ets. Branch | 60 | 519 | 10.36% |
| 37 | Jareer Book Stores | 354 | 763 | 31.69% |
| 38 | Aljomaih Refreshments Co. | 388 | 1435 | 21.28 |
| 39 | Almawared Food Limited Co. | 421 | 972 | 30.22% |
| 40 | Aada Contracting & Trade Co. | 54 | 953 | 5.36% |
| 41 | Green Land Agricultural Limited Co. | 53 | 648 | 7.56% |
| 42 | AlAhli Aluminum Co. | 192 | 810 | 19.16% |
| 43 | Danya limited Food Co. | 255 | 590 | 30.17% |
| 44 | Saudi Telecom | 5030 | 2566 | 66.21% |
| 45 | Omar Ali belsharaf Est. | 340 | 1829 | 15.67% |
| 46 | Obaid Alsalami Contracting Est. Branch | 104 | 2021 | 4.89% |
| 47 | Intercontinental Hotel Co. | 96 | 532 | 15.28% |
| 48 | Dallah Hospital | 258 | 872 | 22.83% |

| S.N | Organisation Name | Number of Saudis | Number of Non-Saudis | Saudization Rate |
|---|---|---|---|---|
| 49 | Saudi Lebanese Contracting Co. | 98 | 1776 | 5.22% |
| 50 | Aljomaih Car limited Co. | 321 | 909 | 26.09% |
| 51 | Jabreen Contracting Est. | 70 | 829 | 7.78% |
| 52 | Alsadhan Trade Co. | 447 | 1461 | 23.42% |
| 53 | Saleh Alrajhi & partners Co. | 61 | 515 | 10.59% |
| 54 | Saudi Dicton Limited Co. | 256 | 820 | 23.79% |
| 55 | Etihad Almoqawellen Co. | 2365 | 42159 | 5.31% |
| 56 | Habara Contracting Goup | 94 | 1037 | 8.31% |
| 57 | Samama Operation & Management Co. | 527 | 7543 | 6.53% |
| 58 | Aldrees Transportation & petroleum Co. | 320 | 3000 | 9.63% |
| 59 | Jazeera manufacturing & trade Est. | 164 | 1790 | 8.39% |
| 60 | Saudi Specialised Contracting Co. | 16 | 532 | 2.91% |
| 61 | British Aerospace Co. | 828 | 651 | 55.98% |
| 62 | Alothiam Stores Co. | 1514 | 3563 | 29.82% |
| 63 | Medical Group Limited Co. | 235 | 833 | 22% |
| 64 | Etak contracting Est. | 39 | 736 | 5.03% |
| 65 | Hayat Medical Co. | 162 | 691 | 18.99% |
| 66 | Abdullah Alrashid & partners contracting Co. | 268 | 6282 | 4.09% |
| 67 | Unitesham Gulf Health Products Co. | 45 | 787 | 5.4% |
| 68 | Saudi Holland Bank | 817 | 259 | 75.92% |
| 69 | Fouadia Public Contracting Co. | 81 | 774 | 9.47% |
| 70 | Dhameem Contracting Est. | 39 | 642 | 5.72% |
| 71 | Adfa Blankets Co. | 58 | 561 | 9.36 |
| 72 | Hasanah trade & contracting Est. branch | 102 | 1536 | 6.22% |
| 73 | Riyadh International Contracting Co. | 467 | 1318 | 26.16% |
| 74 | Aldahiri Contracting Group Co. | 294 | 3080 | 8.71% |
| 75 | Altayar International Transportation Agency | 98 | 433 | 18.45% |
| 76 | Rhajhi Plastic & sponge Factories | 73 | 627 | 2.48% |
| 77 | Abdullah Alrajhai trade stores Est. | 21 | 599 | 3.38% |
| 78 | Alrahid A Beutting limited Co. | 110 | 2617 | 4.03% |
| 79 | Ali Alqarni Alrizqi Contracting Est. | 46 | 889 | 4.91% |
| 80 | Rimal Alswahel Contracting Est. | 209 | 1212 | 14.7% |
| 81 | Herfy Nutritional Services Co. | 830 | 2255 | 26.9% |
| 82 | Saudi Car Services Co. (SACO) | 31 | 581 | 5.06% |
| 83 | Alejtiyaz Contracting Est. | 55 | 513 | 9.68% |
| 84 | National Communications Limited Co. | 174 | 1409 | 10.99% |
| 85 | Aljeray Transportation Est. | 77 | 642 | 10.7% |
| 86 | Alhesab Contracting Est. | 112 | 1282 | 8.03% |
| 87 | AlKhurafi Sons for Trading and Manufacturing Co. | 68 | 632 | 9.71% |
| 88 | Alherettee trade & Contracting Co. | 78 | 781 | 9.08% |
| 89 | Nour Communication Co. | 111 | 685 | 13.94% |
| 90 | Allied Services Limited Co. (HAMARD) | 153 | 1613 | 8.66% |
| 91 | Saudi Tools & Supplies Co. | 153 | 513 | 22.97% |
| 92 | Alalam Alarabi Contracting Co. | 130 | 1177 | 9.94% |
| 93 | Bait Alriyadh Commercial Est. | 344 | 4345 | 7.33% |
| 94 | AlAkawain Limited Co. | 117 | 1095 | 9.65% |
| 95 | Riyadh Marble Factory Co. | 120 | 1316 | 8.35% |
| 96 | Saudi Arabian Kent Co. | 118 | 2774 | 4.08% |
| 97 | Dar Alnukhba Medical Services Co. | 272 | 1913 | 12.44% |

| S.N | Organisation Name | Number of Saudis | Number of Non-Saudis | Saudization Rate |
|---|---|---|---|---|
| 98 | Saudi Cable Factory Co. | 161 | 509 | 24.02% |
| 99 | Constructions Projects Limited Co. | 432 | 4971 | 7.99% |
| 100 | Saudi Ceramic Co. | 453 | 1601 | 22.05% |
| 101 | Abdullah Jarullah Contracting & Maintenance Co. | 73 | 1435 | 4.84% |
| 102 | Shebah Contracting & Trade Co. | 33 | 501 | 6.17% |
| 103 | Alsaleem Contracting & Trade Co. | 49 | 529 | 8.47% |
| 104 | Lameek Constructions & contracting Co. | 45 | 618 | 6.78% |
| 105 | Saudi Co. for technical Eng. Equipment | 75 | 553 | 11.94% |
| 106 | Saudi Fast Food Limited Co. | 366 | 1010 | 26.59% |
| 107 | Sahara Maintenance Limited Co. | 154 | 2980 | 4.91% |
| 108 | Saudi Electricity Co. | 1788 | 1567 | 53.29% |
| 109 | Alobaikan Investment Group Co. | 234 | 833 | 21.93% |
| 110 | Zahran Maintenance & Operation Co. | 930 | 5492 | 14.48% |
| 111 | Abdulla Almonajem Sons Co. | 111 | 1011 | 9.89% |
| 112 | Alsamel Saudi trade & contracting Co. | 57 | 1200 | 4.53% |
| 113 | Saudi French Bank | 1064 | 457 | 69.95% |
| 114 | Munwah trading & Contracting Co. | 240 | 2233 | 9.7% |
| 115 | Jash Technical Limited Services Co. | 88 | 601 | 12.77% |
| 116 | Alsalowly Agricultural Est. | 28 | 763 | 3.53% |
| 117 | Gwano Wbarkfeds Saudi Arabian Limited Co. | 103 | 788 | 11.56% |
| 118 | Fad Contracting & Trading Co. | 36 | 539 | 6.26% |
| 119 | Ban Nesma Limited Co. | 581 | 557 | 51.05% |
| 120 | Tambeen Saudi Limited Co. | 109 | 1447 | 7% |
| 121 | Hotel & Tourism Areas Saudi Co. | 198 | 634 | 23.79% |
| 122 | Alabdulatif Industrial Investment Co. | 20 | 1407 | 1.4% |
| 123 | Sawaed Alriyadh Commercial Co. | 54 | 516 | 9.47% |
| 124 | Khaled Albabutain Contracting Est. | 3 | 695 | 4.3% |
| 125 | Albassami International Business Co. | 190 | 2214 | 7.9% |
| 126 | Packaging Materials Manufacturing Co. | 176 | 864 | 16.92% |
| 127 | Abdulmohsen Alhokair Operation and Maintenance Group | 179 | 2374 | 7.01% |
| 128 | Alfayha General Contracting Est. | 47 | 535 | 8.07% |
| 129 | Alrabeeah & Alnassar Co. | 63 | 687 | 8.4% |
| 130 | Saudi Electrical Services Co. | 92 | 1779 | 4.91% |
| 131 | Zaid Alhosain Trade Est. | 252 | 3101 | 7.51% |
| 132 | SABEC Co. | 1327 | 452 | 74.57% |
| 133 | Mansour Alobaied Contracting Co. | 70 | 763 | 8.68% |
| 134 | Alfakhra Tailoring | 40 | 656 | 5.74% |
| 135 | Alrajihi Development Limited Co. | 108 | 2259 | 4.56% |
| 136 | Saudi Materials Group Co. | 28 | 610 | 4.38% |
| 137 | Shebh Aljazeerah Contracting Co. | 150 | 3356 | 4.27% |
| 138 | Kholoud Commercial & Trade Est. | 49 | 760 | 6.05% |
| 139 | Fedak Global Contracting Co. | 42 | 523 | 7.43% |
| 140 | Mohammed Almajed Contracting Est. | 0 | 683 | 0% |
| 141 | Mohammed Alsodais & Partners Co. | 125 | 1265 | 8.99% |
| 142 | Berian Water & Refreshments Co. | 154 | 670 | 18.68% |
| 143 | Mohammed Alrajihi & Sons Industrial, Trade & Agricultural Co | 52 | 1787 | 2.82% |
| 144 | Saudi Constructions & Commercial Relations Est. | 29 | 591 | 4.67% |

| S.N | Organisation Name | Number of Saudis | Number of Non-Saudis | Saudization Rate |
|---|---|---|---|---|
| 145 | Serakon General Contracting Co. | 54 | 1024 | 5% |
| 146 | Modern Network Contracting Co. | 69 | 862 | 7.41% |
| 147 | AlKhoraiji Est. | 126 | 1764 | 6.66% |
| 148 | Wahat Albarakah Commercial Est. | 167 | 757 | 18.07% |
| 149 | Dar Albandar International Trade Co. | 518 | 1440 | 26.45% |
| 150 | Anwar Alsharq Contracting Co. | 27 | 1863 | 1.42% |
| 151 | ABFV Rock Group KB | 569 | 1558 | 26.75% |
| 152 | AlBeah Planning, constructing, Engineering Co. | 53 | 510 | 9.41% |
| 153 | Abdulmohsen Almohaisen Sons Co. | 48 | 722 | 6.23% |
| 154 | Alorini Contracting Co. | 74 | 1263 | 5.53% |
| 155 | Engineering Establishments & Industrial Development Co. | 60 | 688 | 8.02% |
| 156 | Medical & Scientific Equipment House Co. | 742 | 4462 | 14.25% |
| 157 | Alsafi Danon Limited Co. | 148 | 569 | 20.64% |
| 158 | Manazel Alensha Constructions Co. | 96 | 901 | 9.62% |
| 159 | Defaa Operating & Maintenance Co. | 232 | 795 | 22.59% |
| 160 | Abdullah Alsaied Contracting Group | 48 | 516 | 8.51% |
| 161 | Commercial Centre Co. | 175 | 523 | 25.07% |
| 162 | Saman Alturais Constructing Limited Co. | 64 | 1663 | 3.7% |
| 163 | King Faisal Charity Est. | 236 | 1511 | 13.5% |
| 164 | Ahmed AlHerfi Contracting Co. | 77 | 1410 | 5.17% |
| 165 | Bader Hafid Alotaibi Co. | 0 | 629 | 0% |
| 166 | Heif Alqahtani & Partners Contracting, Commercial Co. | 137 | 3496 | 3.77% |
| 167 | Matajer Saudi Co. | 545 | 1227 | 30.75% |
| 168 | Social Insurance Hospital | 297 | 1344 | 18.09% |
| 169 | Gean Saudi Limited Co. | 712 | 1751 | 28.9% |
| 170 | Arzam Commercial Co. | 51 | 937 | 5.16% |
| 171 | Nadin Arabic Co. | 88 | 1546 | 5.38% |
| 172 | Alsaif Engineering & Contracting Co. | 74 | 724 | 9.27% |
| 173 | Twaiq Operations & Maintenance Co. | 859 | 11097 | 7.18% |
| 174 | Etihad AlEtisalat Co. | 1478 | 552 | 72.82% |
| 175 | Aziziah Bandah United Co. | 1354 | 2451 | 35.58% |
| 176 | Albilad Bank | 1084 | 562 | 65.85% |
| 177 | Saudi Electricity Co. | 1788 | 1567 | 53.29% |
| 178 | Tebrak Contracting & Commercial Co. | 34 | 693 | 4.67% |
| 179 | Riyadh Cement Co. | 103 | 663 | 13.44% |
| 180 | Hashimia Contracting Co. | 63 | 1062 | 5.6% |
| 181 | Babel Operation & Maintenance Co. | 210 | 852 | 19.77% |
| 182 | Alnasban Group Co. | 557 | 8494 | 6.15% |
| 183 | Alotheaim Real-estate Development Co. | 86 | 1088 | 7.32% |
| 184 | Khaled & Bader Aloajel Contracting Co. | 61 | 1034 | 5.57% |
| 185 | Samel Alezdehar Limited Co. | 16 | 690 | 2.26% |
| 186 | Amo Hamza Fishery Co. | 112 | 567 | 16.495 |
| 187 | Alhamadi Hospital Co. | 161 | 943 | 14.58% |
| 188 | Lazourdi Jewelry Co. | 233 | 1161 | 16.71% |
| 189 | Ahmaed Alfahad & Sons Co. | 408 | 6031 | 6.33% |
| 190 | Samba Financial Group | 655 | 372 | 63.77% |
| 191 | National Cooperative Insurance Co. | 362 | 197 | 64.75% |

# Appendix C

# Sample Size

**Organisations employing 500 expatriates and more in Riyadh City**

**according to Ministry of Labor lists**

| S.N | Organisation Name | Number of Saudis | Number of Non-Saudis | Saudization Rate |
|---|---|---|---|---|
| 1 | Saudi Co. for military uniforms & supplies | 232 | 911 | 20.29% |
| 2 | Abdulrahman Alqussaibi for public trade | 172 | 616 | 21.82% |
| 3 | Almashriq Contracting Co. | 230 | 4430 | 4.93% |
| 4 | Almoqawel Alarabi Co. | 152 | 1549 | 8.93% |
| 5 | Alrashed and Almanqour Trade Co. | 54 | 958 | 5.33 |
| 6 | Saudi Telecom | 5030 | 2566 | 66.21% |
| 7 | Aljomaih Car limited Co. | 321 | 909 | 26.09% |
| 8 | Samama Operation & Management Co. | 527 | 7543 | 6.53% |
| 9 | Ali Alqarni Alrizqi Contracting Est. | 46 | 889 | 4.91% |
| 10 | Dar Alnukhba Medical Services Co. | 272 | 1913 | 12.44% |
| 11 | Gwano Wbarkfeds Saudi Arabian Limited Co. | 103 | 788 | 11.56% |
| 12 | Kholoud Commercial & Trade Est. | 49 | 760 | 6.05% |
| 13 | Serakon General Contracting Co. | 54 | 1024 | 5% |
| 14 | Modern Network Contracting Co. | 69 | 862 | 7.41% |
| 15 | Ausis Constructing Est. | 27 | 500 | 5.12% |
| 16 | Etihad AlEtisalat Co. | 1478 | 552 | 72.82% |
| 17 | Tebrak Contracting & Commercial Co. | 34 | 693 | 4.67% |
| 18 | Riyadh Cement Co. | 103 | 663 | 13.44% |
| 19 | Hashimia Contracting Co. | 63 | 1062 | 5.6% |
| 20 | Ahmed Zaki Saudi Arabian Limited Co. | 11 | 559 | 1.92% |
| 21 | Samba Financial Group | 655 | 372 | 63.77% |
| 22 | National Cooperative Insurance Co. | 362 | 197 | 64.75% |
| 23 | Altayar International Transportation Agency | 98 | 433 | 18.45% |
| 24 | Saudi Holland Bank | 817 | 259 | 75.92% |
| 25 | Saudi French Bank | 1064 | 457 | 69.95% |
| 26 | Saudi Electricity Co. | 1788 | 1567 | 53.29% |
| 27 | Saudi Basic Electricity Co. (SABEC) | 1327 | 452 | 74.57% |
| 28 | Albilad Bank | 1084 | 562 | 65.85% |

# Appendix D

# جامعة هال، المملكة المتحدة

# كلية الأعمال

# رضا المستفيدين عن نظام التأمين الصحي التعاوني بمدينة الرياض، المملكة العربية السعودية

**عزيزي المجيب/عزيزتي المجيبه**

تهدف هذه الاستبانة إلى تقصي مدى رضاكم عن نظام التأمين الصحي التعاوني الإلزامي الذي تم تطبيقه على المقيمين والعاملين السعوديين في القطاع الخاص كمرحلة أولية على أن يتم تطبيقه على عامة السعوديين في مرحلة قادمة في حال نجاح تجربة التطبيق الأولية.

ولأهمية آرائكم في تحسين تطبيق نظام التأمين الصحي التعاوني الإلزامي في المستقبل بالإضافة لأهمية أرائكم في نجاح هذه الدراسة فإني آمل منكم التفضل بالإجابة على جميع أسئلة هذه الإستبانة، مع العلم أن الإجابات التي سيتم الحصول عليها سوف تعامل بسرية تامة ولن تستخدم إلا لأغراض البحث العلمي فقط. كما أن عملية تعبئة الاستبانة تستغرق من ٥-١٠ دقائق فقط.

آمل في حال الانتهاء من تعبئة الاستبانة تسليمها إلى إدارة العلاقات العامة. وفي حال رغبتكم استيضاح ما جاء في هذا الاستبيان من أسئلة، أرجو عدم التردد في الاتصال على جوال رقم (٠٥٠٥٢٨٢٣٥٨)

شاكراً ومقدراً لكم تعاونكم ومشاركتكم

الباحث

فؤاد بن عبدالعزيز المبارك

ملاحظه:

إذا كان لديك أية مخاوف بشأن هذا المشروع البحثي، يرجى الاتصال بسكرتير لجنة أخلاقيات البحوث ، جامعة هال ، Cottingham Rd, Hull, HU6 7RX; HU6 7RX ؛ هاتف ١٤٨٢٤٦٣٦٤٦(٤٤)، الفاكس :١٤٨٢٤٦٣٦٨٩(٤٤)

## إرشادات الإجابة

مع فائق التحية، يرجى:

١ – قراءة العبارات الواردة في الاستبانة بتأنٍ وروية.
٢ – وضع علامة ( ✔ ) في المربع الذي يتفق مع إجابتك.
٣ – الإجابة عن جميع الأسئلة الواردة في الاستبانة.
٤ – اختيار مستوى واحد فقط من مستويات الرضا، وهي:

- غير راضٍ إطلاقاً
- غير راضٍ
- حيادي
- راضٍ
- راضٍ جداً

٥ – اختيار درجة واحدة من درجات الأهمية، وهي:

- غير مهم إطلاقاً
- غير مهم
- حيادي
- مهم
- مهم جداً

مثال:

| م | العبارات | ما مدى رضاك عن هذا الجانب من الخدمات؟ | | | | | ما أهمية هذا الجانب بالنسبة لك؟ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | غير راضٍ إطلاقاً | غير راضٍ | حيادي | راضٍ | راضٍ جداً | غير مهم إطلاقاً | غير مهم | حيادي | مهم | مهم جداً |
| ١ | الوقت الكلي المستغرق لتلقي الخدمة | | ✔ | | | | | | | ✔ | |

**ملاحظة:**

– يقصد بـِ (الموظفين) في هذه الاستبانة، الموظفون العاملون في تقديم الرعاية الصحية من أطباء وطـاقم تمريضـي وفنيين وإداريين.

**القسم الأول- البيانات الشخصية**

الرجاء وضع علامة ( ✓ ) في المربع الذي يتفق مع إجابتك.

١ -السن (حدد من فضلك).....سنة

٢ -الجنس: □ ذكر □ أنثى

٣ -الجنسية (حدد من فضلك).....

٤ -الحالة الاجتماعية: □ أعزب □ متزوج □ مطلق □ أرمل

٥ -إذا كنت متزوجاً، فكم عدد أفراد الأسرة الذين يقيمون معك (حدد من فضلك).....

٦ -المستوى التعليمي: □ أقل من الثانوية □ ثانوي □ بكالوريوس □ دراسات عليا (ماجستير ودكتوراه)

٧ -المهنة: □ أعمال يدوية □ مبيعات □ مهن إدارية □أخرى(حدد من فضلك).....

٨ -الدخل الشهري: □ أقل من ٢٠٠٠ ريال سعودي □ ٤٠٠٠ إلى أقل من ٦٠٠٠

□ ٢٠٠٠ إلى أقل من ٤٠٠٠ □ ٦٠٠٠ ريال سعودي فأكثر

٩- هل سبق وأن تلقيت خدمة الرعاية الصحية عن طريق التأمين الصحي التعاوني خلال السنة الماضية؟

□ نعم □ لا (انتقل إلى القسم السابع)

١٠- ما هو نوع التغطية التأمينية التي تتمتع بها: □ أعزب □ عائلي

**القسم الثاني- توفير خدمة الرعاية الصحية تحت مظلة التأمين الصحي التعاوني**

الرجاء وضع علامة ( ✓ ) عند الإجابة التي تصف على أفضل وجه رضاك عن الجوانب التالية ذات العلاقة بموفر خدمة الرعاية الصحية:

| م | العبـــــارات | ما مدى رضاك عن هذا الجانب من الخدمات؟ | | | | | ما أهمية هذا الجانب بالنسبة لك؟ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | غير راض إطلاقاً | غير راض | جيادي | راض | راض جداً | غير مهم إطلاقاً | غير مهم | جيادي | مهم | مهم جداً |
| ١ | عدد مرات المراجعة المطلوبة لتلقي العلاج لكل حالة | | | | | | | | | | |
| ٢ | فترة الانتظار للحصول على الخدمة الصحية | | | | | | | | | | |
| ٣ | عدد الموظفين الذين تعاملت معهم للحصول على الخدمة الصحية | | | | | | | | | | |
| ٤ | الإنصاف في تقديم خدمة الخدمة الصحية | | | | | | | | | | |
| ٥ | لباقة الموظفين في التعامل معك | | | | | | | | | | |
| ٦ | كفاءة الموظفين في تقديم الخدمة | | | | | | | | | | |
| ٧ | احترام الموظفين لك | | | | | | | | | | |
| ٨ | تلبية احتياجاتك المتعلقة بالأمن والسلامة | | | | | | | | | | |
| ٩ | محافظة الموظفين على خصوصية المريض | | | | | | | | | | |
| ١٠ | دقة تعبئة التقارير الطبية للحصول على موافقة شركة التأمين للعلاج | | | | | | | | | | |
| ١١ | شمولية الخدمات الصحية المغطاة بالتأمين | | | | | | | | | | |
| ١٢ | شمولية تغطية الأدوية الموصوفة | | | | | | | | | | |

**القسم الثالث- سهولة الوصول وتوافر المرافق المقدمة للخدمة**

الرجاء وضع علامة ( ✓ ) عند الإجابة التي تصف على أفضل وجه خبرتك في هذه المجالات:

| م | العبـــــارات | ما مدى رضاك عن هذا الجانب من الخدمات؟ | | | | | ما أهمية هذا الجانب بالنسبة لك؟ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | غير راض إطلاقاً | غير راض | جيادي | راض | راض جداً | غير مهم إطلاقاً | غير مهم | جيادي | مهم | مهم جداً |
| **المستشفى أو العيادة التي قدمت لك خدمة الرعاية الصحية تحت مظلة التأمين الصحي التعاوني** | | | | | | | | | | | |
| ١ | يمكن الاستفسار عن خدماته عن طريق الهاتف | | | | | | | | | | |
| ٢ | يقع في مكان مناسب | | | | | | | | | | |
| ٣ | تتوافر به مواقف سيارات كافية | | | | | | | | | | |
| ٤ | تتوافر به أماكن انتظار مريحة | | | | | | | | | | |
| ٥ | تتوافر به لوحات إرشادية سهلة الفهم | | | | | | | | | | |
| ٦ | سهولة جدولة المواعيد | | | | | | | | | | |
| ٧ | يتوافر به نظام معلومات صحي | | | | | | | | | | |
| ٨ | يوفر وسائل أخرى للحصول على الخدمة (مثلاً بالفاكس، بالانترنت، بالبريد الالكتروني) | | | | | | | | | | |
| ٩ | ساعات الدوام العادية تلبي احتياجاتك | | | | | | | | | | |
| ١٠ | تتوافر به جميع التخصصات الطبية | | | | | | | | | | |
| | بصورة إجمالية، ما مدى رضاك عن مقدم الرعاية الصحية؟ | | | | | | | | | | |

**القسم الرابع- الاتصال في أثناء تلقي خدمة الرعاية الصحية**

الرجاء وضع علامة ( ✓ ) عند الإجابة التي تصف مدى رضاك عن الجوانب التالية من الخدمة وأهميتها:

| م | العبارات | ما مدى رضاك عن هذا الجانب من الخدمات؟ | | | | | ما أهمية هذا الجانب بالنسبة لك؟ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | غير راض إطلاقاً | غير راض | جيادي | راض | راض جداً | غير مهم إطلاقاً | غير مهم | جيادي | مهم | مهم جداً |
| **أثناء تلقي خدمة الرعاية الصحية تحت مظلة التأمين الصحي التعاوني** | | | | | | | | | | | |
| ١ | تم الإجابة عن أسئلتي | | | | | | | | | | |
| ٢ | كانت المعلومات التي احتجت إليها متوفرة | | | | | | | | | | |
| ٣ | اللغة المكتوبة والشفهية واضحة | | | | | | | | | | |
| ٤ | كان من السهل فهم الوثائق المطلوبة | | | | | | | | | | |
| ٥ | كان من السهل فهم الاستمارات وملؤها | | | | | | | | | | |
| ٦ | الإجراءات واضحة ومفهومة | | | | | | | | | | |
| ٧ | كان مقدموا الخدمة مستجيبين لشكواي أو تعليقاتي | | | | | | | | | | |

**القسم الخامس – التكلفة**

١- هل تدفع نسبة مشاركة من التكلفة نظير الحصول على الخدمات الصحية ؟ □ نعم □ لا (انتقل للقسم السادس)

إذا كان الجواب ب "نعم" عن السؤال رقم ١، الرجاء وضع علامة ( ✔ ) عند الإجابة التي تصف على أفضل وجه خبرتك للخدمة المتعلقة بالتكلفة:

| م | العبارات | ما مدى رضاك عن هذا الجانب من الخدمات؟ | | | | | ما أهمية هذا الجانب بالنسبة لك؟ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | غير راض إطلاقاً | غير راض | حيادي | راض | راض جداً | غير مهم إطلاقاً | غير مهم | حيادي | مهم | مهم جداً |
| ١ | طريقة الدفع مناسبة | | | | | | | | | | |
| ٢ | نسبة المشاركة في دفع خدمات الأطباء التي تلقيتها عند كل زيارة | | | | | | | | | | |
| ٣ | نسبة المشاركة في دفع قيمة الأدوية | | | | | | | | | | |
| ٤ | نسبة المشاركة في دفع قيمة التحاليل المعملية والإشعاعية | | | | | | | | | | |
| ٥ | تكلفة الخدمات الصحية غير المغطاة بالتأمين الصحي | | | | | | | | | | |

**القسم السادس: أسئلة عامة**

الرجاء وضع علامة ( ✔ ) عند الإجابة التي تصف على أفضل وجه استخدامك للرعاية الصحية في إطار التأمين الصحي التعاوني.

١- إذا استثنينا عدد المرات التي زرت فيها قسم الإسعاف، فكم عدد المرات التي زرت فيها مستشفى أو عيادة خلال السنة الماضية؟

□ ١ □٢ □٣ □٤ □٥ إلى ٩ مرات □١٠ مرات فأكثر

٢- متى كانت آخر مرة تلقيت فيها خدمة الرعاية الصحية تحت مظلة التأمين الصحي؟

□ أسبوع أو أقل □ شهر □ من ٦-١١ شهراً

□ أسبوعين □ من شهرين إلى خمسة أشهر □ سنة فأكثر

٣- هل واجهتك أي من المشكلات التالية في أثناء تلقيك الخدمة؟ (أشر إلى جميع البنود التي تنطبق على هذه الحالة)

□ رفض تقديم بعض الخدمات في إطار التأمين □ تدخل شركة التأمين في تحديد عدد أيام بقاء المريض بالمستشفى

□ أعطيت معلومات متضاربة من أشخاص مختلفين □ مشكلة أخرى (حدد من فضلك).....

- الرجاء وضع علامة ( ✔ ) عند الإجابة التي تصف على أفضل وجه مدى موافقتك أو عدم موافقتك على العبارات الخاصة برب العمل:

| العبارة | غير موافق إطلاقاً | غير موافق | حيادي | موافق | موافق جداً |
|---|---|---|---|---|---|
| ١- منعني رب العمل من الحصول على الرعاية الصحية تحت مظلة التأمين الصحي | | | | | |
| ٢- تم تزويدي بقائمة مقدمي الخدمة | | | | | |
| ٣- تم توضيح حدود التغطية التأمينية | | | | | |
| ٤- لدي مطلق الحرية في اختيار مقدم الرعاية الصحية | | | | | |

- الرجاء وضع علامة ( ✓ ) عند الإجابة التي تصف على أفضل وجه مدى موافقتك أو عدم موافقتك على العبارات الخاصة بشركة التأمين:

| العبارة | غير موافق إطلاقاً | غير موافق | حيادي | موافق | موافق جداً |
|---|---|---|---|---|---|
| ١- كانت شركة التأمين مستجيبة لشكواي أو تعليقاتي | | | | | |
| ٢- في حال تم طلب موافقة مسبقة لتقديم الرعاية الصحية، فإن الوقت المستغرق للحصول على رد شركة التأمين كان مناسباً | | | | | |
| ٣- تتوفر لدى شركات التأمين كفاءات إدارية مؤهلة قادرة على إدارة العمليات التأمينية | | | | | |
| ٤- يتسم ممثلوا شركة التأمين الصحي باللباقة | | | | | |
| ٥-أنا راضٍ عن الطريقة التي استخدمتها شركة التأمين في معالجة مطالباتي | | | | | |
| | **غير راضٍ إطلاقاً** | **غير راضٍ** | **حيادي** | **راضٍ** | **راضٍ جداً** |
| بصورة عامة، ما مدى رضاك عن شركة التأمين التي تتعامل معها؟ | | | | | |
| بصورة عامة، ما مدى رضاك عن نظام التأمين الصحي التعاوني؟ | | | | | |

**القسم السابع- تعليقاتك**

أي مقترحات أو آراء أخرى إضافية لم تتعرض لها هذه الاستبانة يمكن أن تساعد على تحسين تطبيق التأمين الصحي التعاوني تود ذكرها:

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**هل لديك الاستعداد للمشاركة في مقابلة حول الموضوع: □ نعم □ لا**

**إذا كانت الإجابة "بنعم"، من فضلك اكتب اسمك ورقم هاتفك حتى أتمكن من الاتصال بك**

**الاسم:.....**

**رقم الهاتف:.....**

**ما هو الوقت المناسب للاتصال بك: □ صباحاً □ مساءً**

***شكراً على تزويدي بهذه المعلومات***

# Appendix E

## The University of Hull, UK

## Business School

# Beneficiaries` Satisfaction with Cooperative Health Insurance System in Riyadh City, Kingdom of Saudi Arabia

**Dear respondent,**

As a part of my post-graduate study at the University of Hull, I am conducting this survey to collect data about your satisfaction with Cooperative Health Insurance System (CHIS), currently applied to you as a resident in Saudi Arabia**.** I would be grateful if you spare a few minutes of your time, to give me your views. It is anticipated that the insight provided by this survey will guide efforts to improve the applications of cooperative health insurance services in the future. I assure you that all information gathered will be held in the strictest confidence and will only be used for research purposes.

This questionnaire should take from 5-10 minutes to complete. After you have answered these questions, please return the questionnaire to the Public Relations Department. Should you need any clarification, please do not hesitate to call on my Mobile # 0505282358.

E-mail: F.A.AlMobarak@2005.hull.ac.uk

Thank you for your kind cooperation.

The Researcher,

Foad Almobarak

Note: Should you have any concerns about the conduct of this research project, please contact the Secretary, HUBS Research Ethics Committee, University of Hull, Cottingham Rd, Hull, HU6 7RX; Tel No (+44) (0)1482 463646; fax (+44) (0)1482 463689.

## Survey instructions

1- Please read the statements carefully
2- Please tick ( ✔ ) the box that correspond to your response
3- Please answer all the questions
4- Please choose one satisfaction level from the following
   - Very Dissatisfied
   - Dissatisfied
   - Neutral
   - Satisfied
   - Very Satisfied

5- Please choose one importance level from the following:
   - Very Unimportant
   - Unimportant
   - Neutral
   - Important
   - Very Important

Example:

| # | Statements | How satisfied were you with this aspect of the service? | | | | | How important is this aspect of the service to you? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied | Very Unimportant | Unimportant | Neutral | Important | Very Important |
| 1 | Overall time it takes to receive the service | | ✔ | | | | | | | ✔ | |

Note:
"Service staff" in this survey include all staff members delivering health care services to the customer such as physicians, nurses, technicians and administrators.

## Section I - General Information

1- Age (please specify): ……years

2- Gender: □ Male □ Female

3- Nationality (please specify):…….……..

4- Marital status**:** □ Single □ Married □ Divorced □ Widowed

5- If married, number of family members currently living with you (please specify) ……..…

6- Educational level: □ Less than Secondary □ Secondary □ Bachelor □ Post graduate (Master/PhD)

7-Occupation: □manual labour □sales □ administrative work □other (please specify)…….……..

8- Monthly income in Saudi Riyals: □ Less than S.R 2000 □ 4000 to less than 6000
□ 2000 to less than 4000 □ S.R 6000 and more

9- In the last year, did you try to get any kind of treatment through the CHIS?

□ Yes □ No (Go to section VII)

10- What is the type of your health insurance coverage? □ Single□ Family

### Section II - Service Delivery under Cooperative Health Insurance

Please tick ( ✔ ) the response that best describes your satisfaction with the following aspects related to health care provider

| # | Statements | How satisfied were you with this aspect of our service? | | | | | How important is this aspect of our service to you? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied | Very Unimportant | Unimportant | Neutral | Important | Very Important |
| 1 | Number of visits required to receive the treatment for each case | | | | | | | | | | |
| 2 | The waiting time to receive the health service | | | | | | | | | | |
| 3 | Number of people dealt with to get health service | | | | | | | | | | |
| 4 | Fairness in the provision of health services | | | | | | | | | | |
| 5 | Courtesy of service staff | | | | | | | | | | |
| 6 | Service staff were Competent | | | | | | | | | | |
| 7 | Service staff respect to patients | | | | | | | | | | |
| 8 | Met my safety and security needs | | | | | | | | | | |
| 9 | Protected my privacy/confidentiality | | | | | | | | | | |
| 10 | Accuracy in filling medical reports for the purpose of requesting approval for treatment | | | | | | | | | | |
| 11 | Comprehensiveness of covered health services | | | | | | | | | | |
| 12 | Prescription drug benefit coverage | | | | | | | | | | |

**Section III - Access and availability of facilities for the provision of health services**

Please tick ( ✔ ) the response that best describes your experience in these areas

| # | Statements | How satisfied were you with this aspect of our service? | | | | | How important is this aspect of our service to you? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied | Very Unimportant | Unimportant | Neutral | Important | Very Important |
| **The hospital/clinic that provided you with the healthcare service under cooperative health insurance** | | | | | | | | | | | |
| 1 | Was easily accessible by telephone | | | | | | | | | | |
| 2 | Was conveniently located | | | | | | | | | | |
| 3 | Had adequate parking | | | | | | | | | | |
| 4 | Had waiting areas that were comfortable | | | | | | | | | | |
| 5 | Had signs that were easy to understand | | | | | | | | | | |
| 6 | Ease of scheduling appointments | | | | | | | | | | |
| 7 | Had health information system | | | | | | | | | | |
| 8 | Offered various methods of access (i.e., fax, internet, telephone, e-mail) | | | | | | | | | | |
| 9 | The regular working hours met my needs | | | | | | | | | | |
| 10 | Had all medical specialties | | | | | | | | | | |
| Overall, how satisfied were you with the health care provider? | | | | | | | | | | | |

**Section IV – Communication while receiving health care service**

Please tick ( ✔ ) the response that best describes your service experience

| # | Statements | How satisfied were you with this aspect of our service? | | | | | How important is this aspect of our service to you? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied | Very Unimportant | Unimportant | Neutral | Important | Very Important |
| **While receiving health care services under cooperative health insurance** | | | | | | | | | | | |
| 1 | My questions were answered | | | | | | | | | | |
| 2 | The information that I needed was available | | | | | | | | | | |
| 3 | Written and verbal language was clear (e.g., not complicated). | | | | | | | | | | |
| 4 | Documents and other information were easy to understand. | | | | | | | | | | |
| 5 | Forms were easy to understand and fill out. | | | | | | | | | | |
| 6 | Procedures were straight forward and easy to understand | | | | | | | | | | |
| 7 | Health care providers were responsive to my complaint and comments | | | | | | | | | | |

**Section V – Cost**

1- Do you pay copayment (percentage of the cost) for receiving health care services?

□ Yes □ No (Go to section VI)

If the answer is "Yes", please tick (✔) the response that best describes your service experience relating to cost.

| # | Statements | How satisfied were you with this aspect of the service? | | | | | How important is this aspect of the service to you? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied | Very Unimportant | Unimportant | Neutral | Important | Very Important |
| 1 | The method of payment was convenient. | | | | | | | | | | |
| 2 | The copayment (percentage of the fee) for physician care you pay at each visit | | | | | | | | | | |
| 3 | The copayment you pay for medicines | | | | | | | | | | |
| 4 | The copayment you pay for laboratory tests and radiography (X-rays and ultrasound) | | | | | | | | | | |
| 5 | The cost of health care uncovered by insurance | | | | | | | | | | |

**Section VI - General Questions**

Please tick (✔) the answer that best describes your use of health service under cooperative health insurance

1- In the last year, not counting the times you went to an emergency room, how many times did you go to a clinic or a hospital to get health care for yourself?

□ 1 □ 2 □ 3 □ 4 □ 5-9 times □ 10 times or more

2- When was the last time you received health care services under cooperative health insurance?

□ Week or less □ Month □ 6-11 months

□ 2 weeks □ 2-5 months □ Year or more

3- Did you have any of these problems while getting the service? (Check all that apply)

□ Denial of provision of some services

□ I got conflicting information from different people

□ Determining hospital length of stay by the insurance company

□ Other problem (pls. Specify)……..……

- Please tick (✔) the response that best describes how much you agree or disagree with the following general statements about your employer.

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1- I have been denied access to health care services under cooperative health insurance by my employer | | | | | |
| 2- I have been supplied with a list of available providers | | | | | |
| 3- I have been informed about coverage limits | | | | | |
| 4- I have the freedom to choose health care provider | | | | | |

- Please tick ( ✔ ) the response that best describes how much you agree or disagree with the following general statements about the insurance company.

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1- The insurance company was responsive to my complaints and comments | | | | | |
| 2- If preauthorization was requested, the waiting time for the insurance company answer was appropriate | | | | | |
| 3- The insurance company has competent and qualified staff able to manage the insurance processes | | | | | |
| 4- The health insurance representatives were courteous | | | | | |
| 5- I am satisfied with the way the insurance company processed used to process my claims | | | | | |
| | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
| Overall, how satisfied were you with the insurance company | | | | | |
| Overall, how satisfied were you with the cooperative health insurance system | | | | | |

## Section VII - Your Comments

This section is for you to give your opinion on other aspects which are not covered in the questionnaire and which you believe to be important.

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**Would you be willing to participate in an interview about the topic? □Yes □No**

**If you answered "Yes", please write your name and telephone number:**

**Name: …….**

**Telephone No……..**

**What is the appropriate time to call you? □ A.M. □P.M.**

**THANK YOU**

# Appendix F

## Glossary of terms

The following terms shall have the meanings shown alongside each of them:

1- **Accident:** Unexpected accident injury or an accidental incident taking place during the insurance term.

2- **Appendix:** A document issued by the company using an official form dated and signed by an authorized officer proving the authenticity of any amendments in the policy and not prejudicing the basic coverage - based on a request in writing from the policy holder.

3- **Beneficiary (The insured):** The person covered by the System (employee or dependant) and is insured by an insurance company.

4- **Benefit:** Cost of providing health services included in the insurance coverage within the limits shown in the schedule of the policy.

5- **Claim Supporting Documents:**

All documents proving and evidencing: age of the insured person, his nationality, ill, validity of insurance coverage, the circumstances of the accident for which "the claim is raised and the payment of cost as well as other documents such as the police report, bills, receipts, prescriptions, physician' s report, referral, recommendations and any other original documents that may required by the company.

6- **CHIS:** The Cooperative Health Insurance System.

7- **Cooperative Health Insurance Council (CCHI):** The Cooperative Council of Health Insurance established under the provisions of Article four of the system

8- **Common Measurements Tool (CMT):** a survey tool for assessing client satisfaction.

9- **Commencement Date:** The date shown in the policy schedule on which the insurance coverage starts.

10- **Clients:** direct users of a service

11- **Citizens:** indirect contributors and beneficiaries of services provided.

12- **Dependent:** The husband, wives, male sons under the age of eighteen and unmarried daughters who are residing legally in the Kingdom of Saudi Arabia.

13- **Effective Date:** The date designated by policy holder and agreed upon by the company for the commencement of the coverage of the person under the policy or for adding or omitting of an insured person from the policy.

14- **Emergency:** The Medical Treatment required by the beneficiary following an accident or an emergency requiring quick medical intervention.

15- **Employee:** Any person actually working for the policy holder, and is entered in such capacity in the latter's registers, who has not yet reached the age of 65 years when joining the insurance coverage.

16- **Employer:** Natural or legal person employing one labourer or more.

17- **Gross Domestic Product (GDP):** A value measure of the flow of domestic goods and services produced by an economy over a period of time, such as a year. Only output values of goods for final consumption and investment are included because the values of primary and intermediate production are assumed to be included in final prices. GDP is sometimes aggregated and shown at market prices, meaning that indirect taxes and subsidies are included; when these have been eliminated, the result is GDP at factor cost. The word gross indicates that deductions for depreciation of physical assets have not been made.

18- **Health Insurance:** The Cooperative Health Insurance indicated in the System.

19 - **Hospital:** An authorised health facility acceptable to the policy holder and the company, and is licensed to operate as a hospital under regulations in force for providing reimbursable treatment under this policy. Hospital in this policy will not include hotels, guest houses, dormitories, rest houses, recuperation houses, sanitariums, care houses for the persons in custody, infirmaries, asylums or any other places used for accommodating and treating alcohol and drug addicts.

20- **Hospitalisation (in-patients):** Admittance of an insured person as an in-patient in a hospital until the morning of the following day based on a referral from a licensed physician.

21- **Pregnancy and Delivery:** Any pregnancy and / or birth arising from a legitimate martial relationship.

22- **Premium (contribution):** The amount payable by the policy holder in return for the insurance coverage provided by the policy during the term of insurance.

23- **Policy:** The original cooperative Health Insurance Policy approved by the Council, including designations, benefits and exceptions. Policy is issued by the insurance company based on an application submitted by the employer (policy holder).

24 - **Policy Holder:** Natural or legal person to whom the policy is issued.

25- **Percentage of deduction / portability (contribution in payment):** The portion payable (as fixed in the policy schedule) which should be paid by the beneficiary (the insured) when visiting the physician for treatment.

26- **Insurance:** The evidence of the implementation of the insurance coverage under this policy, schedules, appendices or attachments thereto.

27- **Insurance Company:** The Insurance Company licensed to operate in the Kingdom pre-qualified by the council to practice cooperative health insurance business.

28- **Insurance Coverage:** The basic health benefits available to the beneficiary set forth in the insurance policy.

29- **Insured**: the insured the person covered by an insurance policy

30- **Insurer**: a person or company that sells insurance

31- **Licensed physician:** A medical practitioner in position of a degree who is legally licensed to practice medicine, pre-qualified and acceptable to the policy holder and the company for providing cost reimbursable treatment under this policy.

32- **Limits of Coverage:** The maximum limit of liability of the company as set forth in the schedule of the policy for any insured person before any deductions/ portability.

33- **One day surgery or Treatment:** A surgery or a treatment that necessarily requires pre-arrangements for one day stay only in a hospital or a treatment centre.

34- **Saudization**: is the process whereby expatriates are replaced by Saudi Nationals

35- **Secretariat 'General:** The Executive staff of the council.

36- **Service Provider:** The authorised and licensed person or health facility, under the regulations in force, to provide medical services in the Kingdom such as a hospital, a diagnostic centre, a clinic, a pharmacy, a laboratory, a physiotherapy or a radiotherapy centre.

37- **Service Providers Network:** A group of health service providers authorised by the Cooperative Health Insurance Council and designated by the insurance company for providing services to the employer / policy holder by debiting cost directly to insurance -company account upon furnishing a valid insurance card

for the insured. Such network shall include the following three health care categories:

- First category for providing health services (primary health care).
- Second category for providing health services (General hospitals).
- Third category for providing health services (specialist or referral hospitals).

38- **Social Insurance:** Insurance applicable under the Social Insurance Regulations implemented by the General Organisations for the Social Insurance.

39- **System:** The Cooperative Health Insurance System in the Kingdom of Saudi Arabia.

40- **The Hadith or Sunnah:** is a collection of the sayings, teachings and interpretations of the Koran by the Prophet Muhammad and recorded by his closest companions, known as the 'Sahaba'. It also contains stories from the Prophet's life that serve as an example of moral and spiritual excellence that all Muslims are called upon to take as a model. Hadith means the tradition based on the precedent of the Prophet Muhammad's words and deeds that serves as one of the sources of Islamic law.

41- **Treatment in Out-Patient Clinics:** The frequent calling by an insured person on out-patient clinics for the purposes of diagnosis or medical treatment of a disease.

42- **The supervisory body:** The Cooperative Health Insurance Council as well as other bodies designated by the state to supervise the insurance activities.

43- **The Ulama:** Islamic religious leaders who play a unique role by providing religious legitimacy for Saudi rule. Saudi Arabia is the only Muslim country in which the Ulama constitute such an influential political force. The Kingdom's Ulama include religious scholars, *qadis* (Gudges), lawyers, seminary teachers, and the prayer leaders (imams) of the mosques.

# Appendix G

## Statistical Analysis

# SPSS Code book symbols

| | |
|---|---|
| mx2 | General mean of satisfaction level for the service delivery dimension |
| my2 | General mean of importance level for the service delivery dimension |
| mx3 | General mean of satisfaction level for the service availability and accessibility dimension |
| my3 | General mean of importance level for the service availability and accessibility dimension |
| mx4 | General mean of satisfaction level for the communication dimension |
| my4 | General mean of importance level for the communication dimension |
| mx5 | General mean of satisfaction level for the cost dimension |
| my5 | General mean of importance level for the cost dimension |
| m6.4 | General mean of agreement level to the statement s of question four in section six. |
| m6.5 | General mean of agreement level to the statement s of question four in section six. |
| mmx | General mean of satisfaction level for dimensions (2,3,4,5) |
| rx4 | Recoding the marital status variable in personal characteristics |
| mmy2 | General mean of importance level for dimensions (2,3,4,5) |
| rx6.4.1 | Recoding the first statement under question four in section six |

# Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.372 | .264 | | 5.204 | .000 |
| | m6.5 | .673 | .084 | .531 | 8.032 | .000 |
| 2 | (Constant) | .568 | .352 | | 1.614 | .108 |
| | m6.5 | .400 | .115 | .316 | 3.462 | .001 |
| | mx2 | .503 | .151 | .304 | 3.329 | .001 |
| 3 | (Constant) | .086 | .424 | | .203 | .840 |
| | m6.5 | .363 | .116 | .287 | 3.131 | .002 |
| | mx2 | .484 | .150 | .292 | 3.227 | .002 |
| | Type of health insurance coverage | .375 | .188 | .133 | 1.995 | .048 |
| 4 | (Constant) | .419 | .451 | | .930 | .354 |
| | m6.5 | .370 | .115 | .293 | 3.226 | .002 |
| | mx2 | .461 | .149 | .278 | 3.094 | .002 |
| | Type of health insurance coverage | .396 | .186 | .140 | 2.122 | .035 |
| | If married, number of family members currently living with you | -.098 | .048 | -.130 | -2.048 | .042 |

a. Dependent Variable: xxx6

## CODEBOOK

## "Beneficiaries` Satisfaction with the Cooperative Health Insurance System in the Kingdom of Saudi Arabia: A Case Study of Riyadh City"

| Question Number in Survey Instrument | Coding Instructions<br>Number assigned to each survey response |
|---|---|
| **Section I** | **General Information** |
| **xx1** | Please input the entered age as provided by the respondent<br>For – "19-less than 29" input the number - 1<br>For – "29-less than 39" input the number - 2<br>For – "39-less than 49" input the number - 3<br>For – "49-less than 59" input the number - 4<br>For – "59 and above" input the number - 5 |
| **x2** | If the field titled - Male is ticked, please input the number 1<br>If the field titled - Female is ticked, please input the number 2 |
| **x3** | If the field titled - Saudi is entered, please input the number 1<br>If Non Saudi is entered, please input the number 2 |
| **x4** | If the field titled - Single is ticked, please input the number 1<br>If the field titled - Married is ticked, please input the number 2<br>If the field titled - Divorced is ticked, please input the number 3<br>If the field titled - Widowed is ticked, please input the number 4 |
| **x5** | Please input the given number of family members as provided by the respondent |
| **x6** | If the field titled - Less than Secondary is ticked, please input the number 1<br>If the field titled - Secondary is ticked, please input the number 2<br>If the field titled - Bachelor is ticked, please input the number 3<br>If the field titled - Post graduate is ticked, please input the number 4 |
| **x7** | If the field titled - manual labour is ticked, please input the number 1<br>If the field titled - sales is ticked, please input the number 2<br>If the field titled - administrative work is ticked, please input the number 3<br>If the field titled - other is ticked, please input the number 4 |
| **x8** | If the field for Monthly Income - Less than S.R 2000 - is ticked, please input the number - 1<br>If the field for Monthly Income - 2000 to less than 4000 - is ticked, please input the number - 2<br>If the field for Monthly Income - 4000 to less than 6000 - is ticked, please input the number - 3<br>If the field for Monthly Income - S.R 6000 and more - is ticked, please input the number - 4 |
| **x9** | For - "Yes" input the number - 1<br>For - "No" input the number - 2 |
| **x10** | For - "Single" input the number - 1<br>For - "Family" input the number - 2 |

| Question Number in Survey Instrument | Coding Instructions<br>Number assigned to each survey response |
|---|---|
| **Section II** | **Service Delivery under Cooperative Health Insurance** |
| **x.2.1** | For - "Very Dissatisfied" input the number – 1<br>For - "Dissatisfied" input the number - 2<br>For - "Neutral" input the number - 3<br>For - "Satisfied" input the number – 4<br>For - "Very Satisfied" input the number – 5 |
| **x2.2** | |
| **x2.3** | |
| **x2.4** | |
| **x2.5** | |
| **x2.6** | |
| **x2.7** | |
| **x2.8** | |
| **x2.9** | |
| **x2.10** | |
| **x2.11** | |
| **x2.12** | |
| **y.2.1** | For - "Very Unimportant" input the number – 1<br>For - "Unimportant" input the number - 2<br>For - "Neutral" input the number - 3<br>For - "Important" input the number – 4<br>For - "Important" input the number – 5 |
| **y2.2** | |
| **y2.3** | |
| **y2.4** | |
| **y2.5** | |
| **y2.6** | |
| **y2.7** | |
| **y2.8** | |
| **y2.9** | |
| **y2.10** | |
| **y2.11** | |
| **y2.12** | |
| **Section III** | **Access and availability of facilities for the provision of health services** |
| **x3.1** | For - "Very Dissatisfied" input the number – 1<br>For - "Dissatisfied" input the number - 2<br>For - "Neutral" input the number - 3<br>For - "Satisfied" input the number – 4<br>For - "Very Satisfied" input the number – 5 |
| **x3.2** | |
| **x3.3** | |
| **x3.4** | |
| **x3.5** | |
| **x3.6** | |
| **x3.7** | |
| **x3.8** | |
| **x3.9** | |
| **x3.10** | |
| **xx3** | |

| Question Number in Survey Instrument | Coding Instructions<br>Number assigned to each survey response |
|---|---|
| **y3.1** | For - “Very Unimportant” input the number – 1<br>For - “Unimportant” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Important” input the number – 4<br>For - “Important” input the number – 5 |
| **y3.2** | |
| **y3.3** | |
| **y3.4** | |
| **y3.5** | |
| **y3.6** | |
| **y3.7** | |
| **y3.8** | |
| **y3.9** | |
| **y3.10** | |
| **Section IV** | **Communication while receiving health care service** |
| **x4.1** | For - “Very Dissatisfied” input the number – 1<br>For - “Dissatisfied” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Satisfied” input the number – 4<br>For - “Very Satisfied” input the number – 5 |
| **x4.2** | |
| **x4.3** | |
| **x4.4** | |
| **x4.5** | |
| **x4.6** | |
| **x4.7** | |
| **y4.1** | For - “Very Unimportant” input the number – 1<br>For - “Unimportant” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Important” input the number – 4<br>For - “Important” input the number – 5 |
| **y4.2** | |
| **y4.3** | |
| **y4.4** | |
| **y4.5** | |
| **y4.6** | |
| **y4.7** | |
| **Section V** | **Cost** |
| **xx5** | For - “Yes” input the number - 1<br>For - “No” input the number - 2 |
| **x5.1** | For - “Very Dissatisfied” input the number – 1<br>For - “Dissatisfied” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Satisfied” input the number – 4<br>For - “Very Satisfied” input the number – 5 |
| **x5.2** | |
| **x5.3** | |
| **x5.4** | |
| **x5.5** | |
| **y5.1** | For - “Very Unimportant” input the number – 1<br>For - “Unimportant” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Important” input the number – 4<br>For - “Important” input the number – 5 |
| **y5.2** | |
| **y5.3** | |
| **y5.4** | |
| **y5.5** | |

| Question Number in Survey Instrument | Coding Instructions<br>Number assigned to each survey response |
|---|---|
| **Section VI** | **General Questions** |
| **x6.1** | In the last year, not counting the times you went to an emergency room, how many times did you go to a clinic or a hospital to get health care for yourself?<br>If the field titled - 1 is ticked, please input the number 1<br>If the field titled - 2 is ticked, please input the number 2<br>If the field titled - 3 is ticked, please input the number 3<br>If the field titled - 4 is ticked, please input the number 4<br>If the field titled - 5-9 times is ticked, please input the number 5<br>If the field titled - 10 times or more is ticked, please input the number 6 |
| **x6.2** | When was the last time you received health care services under cooperative health insurance?<br>If the field titled - Week or less is ticked, please input the number 1<br>If the field titled - 2 weeks is ticked, please input the number 2<br>If the field titled - Month is ticked, please input the number 3<br>If the field titled - 2-5 months is ticked, please input the number 4<br>If the field titled - 6-11 months is ticked, please input the number 5<br>If the field titled - Year or more is ticked, please input the number 6 |
| **x6.3.1** | For - “Yes” input the number - 1<br>For - “No” input the number - 2 |
| **x6.3.2** | For - “Yes” input the number - 1<br>For - “No” input the number - 2 |
| **x6.3.3** | For - “Yes” input the number - 1<br>For - “No” input the number - 2 |
| **x6.3.4** | For - “Yes” input the number - 1<br>For - “No” input the number - 2 |
| **x6.4.1** | For - “Strongly disagree” input the number – 1<br>For - “Disagree” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Agree” input the number – 4<br>For - “Strongly agree” input the number – 5 |
| **x6.4.2** | |
| **x6.4.3** | |
| **x6.4.4** | |
| **x6.5.1** | For - “Strongly disagree” input the number – 1<br>For - “Disagree” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Agree” input the number – 4<br>For - “Strongly agree” input the number – 5 |
| **x6.5.2** | |
| **x6.5.3** | |
| **x6.5.4** | |
| **x6.5.5** | |
| **xx6** | For - “Very Dissatisfied” input the number – 1 |
| **xxx6** | For - “Dissatisfied” input the number - 2<br>For - “Neutral” input the number - 3<br>For - “Satisfied” input the number – 4<br>For - “Very Satisfied” input the number – 5 |

# Appendix H

# Official correspondence

THE UNIVERSITY OF HULL

BUSINESS SCHOOL

22 January 2008

To whom it may concern:

**Re:Foad Abdulaziz AlMobarak (student No: 200507402)**

Foad Abdulaziz AlMobarak (Student No: 200507402) is a PhD student in the Business School at the University of Hull and is researching "Beneficiaries Satisfaction with Cooperative Health Insurance Program in The Kingdom of Saudi Arabia".

It would be helpful for him to gain access to your organisation to collect the required data to pursue his research.

Yours sincerely,

Andrea de Laine

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بسم الله الرحمن الرحيم

المملكة العربية السعودية
معهد الإدارة العامة

الرقم : ٦٦٠
التاريخ : ٤ - صفر ١٤٢٩
المرفقات :

إدارة التخطيط والتطوير

الموضوع: تقديم مساعدة لطالب دكتوراة

السادة / مؤسسة الضميم للمقاولات

السلام عليكم ورحمة الله وبركاته

افيدكم بأن الزميل الاستاذ/ فؤاد بن عبدالعزيز المبارك المبتعث من معهد الادارة العامة لدراسة الدكتوراة في مجال الادارة الصحية في جامعة هيل ببريطانيا ، يعمل على جمع المعلومات لرسالة بحث الدكتوراة بعنوان (رضا المستفيدين من خدمات نظام التأمين الصحي التعاوني بمدينة الرياض). امل من سعادتكم التكرم بتقديم المساعدة له.

شاكرا لسعادتكم تعاونكم.

وتفضلوا بقبول خالص التحية والتقدير،،

مدير إدارة التخطيط والتطوير

د.مساعد بن عبدالله الفريان


المركز الرئيسي الرياض : ١١١٤١ برقيًا: معهدارة هاتف : ٤٧٦٨٨٨٨ فاكس : ٤٧٩٢١٣٦
فرع المنطقة الغربية جدة : ٢١١٤١ برقيًا: معهدارة هاتف : ٦٣١٤٦٢٩ فاكس : ٦٣١٣٤٤٢
فرع المنطقة الشرقية الدمام : ٣١١٤١ برقيًا: معهدارة هاتف : ٨٢٦٨٣٠٠ فاكس : ٨٢٦٨٨٨١
تلكس : ٤٠١١٦٠ ، ٤٠٤٣٦٠

*Kingdom Of Saudi Arabia*
**Institute Of Public Administration**

*No* : .....
*Date* : .....

**TO WHOM IT MAY CONCERN**

This is to certify that Mr. Foad A. Almobarak has our permission to use our Arabic translation of the Canadian Measurement Tool (CMT) in his PhD thesis entitled "Beneficiaries Satisfaction with Cooperative Health Insurance in Riyadh City, Saudi Arabia.

Dated: 10/1/2008

**Official stamp**

**Director General**
**Research Center**

Dr. Abdolmohsin S. Alhaidar

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