An assessment of the service quality expectations and perceptions of the patients of Awali Hospital in the Kingdom of Bahrain

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DISSERTATION TITLE PAGE

TITLE: An assessment of the service quality expectations and perceptions of the patients of Awali Hospital in the Kingdom of Bahrain.

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DECLARATION

I, GARY JOSEPH LUKE, do hereby declare that this research report, entitled “An assessment of the service quality expectations and perceptions of the patients of Awali Hospital in the Kingdom of Bahrain” is my original work.

All sources used or referred to have been documented and cited.

I further declare that this research report, or any part of it, has not been submitted in the past or will be in the future, for degree or other purposes, to any other educational institution.

GARY JOSEPH LUKE DECEMBER 2007

ABSTRACT

The quality of service from a hospital is the number one factor that will either turn a customer/patient away or make one for life. More and more hospitals are competing for greater shares in the market and customer-driven quality management is becoming the preferred method for improving their performance. Awali hospital is a private hospital in the Kingdom of Bahrain. It is a small 35-bed hospital that offers private medical services to the public. The hospital was originally built to serve the Bahrain Petroleum Company (Bapco) refinery workers but later opened its doors to the public. With the introduction of private patients came higher expectations of quality and higher demands on the overall services. A number of service quality shortfalls were identified over the years but never identified quantitatively by a patient evaluation survey. An English and Arabic version of the questionnaire based on SERVQUAL (Zeithaml, Parasuraman and Berry, 1988) was developed and placed in Awali hospital to test these service quality shortfalls. This study intends to evaluate these areas by answering questions about the relevant areas of service provided by the hospital. It measured patient satisfaction by looking at human aspects of service (responsiveness, reliability, empathy and assurance) with only one factor of the instrument being devoted to the non-human aspect of care rendered (tangibles).

The SERVQUAL instrument has five dimensions that were measured by 21 pairs of item statements. One statement from each pair reflects perceptions, the other expectations. Measurement was accomplished by subtracting expectation from perceptions resulting in a service quality score. Positive or zero scores would reflect ideal or adequate service quality offered by the hospital. A negative score would be indicative of a service experience that did not meet customer expectations. Using the SERVQUAL questionnaire provided, quantifiable reasoning to the research questions in each dimension could be obtained so that precision, objectivity and rigour replaced hunches, experience and intuition as a means of investigating problem areas.

Customers were first asked to supply some additional demographic information, for example gender, number of hospital visits, nationality, patient type (Bapco worker, general practitioner referred or private) and type of visit (inpatient, outpatient or both). They were

then asked to rate the hospital service on a 7-point Likert scale ranging from Strongly Agree (7) to Strongly Disagree (1). At the end of the questionnaire was space to write open comments.

In total 600 paper questionnaires were distributed in the hospital, 300 English and 300 Arabic. Another 150 electronic questionnaires via emails were sent to refinery workers. Of the total 750 questionnaires distributed 162 were returned of which 156 (or 21.6%) could be statistically analysed.

The empirical data results showed that the perception scores were significantly different at the $p < 0.05$ level from expectation scores. All the service quality differences (SQ=P-E) were negatively scored. This indicated that patients were not satisfied in all five dimensions of services offered by the hospital. Of the five dimensions responsiveness had the largest difference with assurance and reliability following with no significant differences between them. The demographic information revealed some interesting differences between the groups. Of all the demographic groups the most significant differences were between groups, “patient types” and “types of visit”, which showed differences between private patients and refinery workers and patients who used the hospital only as an outpatient and patients who used both services, outpatient and inpatient.

In terms of the managerial implications, it was recommended that Awali hospital look to closing Gaps 1-4 of the SERVQUAL gap model which would result in closing the consumer gap, Gap 5. A process model for continuous measurement and improvement of service quality was recommended that looks at asking questions about how the hospital is performing. By adopting some of the recommendations identified in the research questions, Awali hospital could improve their quality of service, and as a consequence, their customer satisfaction and loyalty.

”If we don’t take care of our customers, someone else will.”
- Unknown

// ACKNOWLEDGEMENTS

"I have not stopped giving thanks for you, remembering you in my prayers."

*- **Ephesians 1:15-17** (NIV)*

- First and foremost, I want to give thanks to God through His son Jesus Christ my saviour for all His blessings and for bringing such wonderful people into my life to help me. *You are my God, and I will give you thanks; you are my God, and I will exalt you. - **Psalm 118:27-29** (NIV)*
- To my wife, Tina, I could not have done this without your love and support. I thank you for the hours of proofing and having to deal with my silly grammar mistakes.
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Awali Hospital, Kingdom of Bahrain

TABLE OF CONTENTS

CHAPTER 1: LiteratureReview 1

1 INTRODUCTION 1

2 WHAT IS A SERVICE? 2

2.1 Characteristics of Services 3

2.2 Challenges for Service Marketers 5

3 UNDERSTANDING SERVICE QUALITY 7

3.1 Dimensions of Service Quality 7

3.2 Sources of Customer Expectations 9

3.3 Gaps in Service Quality 11

3.4 Measuring Service Quality 15

3.5 Criticisms of SERVQUAL 16

3.6 SERVQUAL 17

3.7 Service Quality in Health Care 19

3.8 Measuring Service Quality in Healthcare 21

4 HEALTHCARE SERVICES IN KINGDOM OF BAHRAIN 22

4.1 History 22

4.2 Health Ministry Demographics 23

4.2 Policy and Strategic Direction of Health Care Services 25

4.3 Public and Private Health Care in the Arab States 26

4.4 Expatriate Health Care in Bahrain 28

4.5 Awali Private Hospital 30

CHAPTER 2: Methodology ***32***

1. INTRODUCTION 32
2. HYPOTHESES 33
3. RESEARCH QUESTIONS 34

3.1 Is there a difference between perceptions of service quality offered by Awali Hospital and patients expectations? 34

3.2 How does Awali hospital service equate along each of the five SERVQUAL dimensions relative to patient expectations? 39

3.3 Are service gaps in Awali hospital perceived differently amongst different customer segments? 40

4. SAMPLING DESIGN AND DATA COLLECTION 41

4.1 Research Paradigm 41

4.2 Development of the questionnaire 42

4.3 Sampling Technique 43

4.4 Validity and Reliability of SERVQUAL Instrument 44

5. SUMMARY 49

CHAPTER 3: Data Analysis ***50***

3.1 DESCRIPTION OF SAMPLE 50

3.2 SERVQUAL SCORES 53

3.2.1 Paired-Sample T-test of all 21 statements 53

3.2.2 Computing the SERVQUAL scores 54

3.2.3 Paired-Sample T-test of the 5 dimensions 57

3.2.4 One-Way Repeated Measures ANOVA between 5 SERVQUAL Dimensions.. 59

3.3 DEMOGRAPHIC INFORMATION 61

3.3.1 Gender 61

3.3.2 Number of Visits 63

3.3.3 Nationality 65

3.3.4 Type of Patient 67

3.3.5 Types of Visits to Awali Hospital 69

3.4 SUMMARY 72

CHAPTER 4: Discussion of Findings 73

4.1 QUESTION 1: Is there a difference between perceptions of service quality offered by Awali Hospital and patients expectations? 73

4.1.1 What the highest expectations indicate 73

4.1.2 What the highest perceptions indicate 74

4.1.3 What the lowest expectations indicate 74

4.1.4 What the lowest perceptions indicate 75

4.1.5 What the largest differences indicate 76

4.1.6 What the smallest differences indicate 76

4.2 QUESTION 2: How do the perceptions of Awali hospital service measure up against patients' expectations along each of the five SERVQUAL dimensions? 77

4.2.1 The Reliability Dimension 78

4.2.2 The Responsiveness Dimension 78

4.2.3 The Assurance Dimension 79

4.3 QUESTION 3: Are service gaps in Awali hospital perceived differently amongst different customer segments? 80

4.3.1 Gender Differences 80

4.3.2 Number of Visits to Awali Hospital 81

4.3.3 Nationality 81

4.3.4 Patient Type 82

4.3.5 Type of Visits to Awali Hospital 83

4.4 PATIENT COMMENTS 85

4.5 SUMMARY ... 86

CHAPTER 5: Conclusions ... 87

5.1 INTRODUCTION ... 87

5.2 GAP 1: Does Awali hospital know what customers expect? ... 87

5.3 GAP 2: Has Awali hospital selected the right service designs and standards? ... 88

5.4 GAP 3: Is Awali hospital delivering to service standards? ... 90

5.5 GAP 4: Is Awali hospital matching performance to promise? ... 92

5.6 CLOSING GAP 5 AND FURTHER RESEARCH ... 92

REFERENCE LIST ... 95

APPENDICES ... 105

APPENDIX 1: English Survey Questionnaire ... 105

APPENDIX 2: Arabic Survey Questionnaire ... 107

APPENDIX 3: Electronic Request for Online Entry ... 109

APPENDIX 4: Patient Comments ... 110

LIST OF FIGURES

1.1 Degrees of Intangibility 4
1.2 Correspondence between SERVQUAL Dimensions and Original Ten Dimensions for Evaluating Service Quality 8
1.3 Customer's Perceived Service Quality 9
1.4 Adapted Service Quality Gap Model 12
1.5 Nature and Determinants of Customer Expectations of Service 14
2.1 Key Factors Contributing to Gap 1 36
2.2 Key Factors Contributing to Gap 2 37
2.3 Key Factors Contributing to Gap 3 38
2.4 Key Factors Contributing to Gap 4 39
2.5 Tangible Factor Loading after Oblique Rotation 47
2.6 Reliability Factor Loading after Oblique Rotation 47
2.7 Responsiveness Factor Loading after Oblique Rotation 48
2.8 Assurance Factor Loading after Oblique Rotation 48
2.9 Empathy Factor Loading after Oblique Rotation 48
3.1 SERVQUAL 21 differences 56
3.2 SERVQUAL Dimension Gaps between Expectations and Perceptions 58
3.3 SERVQUAL dimension differences 60
3.4 Average SERVQUAL scores between Male and Female 61
3.5 Average SERVQUAL scores grouped by number of hospital visits 63
3.6 Average SERVQUAL scores grouped by Nationality 65
3.7 Average SERVQUAL scores grouped by type of patient 68
3.8 Average SERVQUAL scores grouped by type of visit to Awali hospital 69
4.1 Expectation and Perception 21 Statement Scores 73
4.2 Patient Types Comparison of Individual Statements 82
4.3 Type of Visit Comparison between Individual Statements 84
4.4 Type of Visit Comparison between SERVQUAL Dimensions 84
5.1 Process Model for Continuous Measurement and Improvement of Service Quality 93

LIST OF TABLES

1.1 Bahrain Health Facilities 24
2.1 Total Variance Explained 45
2.2 Promax with Kaiser Normalization rotation Factor Correlation Matrix 45
2.3 Promax Factor Loadings with Kaiser Normalization rotation Pattern Matrix 46
3.1 Descriptive Statistics of the Demographic Variables 51
3.2 Descriptive Statistics of Expectations 52
3.3 Descriptive Statistics of Perceptions 52
3.4a Paired Samples Description Statistics 53
3.4b Paired Samples Correlations 53
3.4c Paired Samples T-Test 53
3.5a 156 questionnaire responses grouped into five dimensions 55
3.5b The five highest expectations 56
3.5c The five highest perceptions 56
3.5d The five largest differences 56
3.5e The five lowest expectations 56
3.5f The five lowest perceptions 56
3.5g The five smallest differences 56
3.6a Paired Samples Statistics 57
3.6b Paired Samples Correlations 57
3.6c Paired Samples T-Test 57
3.7a SERVQUAL Dimension Descriptive Statistics 59
3.7b Multivariate Test 59
3.7c Bonferroni Pairwise Comparisons between SERVQUAL dimensions 60
3.8a Descriptives of Mean Scores between Male and Female 62
3.8b ANOVA of Gender Mean Scores 62
3.9a Descriptives of Mean Scores between Number of Visit Groups 64
3.9b ANOVA of Number of Visit Mean Scores 64
3.10a Descriptives of Mean Scores between Nationalities 65
3.10b ANOVA of Nationality Mean Scores 65
3.11a Descriptives of Mean Scores between Patient Types 68

3.11b ANOVA of Patient Type Mean Scores 68
3.12a Descriptives of Mean Scores between Types of Visits 70
3.12b ANOVA of Type of Visit Mean Scores 70
3.12c Descriptives of the SERVQUAL Dimensions between the different types of visit to Awali Hospital 71
3.12d ANOVA of Mean Scores for Different Patient Types 71
4.1 Common Differences for SERVQUAL Mean Scores 83

CHAPTER 1: *Literature Review*

1. INTRODUCTION

People today have taken a new approach to healthcare services – they are informed, suspicious, and eager to take responsibility for their own care. In this era of information, consumers of healthcare have exceptionally high expectations. "If we are sick we go to the doctor and expect him to fix it. If he can't, we expect him to send us to a specialist who can. And we want the full range of medical services available to us regardless of our ability to pay." Thus, the post-modern hospital is a far different place as a result of the constant change in the needs and expectations of patients. Driven by economic necessity and technologic advances, the patient demands a higher level of accuracy, reliability and overall better service than in the past. Because of the Internet patients are well informed and research solutions to their health care problems. Due to this new paradigm in healthcare, hospital administrations need to be skilled practitioners in marketing and business planning. These skills can assist managers in increasing volume, controlling costs, and increasing profit. Managers with these skills can improve healthcare standards and add long term value because they know how to provide superior service and develop innovative strategies (Harmening, 2003:288).

> Quoting from his book entitled, *Hospital-Wide Quality Assurance,* Christopher Wilson highlights what is mentioned above. "Thus society, and we are society, says: "Before we give you our money, our trust, our bodies, our children, answer these questions: how do you know how good is the service you are offering? What evidence do you have that you can show us and which convinces you that your care, administration, service, teaching are what you say they are, and what we want to receive?" (Wilson, 1987:2)

Understanding customer expectations in any industry is the lifeblood for understanding what you are doing right and what you are doing wrong. Because customers compare their perceptions of something with reference points when evaluating a product or a service, thorough knowledge about customer expectations is critical to businesses and should function as standards or reference points against which performance is judged. Knowing what the customer expects is the first and possibly most critical step in delivering quality products or services (Zeithaml and Bitner, 2003:60). Measuring the beliefs or expectations of the customer will create tangible reference points to work from.

Thus the purpose of this research is to find from empirical data, received using Parasuraman, Zeithaml and Berry's (1988) SERVQUAL model, the standard of service quality offered by a private hospital in the Kingdom of Bahrain.

2. WHAT IS A SERVICE?

A service is not something that is built in a factory, shipped to a store, put on a shelf, and then taken home by a customer. A service is a dynamic living process. A service is something that is executed on behalf of, and often with the involvement of, the customer. A service is performed. A service rendered. A service is motion and activity -- not pieces or parts. The "raw materials" of a service are time and process -- not plastic or steel. A service cannot be stored or shipped -- only the means for creating it can. A service cannot be held in one's hand or physically possessed. In short, a service is not a thing but an intangible aspect of customers' perceptions (Shostack & Kingman-Brundage, 1991:243).

Many definitions of service are available but all contain a common theme of intangibility and simultaneous consumption (Fitzsimmons and Fitzsimmons, 2001:5). Put in the simplest terms, services are deeds, processes, and performances (Zeithaml and Bitner, 2003:3). The core of a service is that part of the service we think of when we name the service; examples would be the way dinner is served at a nice restaurant or the legal advice obtained from an attorney. The relationship aspect of a service describes the interpersonal process by which the service is delivered and is thought to be especially important in customer interactions with professional service providers (Iacobucci and Ostrom, 2001:258).

The growing importance of the role that services play in both the economy as a whole and organisations in particular cannot be over-estimated. This encompasses not only "pure" service industries as such, but companies selling physical goods where the element of service in their offering is increasingly one of the few sources of competitive differentiation. And while a focus on the customer underpins the marketing of both physical goods and services, it's critical to understand the limitations of traditional marketing when it comes to developing the most effective tools and techniques for services marketing (Young *et al.*, 2002:1).

2.1 Characteristics of Services

The service environment is sufficiently unique to allow us to question the direct application of traditional manufacturing-based techniques to services without some modification. Ignoring the differences between manufacturing and service requirements will lead to failure, but more importantly, recognition of the special features of services will provide insights for enlightened and innovative management (Fitzsimmons and Fitzsimmons, 2001:21).

The distinctive characteristics of a service that set it apart from physical goods are: intangibility, inseparability, variability (heterogeneity), and perishability (Kotler, *et al*., 2002:12).

2.1.1 Intangibility

Intangibility is obviously not an absolute term. It would be difficult to think of any service that was purely intangible and had no tangible elements associated with it. Most services, as with most goods, can be viewed as a mix of tangible and intangible offerings to the buyer. Even within the professional service context (Figure 1.1) one can view varying degrees of intangibility both between professions and within the service offerings of one profession. We can therefore view intangibility as a relative continuum in the professional service context (Morgan, 1991:9).

Intangibility presents several marketing challenges. Services cannot be inventoried, and therefore fluctuations in demand are often difficult to manage. Services cannot be easily patented, and new service concepts can therefore easily be copied by competitors. Services cannot be readily displayed or easily communicated to customers, so quality may be difficult for consumers to assess (Zeithaml and Bitner, 2003:21).

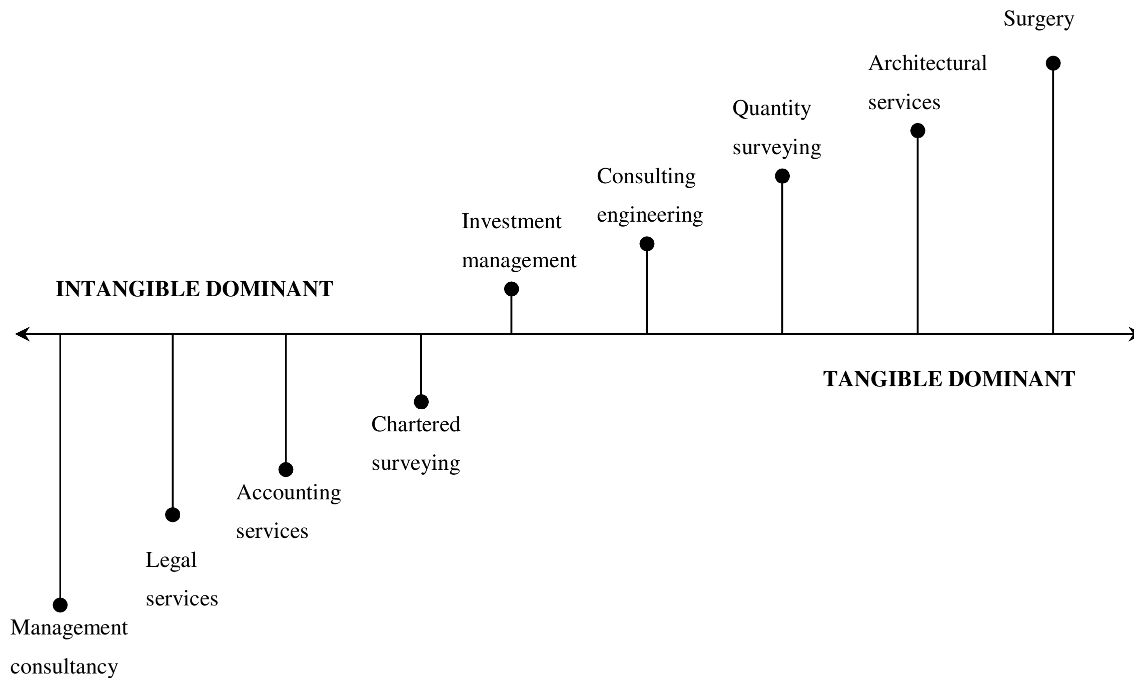

Figure 1.1: Degrees of Intangibility (Morgan, 1991:9)

2.1.2 Inseparability

Because the service cannot be separated from the service provider, how that individual is perceived – his or her professionalism, appearance, and demeanour – will all be used in judging the quality of the service firm. This inseparability carries over to those individuals who answer the phones for the organisation or occupy the receptionist's desk. They often provide the first impressions prospective clients get of the service organisation (Kotler, *et al.*, 2002:12). Because services often are produced and consumed at the same time, mass production is difficult if not impossible. The quality of service and consumer satisfaction will be highly dependent on what happens in "real time," including actions of employees and the interactions between employees and customers (Zeithaml and Bitner, 2003:22)

2.1.3 Variability (Heterogeneity)

Services, because they are performed and always involve a human element even if only on the part of the user, cannot be standardised in the way that goods can. A service is always subject to some variation in performance and developing realistic standards of performance is extremely difficult (Rushton and Carson, 1989:26). Because services are heterogeneous across time, organisations, and people, ensuring consistent service quality is challenging.

Quality actually depends on many factors that cannot be fully controlled by the service supplier, such as the ability of the consumer to articulate his or her needs, the ability and willingness of personnel to satisfy those needs, the presence (or absence) of other customers, and the level of demand for the service. Because of these complicating factors, the service manager cannot always know for sure that the service is being delivered in a manner consistent with what was originally planned and promoted (Zeithaml and Bitner, 2003:21)

2.1.4 Perishability

Perishability of services means that they cannot be stored for later sale or use (Kotler, *et al.*, 2002:13). If a service is not used when available then the service capacity is wasted. For example, an empty seat on a particular flight from South Africa to Dubai cannot be sold to a passenger leaving on a later flight to Dubai. This characteristic of the service delivery process can cause severe problems if the demand for services (emergency room in a hospital) is not uniformly distributed over time. Strong demand fluctuations require excess capacity and careful planning at the level of the service provider (Vandamme and Leunis, 1993:32). The fact that services cannot typically be returned or resold also implies a need for strong recovery strategies when things do go wrong (Zeithaml and Bitner, 2003:22).

2.2 Challenges for Service Marketers

The 11 questions below exemplify the challenges that face service marketers because of the basic differences between goods and services. These challenges revolve around: understanding customer needs and expectations for service, making the service offering tangible, dealing with myriad people and delivery issues, and keeping promises made to customers. These questions are taken from Zeithaml and Bitner (2003:22):

Question 1: *How can service quality be defined and improved* when the product is tangible and nonstandardized?

Question 2: *How can new services be designed and tested effectively* when the service is essentially an intangible process?

Question 3: *How can the firm be certain it is communicating a consistent and relevant image* when so many elements of the marketing mix communicate to customers and some of these elements are the service providers themselves?

Question 4: *How does the firm accommodate fluctuating demand* when capacity is fixed and service itself is perishable?

Question 5: *How can the firm best motivate and select service employees* who, because the service is delivered in real time, become a critical part of the product itself?

Question 6: *How should prices be set* when it is difficult to determine actual costs of production and price may be inextricably intertwined with perceptions of quality?

Question 7: *How should the firm be organised so that good strategic and tactical decisions are made* when a decision in any of the functional areas of marketing, operations, and human resources may have significant impact on the other two areas?

Question 8: *How can the balance between standardisation and personalisation* be determined to maximize both the efficiency of the organisation and the satisfaction of its customers?

Question 9: *How can the organisation protect new service concepts from competitors* when service processes cannot be patented?

Question 10: *How does the firm communicate quality and value to consumers* when the offering is intangible and cannot be readily tried or displayed?

Question 11: *How can the organisation ensure the delivery of consistent quality service* when both the organisation's employees and the customers themselves can affect the service outcome?

Competing organizations provide the same *types* of service – airline transportation, taxi services, hospital and outpatient services – but they do not provide the same *quality* of service. There are many aspects that could affect the service delivered. There are therefore many facets for marketers to consider in order to maintain the competitive edge over other companies. No one knows this better than customers. To customers, competing service enterprises may look alike, but they do not feel alike. In fact, service quality has become the great differentiator, the most powerful competitive weapon most service organisations possess (Berry, *et al.,* 1988:35).

This highlights the fundamental core of the research in this dissertation - s*ervice quality* – the differentiator between "average" and "wow" service delivery. This study will attempt to identify: what service quality is, what causes service-quality problems in hospitals, how

service organisations can recognise service-quality problems and what service organisations can do to improve quality shortfalls (gaps) to meet the customer expectations.

3. UNDERSTANDING SERVICE QUALITY

Service quality is the foundation for services marketing because the core product being marketed is a performance. The performance is the product; the performance is what customers buy. A stronger service gives companies the opportunity to compete for customers; a strong performance of the service builds competitiveness by earning customers' confidence and reinforcing branding, advertising, selling and pricing (Berry and Parasuraman, 1991:5).

Parasuraman, *et al.,* (1988) found that the customer's perception of quality is not a unidimensional concept. They identified five dimensions that a client considers in his or her assessment of service quality.

3.1 Dimensions of Service Quality

Exploratory research by Parasuraman, Zeithaml, and Berry (1985) revealed that the criteria used by consumers in assessing service quality fit 10 potentially overlapping dimensions. These dimensions were tangibility, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding/knowing the customer, and access. These 10 dimensions and their descriptions served as the basic structure of the service-quality domain from which five items was derived for the current SERVQUAL scale.

Various statistical analyses conducted in constructing SERVQUAL, revealed considerable correlation among items representing several of the original ten dimensions. In particular, the correlations suggested consolidation of the last seven dimensions into two broader dimensions labelled *assurance* and *empathy* (see Figure 1.2). The remaining dimensions – *tangibles, reliability,* and *responsiveness* – remained intact throughout the scale development and refinement process (Zeithaml, *et al.*, 1990:25).

SERVQUAL Dimensions

Original Ten Dimensions for Evaluating Service Quality	Tangible	Reliability	Responsiveness	Assurance	Empathy
Tangible					
Reliability					
Responsiveness					
Competence Courtesy Credibility Security					
Access Communication Understanding the Customer					

Figure 1.2: Correspondence between SERVQUAL Dimensions and Original Ten Dimensions for Evaluating Service Quality (Zeithaml, et al., 1990:25)

Parasuraman, *et al.*, (1998) identified these five principle dimensions that customers use to judge service quality, which are listed and defined below in order of declining relative importance to customers.

i) *Reliability*: The ability to perform the promised service both dependably and accurately. Reliable service performance is a customer expectation and means that the service is accomplished on time, in the same manner, and without errors every time.

ii) *Responsiveness*: The willingness to help customers and to provide prompt service. Keeping customers waiting, particularly for no apparent reason, creates unnecessary negative perceptions of quality. If a service failure occurs, the ability to recover quickly and with professionalism can create very positive perceptions of quality.

iii) *Assurance*: The knowledge and courtesy of employees as well as their ability to convey trust and confidence. The assurance dimension includes the following features: competence to perform the service, politeness and respect for the customer, effective communication with the customer, and the general attitude that the server has the customer’s best interests at heart.

iv) *Empathy*: The provision of caring, individualized attention to customers. Empathy includes the following features: approachability, sensitivity, and effort to understand the customer's needs.

v) *Tangibles*: The appearance of physical facilities, equipment, personnel, and communication materials. The condition of the physical surroundings (e.g. cleanliness) is tangible evidence of the care and attention to detail that are exhibited by the service provider. This assessment dimension also can extend to the conduct of other customers in the service (e.g. a noisy guest in the next room at a hotel) (Fitzsimmons and Fitzsimmons, 2001:45).

From Parasuraman, *et al.*, (1998) marketing researchers use these five dimensions to form an assessment of service quality, based on the comparison between expected and perceived service. The gap between expected and perceived service is the measure of service quality Figure 1.3 illustrates this but also shows that customer expectation of a given service is formed or influenced as a result of many factors, *word of mouth, personal needs, past experiences and external communication.*

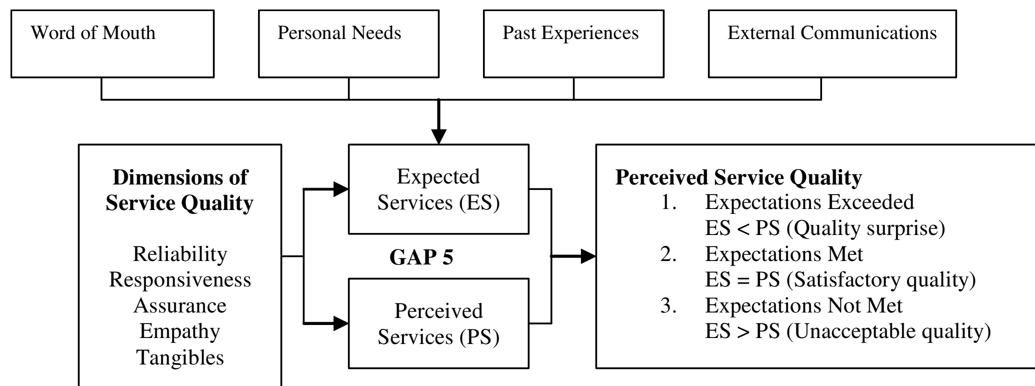

Figure 1.3: Customer's perceived service quality (Fitzsimmons and Fitzsimmons, 2001:44)

3.2 Sources of Customer Expectations

Given the importance of understanding customer expectations in order to deliver service quality, it is also clearly important to understand how such expectations might be formed. Finding out what customers expect is essential to providing service quality (Zeithaml and Bitner, 1996:4).

3.2.1 Word of Mouth Communication

Customers will have their expectations shaped, in part by word-of-mouth communications about the service provider. Effectively, this relates to communication from sources other than the service provider itself. Friends, family, colleagues are obvious sources in this context. Equally, the media may be a source of such communication as may other organisations such as inspection and audit agencies and central government. An important question for a service is: *do you know what others are saying about your service?* (Accounts Commission for Scotland, 1999:10). While a professional service provider cannot directly control what one client tells another, he or she can influence it (Kotler, *et al.,* 2002:45). For example, if an optometrist gains a new patient as a result of a personal reference from an existing customer, the optometrist can send the referring customer a note of thanks, thereby encouraging such positive word of mouth.

3.2.2 Personal Needs

Any customer will have what they regard as a set of key personal needs which they expect the service to address. Clearly these will vary from service to service and importantly – from customer to customer. An inadequate understanding by the service of these personal needs will make it difficult to design an appropriate service (Accounts Commission for Scotland, 1999:10). Professional service providers must be aware of personal needs and desires of their clients. Client expectations can shift as a result of the circumstances surrounding the need (Kotler, *et al.,* 2002:45). For example, the parent of a sick child having symptoms of flu who brings that child to the doctor's office may be willing to wait a reasonable time, say 20 minutes, especially if there were other children with the same condition crowding the doctor's waiting room. On the other hand, if that same parent's child fell off a swing and cut his head and had serious bleeding, the parent would expect immediate attention.

3.2.3 Past Experiences

Some customers – many for some services – will be "repeat" customers in the sense that they have used the service before. Their previous experience as a customer will, in part, influence their expectations of future service. One customer, for example, may have low expectations because of previous poor service. Another may have high expectations because the service quality last time was high. However, customers may also use their previous experience of other organisations in this context (Accounts Commission for Scotland, 1999:9). Another factor that would be influenced by past experience is perceived service alternatives. The more

competitors a professional service provider has and the more clients are aware of their existence, the greater the expectations of quality service. Clients are not likely to put up with poor service when they can get better attention across the street (Kotler, *et al.,* 2002:45).

3.2.4 External Communication

This influencing factor can be divided into two sub-categories: Explicit external communication and implicit external communication.

Explicit Communication – relates to statements about the service made by the service itself. Such statements may come from service staff or from the service in form of leaflets, publicity and marketing material (Accounts Commission for Scotland, 1999:10). The clients' expectations will obviously be affected by what they are told they can expect (Kotler, *et al.,* 2002:44).

Implicit Communication – Because services are intangible, clients will look for some other clues as to the potential quality of the service. They look at the physical evidence provided by the professional service provider and the price they will be charged for services. An office furnished with Persian rugs, etched glass, and fine art may communicate that a professional service provider is successful, and also expensive. Because there is an implied price-quality relationship, a higher price implies a higher quality. Thus, clients who are willing to pay higher fees do so because they expect a greater amount of attention and a more positive outcome (Kotler, *et al.,* 2002:44).

3.3 Gaps in Service Quality

The central focus of the gaps model is the customer gap, i.e. the difference between customer expectations and perceptions (see Figure 1.3 – Gap 5). Expectations are the reference points customers have coming in to a service experience; perceptions reflect the service as actually received. The idea is that businesses will want to close this gap – between what is expected and what is received – to satisfy their customers and build long-term relationships with them. To close this all-important customer gap, the model suggests that four other gaps – the provider gaps – need to closed. The provider gaps are the underlying cause behind the customer gap:

Gap 1 – Not knowing what customers expect.

Gap 2 – Not selecting the right service designs and standards.

Gap 3 – Not delivering to service standards.

Gap 4 – Not matching performance to promises.

The consumer evaluations of service quality centre on the balance of their expectations and perceptions of a service. Expectations that are met or exceed in a service encounter, or series of service encounters, will result in adequate or ideal service quality evaluations. Alternatively, expectations that are not met will result in negative service quality evaluations. The service quality gap model in Figure 1.4 provides a framework for organisations seeking to systematically improve consumer perceptions of service quality (Parasuraman, *et al.,* 1985:42). Figure 4 illustrates five gaps as mentioned. Gap 5, the difference between consumer expectations and perceptions is a direct reflection of Gap 1-4. This means that the smaller the discrepancy observed in Gaps 1-4, the more likely consumers will favourably evaluate service quality (O'Connor, *et al.* , 2000:9).

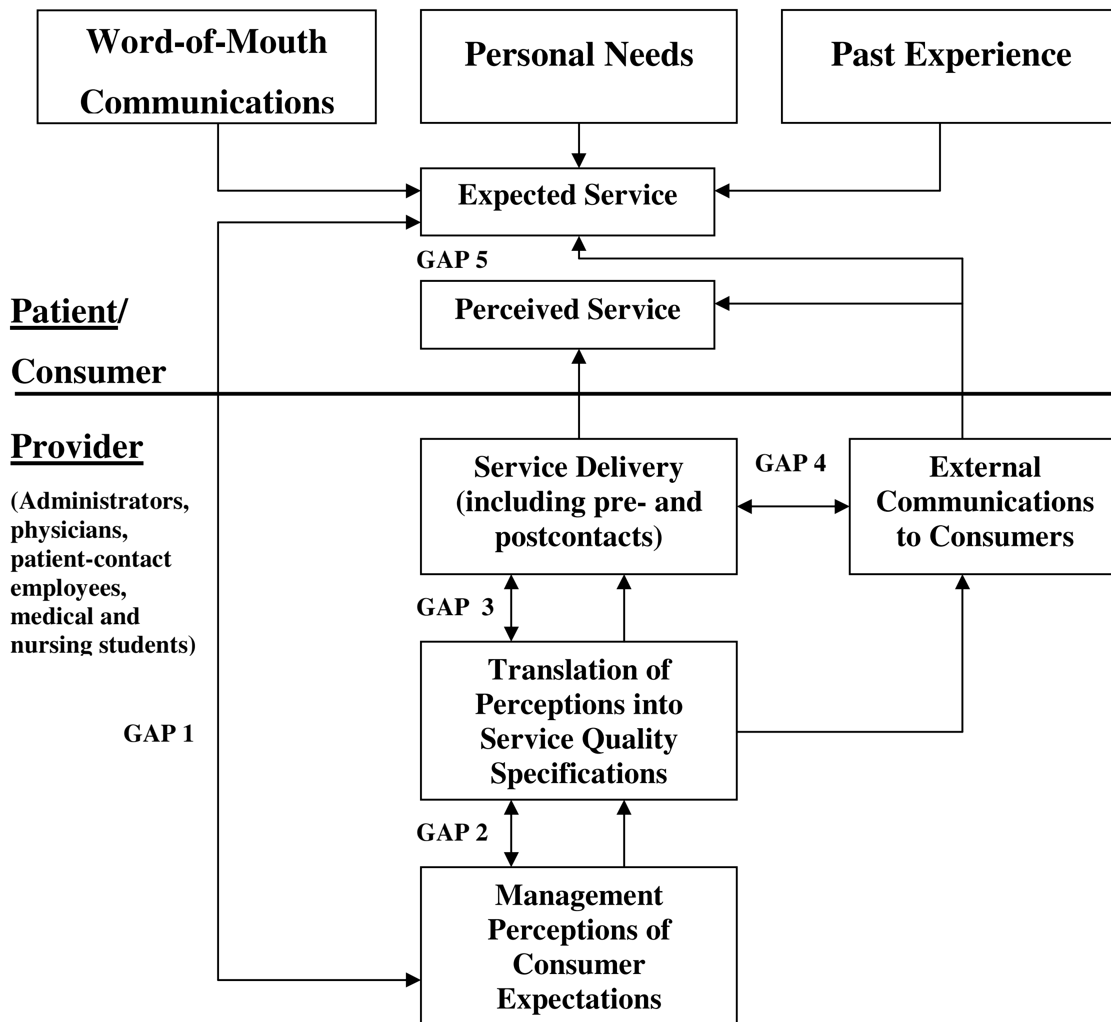

Figure 1.4: Adapted Service Quality Gap Model (O'Connor, et al., 2000:9)

A primary cause in many firms for not meeting customers' expectations is that the firm lacks accurate understanding of exactly what those expectations are (Zeithaml and Bitner, 2003:32). Understanding customer expectations is a prerequisite for delivering superior service; customers compare perceptions with expectations when judging a firm's service (Parasuraman, *et al.,* 1991:39).

Parasuraman, *et al.*, (1993) continued to evolve their conceptual model. The author's prime contribution was the development of the zone of tolerance concept. Conceptually, the zone of tolerance is an area between a customers' *adequate* service level and the desired service level. For example, when you use a laboratory department in a hospital, your *desired* service level, in regard to waiting time, is most likely zero minutes. In order for the hospital to keep you as a customer, you, on average, may not want to wait longer than 1 hour – the adequate service level. The difference between zero wait time and a 1 hour wait time is the zone of tolerance. As Figure 1.5 shows below, there are a number of factors that can be affected by situational factors. For example, if a major motor vehicle accident has occurred involving a large number of people, the doctors using the laboratory (laboratory customers) are willing to wait a little longer for blood results due to the unforeseen situation and the larger work volume. Due to their past/everyday experience they expect results quickly because of the explicit service promises given by the laboratory that guarantee a 1 hour turn around for urgent work. This new model is based upon the following two propositions: (1) Customers assess service performance based on two standards: what they desire and what they deem acceptable and (2) A zone of tolerance separates desired service from adequate service (Grapentine, 1998:5). The model highlights an outcome where performance or perceived service that is below adequate is a competitive disadvantage. An outcome where the perceived service falls between adequate and desired expectations, within the zone of tolerance, would be classified a competitive advantage.

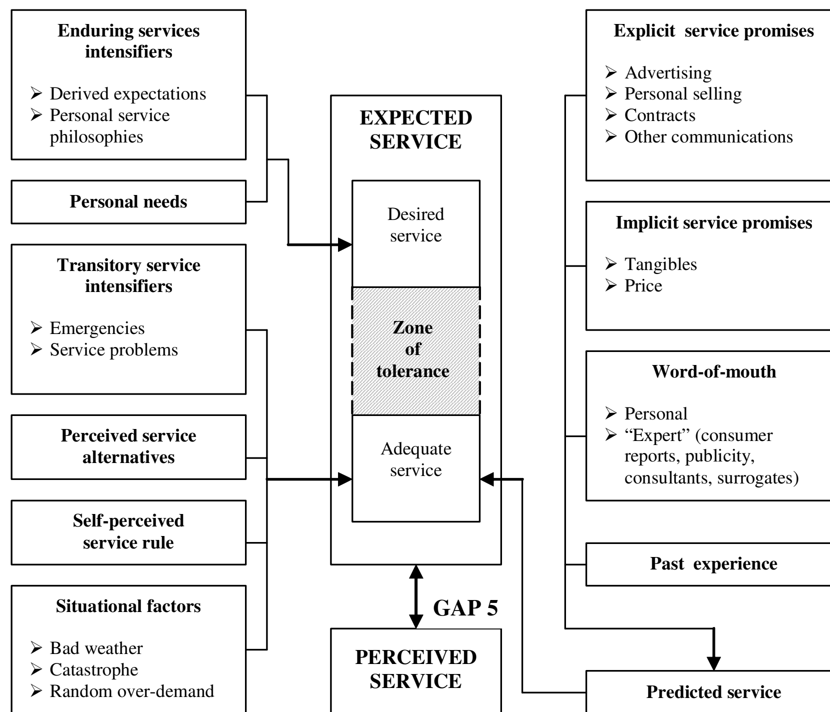

Figure 1.5: Nature and determinants of customer expectations of service (Zeithaml, et al., 1993:5)

Berry, Parasuraman and Zeithaml (1993) postulated, but did not test, that both adequate and desired service levels will be influenced by the importance attached by consumers to the dimensions of service quality, as will the width of the zone of tolerance. They suggested that both desired and adequate expectation standards would be higher for those dimensions of service quality considered to be more important and the zone of tolerance would be smaller for more important dimensions.

The *customer gap* (Gap 5) is the focal point of this dissertation. Empirical data obtained from consumers' results of SERVQUAL, will be used to look at the relationship between the five dimensions that customers' use to form their expectations and perceptions of the service and to identify the key areas of strength and weakness in the service quality delivery process of a private hospital in the Middle East. Using the statistical data and customer feedback obtained from the surveys for the different dimensions of service quality, the zone of tolerance for each of the five dimensions will be determined.

3.4 Measuring Service Quality

Measuring service quality is a challenge because customer satisfaction is determined by many intangible factors. Unlike a product with physical features that can be objectively measured (e.g., the fit and finish of a car), service quality contains many psychological features (e.g., the ambience of a restaurant). In addition, service quality often extends beyond the immediate encounter because, as in the case of health care, it has an impact on a person's future quality of life (Fitzsimmons and Fitzsimmons, 2001:48).

Finding out what customers expect is essential to providing service quality, and marketing research is a key vehicle for understanding customer expectations and perceptions of services. In services, as with any offering, a firm that does no marketing research at all is unlikely to understand its customers. A firm that does marketing research, but not on the topic of customer expectations, may also fail to know what is needed to stay in tune with changing customer requirements. Marketing research must focus on service issues such as what features are most important to customers, what levels of these features customers expect, and what customers think the company can and should do when problems occur in service delivery (Zeithaml and Bitner, 2003:124).

High service quality appears to result in measurable benefits, sometimes directly detectable as increases in profits and market share. The Strategic Planning Institute of Cambridge, Massachusetts has compiled data concerning 2600 firms over the last 15 years. The results of their research have shown that the perceived quality of a company's goods and services is directly tied to financial performance. In particular, they found that, from almost any performance measure – including market share, return on investment and asset turnover – those businesses that offer higher quality perform better. Among the most powerful tool for shaping perceptions of overall quality is customer service. The point is simply that quality measurement and customer satisfaction deserve special attention if service firms are to remain competitive (Rosen, *et al.,* 2003:4).

Market research methods can be divided into primary and secondary data collection. Primary data collection refers to data collected for the first time, such as through interviews or questionnaire surveys, whereas secondary data are taken from other sources that have already carried out primary data collection (Luck, *et al.,* 2000:7). The most widely used and tested

service quality survey instrument has been SERVQUAL (Bennington and Cummane, 1998:398).

3.5 Criticisms of SERVQUAL

Many criticisms of the SERVQUAL scale have appeared over recent years: Blanchard and Galloway (1994) argued that it confuses outcome, process and expectation; Chen *et al.* (1994) stated that it neglects the price factor, and suffers from multicollinearity due to the averaging of measured gaps; Carmen (1990) argued that it is not generic and needs to be customised to the service in question. He also suggests that the instrument could only be used as a guide to research service quality in various industries. He also suggested a problem exists in Parasuraman, Zeithaml and Berry's treatment of expectations where a respondent error could exist due to different interpretations of questions. Expectations could be rated according to their importance, as forecasts, ideal, deserved and/or as minimum tolerable.

Brown *et al.* (1993) reported psychometric problems with the use of the difference scores and suggested that the five dimensions may in fact represent a unidimensional construct. Another matter suggests that the model should not be limited to the five dimensions proposed by Parasuraman, Zeithaml and Berry. Up to seven or eight dimensions have been identified by various researchers in a variety of studies (Carman, 1990:50-51). The validity of the dimensions was also shared by Parasuraman, Zeithaml and Berry, and continues to be debated, but Parasuraman, *et al.*, (1998) state that the model is generic (a skeleton) and dimensions will change from one industry to another.

Cronin and Taylor (1992) argued that this negative perception of expectations, or the term they use "disconfirmation paradigm" that SERVQUAL instrument applied in determining service quality was inappropriate for measuring service quality. They pointed out that this "disconfirmation paradigm" measures customer satisfaction instead of service quality. In their study, Cronin and Taylor (1992) used the performance scale (SERVPERF) and found that SERVPERF outperformed SERVQUAL. Cronin and Taylor (1992:64-65) indicate that SERVPERF was a more appropriate measure, because they felt that consumer satisfaction has a greater influence over the purchase intentions of the consumer, than service quality.

Despite numerous suggestions regarding reappraisal and restructuring, expectations of what service quality might be – fed by the sheer mass of Parasuraman, Zeithaml and Berry - inspired literature – have now become our perceptions of what service quality really is; and this perception continues to inform mainstream service quality research today. Even where work is primarily focused on the technical and functional aspects of service quality, the SERVQUAL dimensions may still be used to inform, or even determine, their structure (Woodall, 2001:596). This instrument has been widely used in many service industries, including hotels, dentistry, travel, higher education, real estate, accountancy, architecture, hospitals and construction services (Foster, 2001:223).

3.6 SERVQUAL

SERVQUAL is an instrument "for assessing customer perceptions of service quality in service and retailing organisations" (Parasuraman, *et al.,* 1988:12). Exploratory research conducted in 1985 showed that clients judge service quality by using the same general criteria, regardless of the type of service. Parasuraman *et al.* (1988) captured these criteria using a scale composed of 22 items (statements) designed to load on five dimensions reflecting service quality as defined by its authors. Each item is used twice: firstly to determine customers' expectations about firms in general, within the service category being investigated; secondly to measure perceptions of performance of a particular firm (Llosa, *et al.,* 1998:17).

The 22 statements in the survey describe aspects of the five dimensions of service quality. The evaluations of these 22 statements are collected using a seven-point Likert scale. According to Parasuraman *et al.* (1988), the service quality is then the difference between customers' perceptions and expectations. The SERVQUAL score is given by the equation (Llosa, *et al.,* 1998:17):

$$Q = \frac{1}{22} \sum_{i=1}^{22} (Pi - Ei)$$

Q = Perceived service quality
Pi = Performance level perceived on attribute I for the delivered service
Ei = Expected performance level on attribute I for the service generally.

The score for the quality of service is calculated by computing the difference between the ratings that customers assign to paired expectation and perception statements. This score is referred to as GAP 5, as was shown in Figure 3 (refer to page 10). Scores for the other four gaps can also be calculated in a similar manner (Fitzsimmons and Fitzsimmons, 2001:49).

An average score for each dimension is then calculated across all respondents. Also an overall service quality score is calculated by taking the mean score for the five dimensions. Positive scores show better than expected service while negative scores show poor quality. A zero score implies that quality is satisfactory. In Parasuraman *et al.*, (1991), a more recent version of the instrument includes a third section that measures the relative importance of the five dimensions to the customer. These scores are then used to weight the perceived service quality measure of each dimension, the main purpose being to give a more accurate overall perceived service quality score (Robinson, 1999: 21).

Data gathered through a SERVQUAL survey can be used for a variety of purposes (Zeithaml and Bitner, 2003:138):

- To determine the average gap score (between customers' perceptions and expectations) for each service attribute.
- To assess a company's service quality along each of the five SERQUAL dimensions.
- To track customers' expectations and perceptions (on individual service attributes and/or on the SERVQUAL dimensions) over time.
- To compare a company's SERVQUAL scores against those of competitors.
- To identify and examine customer segments that differ significantly in their assessments of a company's service performance.
- To assess internal service quality (that is, the quality of service rendered by one department or division of a company to others within the same company).

Despite all well-documented criticism, it is still widely used as there are no other well-established alternatives. Parasuraman *et al.,* (1988; 1991; 1993) claim that the instrument is applicable to a wide variety of service industries although it may be necessary to reword and/or augment some of the items.

This instrument spawned many studies focusing on service quality assessment and is used all over the world in service industries. Published studies have used SERVQUAL and adaptations of it in a variety of contexts: real estate brokers, physicians in private practice, public recreation programs, a dental school patient clinic, a business school placement centre, a tire store, motor carrier companies, an accounting firm, discount and department stores, a gas and electric utility company, hospitals, banking, pest control, dry cleaning, fast food, and

higher education (Zeithaml and Bitner, 2003:138). A negative aspect in using this survey in the Middle East is that the development of service quality dimensions was based on research conducted across multiple contexts within the United States. As a general rule, reliability was found to be the most important dimension of service quality in the United States, with responsiveness typically the second most important. One question that researchers (Furrer, Liu and Sudharshan, 2000) have begun to investigate is whether the dimensions and relative importance of the dimensions are the same across cultures.

3.7 Service Quality in Health Care

Concerns with quality in healthcare and its measurement are not at all new. As long ago as 1854, Florence Nightingale demonstrated that a statistical approach with graphical methods could be persuasive in reducing the cost of poor quality care by 90% within a short period of time (Hart, 1996:22).

Service quality has been increasingly identified as the key in differentiating services and building competitive advantage (Taner and Anthony, 2006:i). Therefore, understanding, measuring and improving quality is a formidable challenge for all organisations since they compete to some degree on the basis of service. The bottom line for strategic advantage in health care is quality. People are not as accepting now as say ten years ago. The high cost for health care services and legal backing has placed a greater emphasis on service providers (doctors and hospitals) to deliver a thorough high quality service to the customer. Patients now have a preconceived standard of quality before arriving at a hospital and therefore the understanding between the customer and provider needs to be understood clearly.

Lim and Tang (2000) emphasized that in the healthcare industry, hospitals provide the same types of service, but they do not provide the same quality of service. Furthermore, consumers today are more aware of alternatives on offer and rising standards of service have increased their expectations. They are also becoming increasingly critical of the quality of service experience. Service quality can therefore be used as a strategic differentiation weapon to build a distinctive advantage which competitors would find difficult to copy. To achieve service excellence, hospitals must strive for “zero defections”, retaining every customer that the company can profitably serve. “Zero defections” require continuous efforts to improve the quality of the service delivery system.

Rose, *et al.* (2004) identified that the service providers in health care increasingly have to deal with a wide range of social, financial, political, regulatory and cultural challenges, the impact of which, among other factors, is the demand for greater efficiency, better quality and lower costs. Hence, quality management has emerged not only as the most significant and enduring strategy in ensuring the very survival of organisations, but also a fundamental route to business excellence. Moreover, due to the availability of information and a better-educated population, the need to measure up is no longer a choice but a necessity in meeting rising expectations from better-informed customers.

Knowing what the customer expects when they use health care services is ultimately the way to create good service quality. Doing market research amongst the health care users to determine their expectations and perceptions of services would give managers the strategic leap necessary to meet those customer expectations in their own organisation. The strategic advantage is to understand the customers' needs and then make the changes to deliver that exceptional service. As mentioned earlier, customers today are well informed and know what they want. They would therefore have clear and precise needs that they would expect from any organisation. Vandamme and Leunis (1993) said, "In the healthcare sector, marketing has grown beyond the point of being neglected. Increased competition for both patients and funds has forced some organisations, more specifically hospitals, to become more market-oriented. Resistance against marketing has diminished over time, and more and more hospitals and healthcare organisations now accept marketing as a valid management function." Yet, despite these motivations, service quality in healthcare is poorly understood and insufficiently explored (Cleary and Edgman-Levitan, 1997:1608). So where do we start? We need not reinvent the wheel; others know a great deal about service quality and we can learn from them (Kenagy, *et al.,* 1999:661).

Kotler, *et al.,* (2002) say that most professionals recognise the value of information gathering in managing business. Yet they attach less importance to conducting formal research. Many fall prey to the "just talk to people" syndrome. Although no one would argue that professionals should be talking with current and prospective customers, there are serious problems in relying on this method of gathering "information" Firstly, the individuals they speak to may not be representative of their customer group. We all have a tendency to talk to people who are similar to us, and therefore the information that is collected by "just talking to people" is likely to support the person's preconceptions. This approach also typically is

characterised by biased interviewing techniques. Finally, there are likely to be inconsistencies between how individuals are asked questions. A well-planned research program should eliminate these problems.

3.8 Measuring Service Quality in Healthcare

Services in healthcare are intangible because it is not possible to count, measure, inventory test or verify them in advance of sale. Customer experience, either directly or vicariously from outside sources, is frequently the only means of verifying whether healthcare services meet quality standards and the nature of service performance diverges from one transaction to another. This "heterogeneity" can occur because the service is delivered by different physicians, nurses and others to a variety of patients with varying needs. In healthcare, production and consumption are inseparable. The services are consumed when they are produced, which makes quality control difficult. This necessitates that marketing and operations functions occur simultaneously (Rhode Island Department of Health, 2002:14). Due to these and other factors in services it makes it extremely difficult for the consumer to judge service quality.

Besides these factors that make measuring the quality of services so difficult compared to goods, health service quality is also multi-dimensional. Technical dimensions of health services are medical care: how quickly the doctor took to diagnose a problem. Patients also want to measure the functional dimensions like: comfortable rooms, courteous and empathetic staff. There are a range of models that attempt to provide a comprehensive understanding of the service factors and dimensions that most need to be improved in order to improve perceptions of a service (Duffy, *et al.,* 2002:10). A growing number of measurement tools aimed at assessing consumer ratings of their health care appear to reflect this trend. Examples include: (a) the Consumer Assessment of Health Plans Survey; (b) the Hulka patient Satisfaction with Medical Care Survey; (c) the National Centre for Quality Assurance's – Member Satisfaction Survey; (d) the Picker Institute's Adult Medical Surgical Inpatient' (e) Patient Judgements of Hospital Quality; and (f) The Outpatient Satisfaction Questionnaire (OSQ-37) (O'Connor, *et al.,* 2000:8)

Healthcare organisations in Middle Eastern countries are undergoing pressure from their governments and the general public to improve quality and compete effectively with their counterparts in the private sector (Jabnoun and Chaker, 2003:290). Healthcare organisations

today are not unique in pursuing consumer evaluations of their services (O'Connor, *et al.,* 2000:8).

The focus of this research, as mentioned earlier in this chapter, would be to measure the service quality "gap" between expectations and perceptions in the health care industry of service quality delivered in a private health sector. The work of Parasuraman *et al.,* (1988) on the service quality "gap" in service organisations resulted in the SERVQUAL research tool. SERVQUAL has been used and studied extensively in both the health and non-health service industries (O'Connor, *et al.,* 2000:8). It has been widely criticised and has a number of shortcomings which have been highlighted, but it still forms the starting point of most reviews of service quality for any service organisation (Duffy, *et al.,* 2002:10). The detailed methodology of the SERVQUAL tool and its qualitative and quantitative evaluations in the healthcare sector in the Kingdom of Bahrain will be discussed in chapter 2.

4. HEALTHCARE SERVICES IN KINGDOM OF BAHRAIN

"We must reach beyond tomorrow in designing our system of health, for our actions today are the foundation of our future success. Our vision for an integrated health service system and the journey we are taking to achieve it is based upon our belief that the whole is greater than the sum of its parts. Looking beyond the walls of our facilities and blending services with the community and the education system, will change the way we perceive our health service. As we reach out to our partners in building this network of care, we create a force that will enable us to have an impact on our communities and our quality of life." (Kingdom of Bahrain Ministry of Health Vision, 2002)

4.1 History

In 1893, American missionary Samuel Zwemer arrived in Bahrain. He realized that Bahrain's estimated 50,000 inhabitants were in dire need of medical treatment. Although not a doctor, he tried to care for them as best he could. Unfortunately, Zwemer's medical skills were limited and by the end of 1894 he wrote: "I need not urge the absolute necessity of a medical missionary here, the responsibility and anxiety is too much for one not qualified." A couple of years later, Zwemer married Australian nurse and missionary Amy Wilkes, who advised her husband on treatment methods while she tended to the medical needs of women. By 1900, Zwemer and Wilkes' efforts were buttressed with the arrival of physicians from

Michigan. At first, operations were performed in the courtyard of the mission's house. But soon the volume and needs of patients proved too great for the limited facility – Bahrain needed a hospital, and efforts were made to find a benefactor. Then in January 1903, after a generous donation from the Alfred DeWitt Mason family in New York City, the Mason Memorial Hospital was inaugurated. Over the years, additional medical buildings were constructed to accommodate demand, and by 1962, a new complex was opened by the late Amir of Bahrain, Shaikh Isa bin Salman Al-Khalifa. The new medical center was named the American Mission Hospital and was operated with the same pioneering spirit embodied by the first missionaries. Life was not easy in the early days. Some staff members succumbed to disease and, at times, Bahrainis were suspicious of their activities (Scott, 2004:1). Today Bahrain has a comprehensive network of clinics and hospitals across the island kingdom ensuring that nationals and expats have access to healthcare.

4.2 Health Ministry Demographics

The Kingdom of Bahrain consists of a group of 33 islands, situated in the Arabian Gulf, off the east coast of Saudi Arabia, with an area of approximately 680 square kilometres. The estimated population in 2005 was 724,645; the percentage of Bahraini was 61.9% and Non-Bahraini 38.1% (Kingdom of Bahrain Ministry of Health, 2005:2). The crude birth rate was 20.9 per 1000 population in 2005, and the population growth rate was 2.7% (Kingdom of Bahrain Ministry of Health, 2005:7).

Previously the national economy was centred on oil production and related industrialisation such as petrol refining and petro-chemical industry development. In the last few decades, the economy has diversified and expanded into other areas including manufacturing, agriculture, banking and service industries (Bahrain College of Health Sciences, 1999:1).

The Health system is shared between both government and private sectors. The Health facilities have improved rapidly during the past five years which is illustrated in Table 1.1. This can be witnessed clearly through the remarkable evolution in regard to the size and quality of the services at Salmaniya Medical Complex (main government hospital in Bahrain). The building has been expanded to enable the introduction of new services such as Oncology and Kidney Transplant. The installation of new sophisticated medical equipment contributed to the diagnosis, treatment and rehabilitation of patients. In addition to that, a

great improvement to the quality of the services was seen at the Psychiatric Hospital, Geriatric and the five Maternity Hospitals (Kingdom of Bahrain Ministry of Health, 2002:2).

Table 1.1: Bahrain Health Facilities (1998 – 2005)

DESCRIPTION		2005	2004	2003	1999	1995
Hospitals	*Government*	9	9	9	9	9
	Private	9	6	6	3	3
Beds	*Government*	1741	1694	1691	1689	1568
	Private	292	215	213	134	177
Primary Health Care	*Government*	23	23	23	23	22
Inpatients	*Government*	84167	78356	77710	62231	62141
	Private	14094	10863	8387	4863	6353
Outpatients	*Government*	3953897	3854060	3766526	3293632	3138859
	Private	510129	483786	420463	290368	162231

Kingdom of Bahrain Ministry of Health Statistics 2005:5

Bahrain leadership is always keen on fulfilling population demands for health services. The expansion in health services has not only been seen in the government sector, but also in the private sector. The opening of the Bahrain Specialist Hospital on 19th October 2002 was witness to that. In addition to that, several private clinics, Polytechnics and Medical Centres in various medical specialities have been opened. Seven of these clinics operate around the clock (Kingdom of Bahrain Ministry of Health, 2002:4).

The Ministry of Health provides free government health care. The budget for healthcare was 103 million Bahrain Dinar (equivalent to U.S $273 million) in 2005, which is approximately 7.0% of the total government expenditure. In that year, the Ministry's recurrent budget was BD 100 million with annual growth rate of 16.6%, whereas on 1998 the Ministry's budget was BD 56.2 million which represented 8.0% as percentage of the total government expenditure. The Ministry of Health average expenditure per capita has increased from BD 95.6 in 1992 to BD 138.1 in 2005. More than half of the budget was devoted to Secondary Health Care. However, only 22.1% of the budget was devoted to Primary and Preventative Health Care in 2005 and 21.5% in 1998 (Kingdom of Bahrain Ministry of Health, 2005:6).

In 2005, 2222 deaths were reported to Public Health Directorate as compared to 1786 in 1995 (47% deaths occurred at Salmaniya Medical hospital). The crude death rate continues to be very low and nearly constant (3.0 per 1000 population) since 1995. Diseases of the circulatory system/cardiovascular diseases (CVD) constitute the highest single cause of mortality in Bahrain, accounting for more than 22% of total deaths at Salmaniya Medical Complex. Most deaths recorded in Bahrain from disease are amongst male (62%) rather than female. Deaths from the Infectious and Parasitic rose significantly in 2002, 79.6% from previous year. Other major causes of death were injuries and poisoning, endocrine, nutritional and metabolic disorders, congenital anomalies, genitourinary diseases and diseases of the digestive system (Kingdom of Bahrain Ministry of Health, 2005:9).

4.2 Policy and Strategic Direction of Health Care Services

"Health Services Without Walls – A Community Partnership of Health" was a theme selected to highlight the need to focus the Ministry of Health's efforts towards reducing barriers to service and between services. By improving access and referrals the commitment to the six core principles, that are the foundation of the Bahrain Health System, could be realised. The Ministry of Health laid out the following set of principles (Ministry of Health Direction, 2002:1):

Accessibility: *reasonable access to all medically necessary health care services provided by physicians or hospitals to all Bahrain residents, nationals and non-nationals.*

Affordability: *reasonable costs for quality health care services that are within the fiscal resources and economic means of Bahrain.*

Appropriateness: *proper use of the health services provided through proven cost effective means including emergency, elective care, acute care, outpatient services, primary health, public health, home care, geriatric services, and psychiatric programs*

Accountability: *responsible monitoring, evaluation and reporting of healthcare resources expenditure related to performance of health services, and health outcomes*

Accreditation: *official certification and licensure of health services and professionals in accordance with approved and appropriate international standards*

Acceptability: *public confidence in the health services and shared responsibility for their health. Cooperation in ensuring that the healthcare is satisfactory, affordable, and accessible by participating in health promotion, disease prevention and the appropriate utilization of services.*

The Ministry has realised that to meet such principles they will have to strengthen their strategic participation with other government services, private industry and most importantly communities, families and individuals. The philosophy and service policy of the Ministry of Health Policy Framework published in 2002, worked towards developing a more responsive, accessible system of service that provides for a seamless referral network across a fully integrated continuum of care. To improve responsiveness there would need to be a more open system of public consultation, program evaluation, and accountability. The Ministry indicated that it would undergo a restructuring of services to simplify and improve efficiencies of service delivery, management and decision making and to reduce unnecessary barriers or delays to appropriate care, service or information. As a priority they would develop policies, programs and services that support promotion of health and prevention of disease. (Ministry of Health Direction, 2002:5)

4.3 Public and Private Health Care in the Arab States

Public services in most countries are experiencing discerning and discriminating customers, who may choose between private and public sector services (Rowly, 1998:322). Despite the strategic importance of quality in the context of any healthcare organisation, it is popularly perceived that substantial differences in quality exist among healthcare providers. The healthcare industry is a highly competitive global industry. People are willing to travel to remote parts of the world in order to receive the service quality they hope for. Members of the ruling family and wealthy Arabs in the Gulf and Arab states invariably have all major operations done outside their own territory, particularly in London and American cities (Hughes and Chesters, 2003:1). Patients usually prefer to go to private hospitals, hoping to receive high service quality, flexible measures, less crowded facilities and rapid procedures in providing medical services. On the other hand, healthcare organisations operating in the public sector are undergoing pressure from governments and the general public to improve quality and compete effectively with their counterparts (Jabnoun and Chaker, 2003:290). In

November 2006, Bahrain News Agency reported that developing healthcare services rank on top of voters' priorities, and look forward to higher standards of healthcare infrastructure including high tech equipment and qualified staff (Bahrain News Agency, 2006:1). But delivering that level of healthcare costs and in the GCC states it is expected to hit $60 billion by 2025. Health risks, ageing, population growth and medical inflation are among factors that are predicted to drive up the cost of healthcare from $12bn to $60bn over the next 18 years (Singh, 2006). It predicts that by 2025, cardiology will account for 24 per cent of total healthcare costs, followed by infectious diseases, maternal and perinatal conditions, digestive diseases, genito-urinal disorders, cancer and other diseases. The number of outpatient and inpatient visits is expected to grow by 350 per cent in the UAE, Saudi Arabia and Kuwait, 310 per cent in Oman and 260 per cent in Bahrain. All these increases however point to a nursing shortage across the GCC as a major concern. The current nursing levels across the region mean there are only 4.2 nurses per 1,000 people in the UAE; three per 1,000 in Saudi Arabia; 4.3 per 1,000 in Bahrain and 3.5 per 1,000 in Oman. Of the nursing staff, only three per cent are nationals in the UAE, while the figures are higher in Bahrain (60 per cent) and Oman (56 per cent) (Singh, 2006).

The other issue in the private and public healthcare is female and male healthcare workers seeing the opposite sexes. According to the Islam law, all hospitals have to ensure that male nurses treat men and female nurses treat women. This is obligatory, just as it is obligatory for male doctors to treat men and female doctors to treat women, except in cases of extreme necessity. The same applies when only a female doctor can attend to the case at hand. Otherwise, the normal ruling should be applied, whereby male doctors attend to male patients and female doctors attend to women. The reason why Shari`ah lays a great emphasis on this is to avoid the means that may lead to temptation and to prevent khalwah (being alone with a non-Mahram) (Jazakumllah, 2004).

Healthcare education in the Arab states is limited despite the many annual reports on global human development and Arab development by international agencies, such as UNDP (United Nations Development Programme), ESCWA (United Nations Economic and Social Commission for Western Asia), and UNFPA (United Nations Population Fund), which rely on general numerical country indicators. There is a deficit of literature that articulates the complexities surrounding issues of gender, health, and poverty in the Arab world. This is because of the scarcity of databases and social/structural barriers to research in the Arab

world (Joseph and Najmabadi, 2005:172). Rather than women specifically, the family unit as a whole is more frequently the focus of health education. On a whole, there is little in the way of systematic health education offered specifically to women. Women's generalised lack of empowerment and low social and judicial status relative to men, ranging from day-to-day concerns to political arena, underpin the obstacles to their health education in the Arab states. Through inequality, women have disproportionately higher health risks, and these are exacerbated by poverty. Further, restricted life opportunities result in lower levels of education for women and lack of awareness of health issues. Most of the health education funded by external non-government organisations (NGOs) is directed to the area of reproductive health, such as family planning, safe birth practices, infertility counselling, sexually transmitted diseases, maternal and newborn care (Joseph and Najmabadi, 2005:142).

4.4 Expatriate Health Care in Bahrain

The quality of health care in Bahrain is generally high and equal to that in Western Europe and the USA, except for highly specialised treatment. Owing to Bahrain's small population and the numerous medical facilities in the private and public sectors, long waiting lists are almost unheard of. For specialised treatment, however, it's sometimes necessary to seek medical assistance outside Bahrain, and locals, who can afford it, often do so. Although some of Bahrain's doctors and medical staff are local, the vast majority are foreign and were trained in their home countries. The attraction of Bahrain for them is the same as for most other expatriates: financial reward.

American Mission Hospital, which used to operate on a part-private (for those who could afford treatment), part-free (for those who couldn't) basis, played an important part in the development of medical services and can still be found today, although they no longer offer free treatment. Bahrain now has a public health service providing free or very low cost health care for its nationals and it's important to note that these services are also available to expatriates. For some time however, Bahrain has been encouraging businesses to provide medical insurance for their employees, to lighten the burden on the national purse.

Expatriates, of which make up more than 38 percent of the population, have common health problems including alcoholism (particularly among bachelors, owing to loneliness and depression) and respiratory problems caused by sand and dust in the air – a situation exacerbated by continuous building work in most states. Hard work and long hours in often

extreme heat can also affect the immune system and compromise the body's ability to counter illness. Expatriates – particularly manual workers – can suffer sunstroke and sunburn. Government laws excuse work outdoors if the temperature reaches 50oC (122oF), which isn't uncommon at the height of summer, although it's unusual for work to be stopped under these conditions. In the summer, humidity causes added discomfort, with eye infections common. (Hughes and Chesters, 2003).

A large percentage of expatriates are migrant workers from Bangladesh, Nepal, Pakistan, Philippines and India. In Bahrain there is no law that specifically prohibits trafficking in persons (McKinley 2006:185). Bahrain, Jordan, Malaysia, and Saudi Arabia all require potential migrant workers to undergo a mandatory medical test, which includes an HIV test, before they can enter the country. If a migrant worker tests positive for any of the infections tested for (e.g. HIV/AIDS, TB, and hepatitis), he or she is denied entry. Once in the destination country, migrant workers have to repeat the medical test to have their work permit renewed. No health information is given to migrant workers during these health exams; they are generally not even told what infections/diseases they have if they are ill. If found to be infected migrant workers are not treated adequately. Instead they are stabilised, if required, and deported almost immediately. In Bahrain, for example, rigorous action is taken if a worker is found to suffer from an infectious disease. Ministerial Order Number 11/1976 states that if the Medical Commission finds a migrant worker neither physically fit nor free from infectious diseases, the Commission shall notify the Ministry of Labour and Social Affairs of this fact within 24 hours. The Ministry of Labour then requests the Directorate of Immigration and Passports to deport the worker at the employer's expense. In sum, migrant workers' rights to health are grossly neglected in destination countries, where migration policies focused on exclusion, containment and deportation take precedence over actions to counter the vulnerabilities migrant workers confront (McKinley 2006:193).

Article 2 of the Bahrain Labour Law for the Private Sector (1976) exempted "domestic servants and persons as such" from the purview of the law, on the basis of the private nature of domestic work. In the case of a dispute, domestic workers can appeal to the police or to the court, but official action taken against employers is negligible. It is also illegal in Bahrain for domestic workers to run away from their employers, and if found, they are deported. Both laws support an environment in which sexual, physical and psychological violence against female migrant workers can readily occur. Female migrant workers' sexual and reproductive

health, in particular, are often rendered vulnerable by their living and working conditions. Isolated, and perhaps even confined, female migrant workers are often at the mercy of their male employers who may expect and force them to have sexual relations with them. Even when intimate relations are consensual, whether between a female migrant worker and her employer or with another individual, they remain vulnerable to HIV and STIs, as they tend to have minimal access to information on sexual and reproductive health. Moreover, given the power differential, women have little opportunity to demand that protection be used (McKinley 2006:19).

All Bahrainis receive free state health care; most companies offer their expatriate workers some sort of health coverage, either through insurance companies, in which case rates are negotiable, or through arrangements with one or more of the local private hospitals. There is a US$ 8 fee for expatriates attending an emergency clinic in a government hospital. The Government of Bahrain is currently studying a compulsory medical insurance scheme for expatriates in order to cover at least some of its costs (Jamsheer, 2003:1). Expatriate workers in Bahrain are costing the Ministry of Health (MoH) US$132.64mn per year in medical treatment, with the state only recouping around US$13.2mn, according to recently released data. This total - which accounts for roughly 8% of overall government expenditure - is likely to help garner support for the MoH's plans to make private health insurance compulsory for all expatriate workers by 2012. The scheme will see the full financial burden for expatriate healthcare shifted to the private sector (Davies, 2006:5). With these new laws taking action by 2012 it will require that the private hospitals in Bahrain: American Mission Hospital, the International Hospital of Bahrain, Ibn Nafees Hospital, Bahrain Specialist Hospital, Al Noor Specialist Hospital, Awali Hospital and a number of clinics, dentals surgeries and plastic surgeries improve and restructure their services to accommodate the increase inflow of private patients.

4.5 Awali Private Hospital

Built in 1937 Awali Hospital has undergone major refurbishing over the years to form the current 35-bed general private hospital, offering inpatient and outpatient services. The hospital is owned by Bahrain Petroleum Company (BAPCO). The majority of patients using Awali hospital are BAPCO employees, BAPCO family, ruling family sponsored by Amiri court and private patients by application. The hospital is staffed by western doctors, nurses

and midwives. It provides general practitioner services and specialty services in internal medicine, paediatrics, obstetrics, gynaecology, dermatology and general surgery. Other services offered include physiotherapy, dietician, x-ray and laboratory. The hospital also has a private dental clinic managed by two dentists. In 1980, BAPCO built a clinic in the refinery providing general practice/industrial medical facilities for those employees working in the refinery area. Patients seen in the refinery are referred to the hospital if further medical care is required. General medical procedures are performed in the hospital, but any specialised work is referred to the nearby public hospitals.

CHAPTER 2: *Methodology*

1. INTRODUCTION

The method of this study applies an adapted SERVQUAL (Parasuraman, Zeithaml and Berry, 1988) model to compare patient perceptions against patient expectations in a private hospital in the Kingdom of Bahrain. As discussed in the previous chapter, academic testing of the SERVQUAL instrument has tended to occur in for-profit services. However, a number of researchers have evaluated the tool in health service contexts, albeit primarily in the US for-profit sector. Reidenbach and Sandifer-Smallwood (1990), Babakus and Mangold (1992) and Taylor and Cronin (1994), all tested SERVQUAL in health care services and concluded that Parasuraman *et al.*'s (1988) dimensions were appropriate and transferable to hospital services, although Taylor and Cronin commented that health service managers should be encouraged to test the dimensions in their own business environments rather than automatically adopt the SERVQUAL factor structure. Youssef *et al.* (1996) and Curry and Sinclair (2002), who empirically tested the methodology in UK NHS hospitals, also concurred that the survey instrument and the five dimensions were broadly transferable to health services. The advantages of using this model in healthcare is that the empirically derived data from the research questions of the distributed surveys form a positivistic paradigm to improve the service quality by identifying gaps in the different dimensions of quality offered by the hospital services. This provides quantifiable reasoning to the research questions in each dimension so that precision, objectivity and rigour replace hunches, experience and intuition as a means of investigating problems (Hussey and Hussey, 1997). Patients are asked to answer a total of 44 questions (22 expectations against 22 perceptions), within each of the five dimensions which are then used to determine:

- The relative importance of each attribute.
- A measurement of performance expectations that would relate to an "excellent" company.
- A measurement of performance for the company in question.

Adding to this, it allows for an assessment of the gaps between desired and actual performance. Putting service quality into operation as a difference or "gap" score is a consistent extension of the theoretical work of Parasuraman and his colleagues on the determinants of service quality. The construct is differentiated from consumer satisfaction in a way that defines the expectations/perceptions "gap" as an enduring perception about the overall excellence of a particular firm. This approach to defining and measuring service quality as the difference between expectations and perceptions is a major departure from previous scale development efforts in health care services (e.g., Bopp 1990; Casarreal, Mills, and Plant 1986; Ware and Snyder 1975). While it should be pointed out the SERVQUAL is intended to measure functional quality rather than technical quality, this limitation is inherent in the fact that the technical aspects of the delivery process are, in most cases, industry specific (e.g., health care versus banking services) (Babakus and Mangold, 1992:768).

2. HYPOTHESES

The research objective is to determine if there is an empirical significance between the perceived quality of service offered by Awali Hospital to the general public in Bahrain compared to their patients' expectations. Based on this research objective, the following hypotheses were developed:

Null Hypothesis. H_o: $\mu_1 = \mu_2$

There is no significant difference between the quality of service offered by Awali Hospital as perceived (μ_1) by its customers compared to their expectations (μ_2). (This means that the services offered by Awali Hospital as perceived do meet customers' expectations).

Research (Alternative) Hypothesis. H_1: $\mu_1 \neq \mu_2$

There is a significant difference between the quality of service offered by Awali Hospital as perceived (μ_1) by its customers, relative to their expectations (μ_2). (This means the services of Awali Hospital as perceived by its customers; do not meet customers' expectations).

3. RESEARCH QUESTIONS

The answers to the research questions below are intended to test the research hypotheses and provide important guidelines for managers/administrators of Awali hospital about quality improvement efforts. Areas identified were: the evaluation of general medical practices offered, the sequence of events in the delivery of care and the interactions between patients and medical staff, the physical facilities, equipment, staffing patterns, and qualifications of health personnel, the change in the patient's health status as a result of care, availability, accessibility, and overall effect on the community of the hospital. The study intends to evaluate these areas by answering the following questions:

3.1 Is there a difference between perceptions of service quality offered by Awali Hospital and patients expectations?

Awali hospital has striven to meet customers' expectations in most attributes of the services offered. The hospital is a small country-style hospital and was originally built to service oil refinery workers and Awali town residents in the Kingdom of Bahrain. When the hospital was opened to the general public, the number of inpatients and outpatients grew. The demand for standards and quality also changed and new standard operating procedures were established. The discovery of oil in the Middle East in 1962 and the huge influx of money into the region opened the door to western expatriates in the Middle East to offer their services and in turn to utilise services such as, hospitals. The expatriates brought to the region not only first world quality standards but higher demands for quality from services offered. This was highlighted in the previous chapter with the increasing healthcare cost on the Bahrain government to deliver the standards expected not only for expatriates but locals as well. Since these changes and new demands, Awali hospital has only used word-of-mouth and personal opinion to measure their desired standard of quality expected from their clients.

The hospital is funded by the Bahrain Petroleum Company (BAPCO) oil refinery and the workers have to use the hospital. Because the major revenue is not depended on patient numbers, if patients are not happy or do not return, it is not a loss to the hospital. By answering these research questions below and identifying the service

gaps, it will be possible to determine how this kind of thinking has impacted the quality standards and identified the strengths and weaknesses in each of the service attributes offered by Awali hospital. Any plausible program to create, oversee, or manage superior service quality is highly dependent on understanding customer expectations (O'Connor, *et al.,* 2000:8). The application of the SERVQUAL model for measuring healthcare service quality is well documented and accredited (Speller and Ghobadian, 1993).

The importance of management understanding customer perceptions of service quality in their organisation is the fundamental base of this research using the SERVQUAL instrument. Understanding these expectations, in Awali hospital, by management has been discussed and identified in strategic meetings as a grey area. As mentioned in the previous chapter, the primary cause in many firms for not meeting customers' expectations is the firm's lack of accurate understanding of exactly what those expectations are (Zeithaml and Bitner, 2003:32). Research has identified four "provider/company gaps" that underlie the overall shortfall in customer expectations/perceptions that Awali hospital or any service organisation needs to ask. To answer these research questions below we need to look at the different gaps that make up the gaps model. The central focus (top half of Figure 1.4) of the gaps model is the customer gap. To close this all-important customer gap, the model suggests that four other gaps-the provider gaps-need to be closed. These are the underlying causes of the customer gap:

3.1.1 Gap 1: Does Awali hospital know what customers expect?

Knowing what the customers expect is the first and possibly most critical step in delivering quality service (Zeithaml, *et al.,* 1990:51).

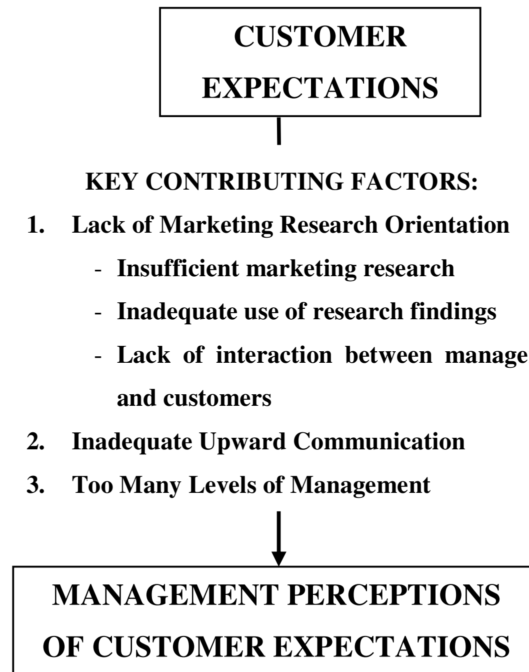

Figure 2.1: Key Factors Contributing to Gap 1 (Zeithaml, *et al.,* 1990:52)

Many factors can obscure a firm's understanding of customer expectations, among them inadequate market research, a lack of communication from frontline employees to management, and inadequate attention to service recovery. To address this short fall, companies need to establish "listening systems" to capture, organise, and disseminate service quality information to support decision making (Zeithaml and Parasuraman, 2004:xiii).

3.1.2 Gap 2: Has Awali hospital selected the right service designs and standards?

Too often, firms use design and standards that correspond to company concerns such as productivity or efficiency rather than to customer expectations and priorities (Zeithaml and Parasuraman, 2004:xiii). Once managers accurately understand what customers expect, they face a second critical challenge namely: using this knowledge.

Figure 2.2: Key Factors Contributing to Gap 2 (Zeithaml, *et al.,* 1990:72)

Zeithaml, *et al.* (1990) reported that Gap 2 is a wide gap in many companies and the recurring theme in the executive interviews in their research was the difficulty experienced in attempting to match or exceed customers' expectations. Many executives would not change company systems of service delivery to enhance customers' perceptions because doing so would have required altering the very process by which work was accomplished (Zeithaml and Parasuraman, 2004:xiii). The key question is, "how can Awali hospital establish customer-driven service designs and standards?"

3.1.3 Gap 3: Is Awali hospital delivering to service standards?

Even when customer-driven standards are in place, they must be enforced by a firm's employees, systems, and technology. Thus, Gap 3 – not delivering to service standards – addresses human resources issues such as recruitment, training, feedback, job design, motivation, and organisational structure (Zeithaml and Parasuraman, 2004:xiii).

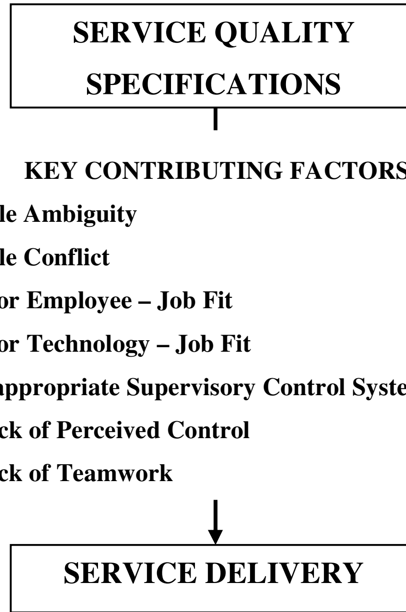

Figure 2.3: Key Factors Contributing to Gap 3 (Zeithaml, *et al.,* 1990:91)

Maintaining service quality, then, depends not only on recognising customers' desires and establishing appropriate standards but also on maintaining a work force of people both willing and able to perform specific tasks (Zeithaml, *et al.,* 1990:90).

3.1.4 Gap 4: Is Awali hospital matching performance to promises?

The fourth major cause of low service-quality perceptions is the gap between what a firm promises about a service and what it actually delivers. Advertising, sales force, and other communications set the standard against which customers assess a company's service quality. Ensuring that all the company's external messages are aligned with what the company delivers is more difficult in organisations because what is delivered critically depends on employees' interactions with customers (Zeithaml and Parasuraman, 2004:xiv).

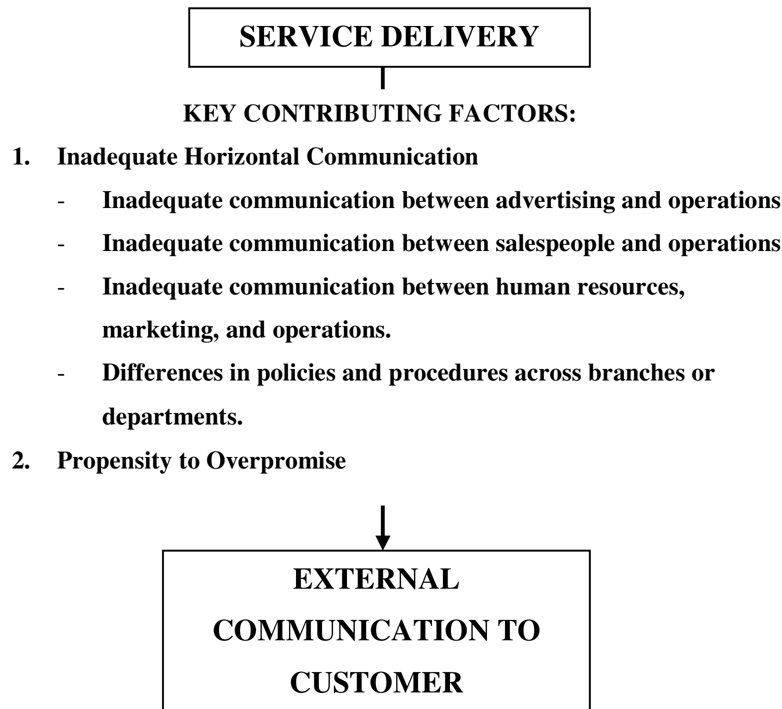

Figure 2.4: Key Factors Contributing to Gap 4 (Zeithaml, *et al.,* 1990:116)

Communicating service quality begins with an understanding of the aspects of service quality that are important to customers. Isolating quality dimensions most important to customers provides a focus for advertising efforts. Emphasising the most important dimension or dimensions of service quality results in more effective communication than focusing on other dimensions. If reliability is central to meeting customer expectations, why don't companies focus on reliability in advertising? Why do many companies focus instead on other service dimensions for example: empathy and tangibles (Zeithaml, *et al.,* 1990:124)?

3.2 How does Awali hospital service equate along each of the five SERVQUAL dimensions relative to patient expectations?

Research suggest that customers do not perceive quality in a unidimensional way, but rather that they judge quality based on multiple factors relevant to the context in which they are experiencing the service (Zeithaml and Bitner, 2003:93). Specific dimensions of service quality have been identified by Parasuraman, Zeithaml and Berry (1988). The five dimensions identified: *Reliability, Responsiveness, Assurance, Empathy and Tangibles* will compare patient interaction, the physical environment,

and service outcomes of everyday hospital service experiences as perceived by the patients that use the hospital.

O'Connor *et al.,*(2000:10) found in their study that all groups working within the health clinic (employees, administrators, physicians) *underestimated* their patients' expectations of service reliability, assurance, responsiveness, and empathy, but all *overestimated* patient expectations of the tangible dimension. Evaluating the different dimensions of the hospital's service will help identify the critical areas that need attention and reproduce others areas where patients perceptions were higher. So much depends on decision makers knowing what customers expect from the service, what customers perceive the service to be, and what is getting in the way of the organization meeting customers' expectations. Without empirically based answers to these questions in each dimension, the likelihood of wrong decisions and wasted resources is very great. In the absence of data, individual biases, assumptions, and games playing are likely to dictate service-improvement planning. In matters of service quality, there is no substitute for knowing what is going on (Zeithaml, *et al.*, 1990:144). As part of the question of how Awali hospital will equate along each of the five dimensions a further breakdown of a dimension into its constituent questions will then allow further focusing on particular problem areas. This will help identify where performance improvement is most needed in order to better meet customers' expectations.

3.3 Are service gaps in Awali hospital perceived differently amongst different customer segments?

The cultural dynamics within the Kingdom offers an insight into how the hospital service and private healthcare are evaluated by the different cultures. The dominant culture is Arabic with other cultures making up the expatriate population (Indian, Pakistan, Philipino and Westerners). There is a fundamental diversity of cultures in Bahrain which requires an increased level of cultural awareness and competency from professional services. The gap approach of SERVQUAL can be used to compare the expectations, perceptions and quality gaps for the different customer segments. For example: are the Islamic female patients in Awali hospital willing to be seen by male doctors as the Quran forbids this kind of practice. Are there differences in the way

males and females perceive the services offered? Are private patients' expectations being met as compared to BAPCO workers or visa versa? This will help the administration find out where there are similarities and where there are key differences in patient expectations and the healthcare provided. Finding out these differences would help close the service quality gaps.

The development of service quality dimensions by Parasuraman, Zeithaml and Berry (1988) was based on research conducted across multiple contexts within United States. As a general rule, reliability was found to be the most important dimension of service quality in the United States, with responsiveness typically the second most important (Zeithaml, *et al.,* 1990:29). One question that researchers have begun to investigate is whether the dimensions and the relative importance of the dimensions are the same across different cultures (Zeithaml and Parasuraman, 2004:13). Donthu and Yoo (1998) researched the effects of customers' cultural orientation on their service quality expectations using Hofstede's (1991) well established cultural dimensions and the five service quality dimensions. His results showed that while customers across all cultures had high overall service quality expectations, there were differences between cultures as to which individual dimensions were rated the highest. Customers low on power distance, for example, expected responsive and reliable service, while individualistic customers expected empathy and assurance.

4. SAMPLING DESIGN AND DATA COLLECTION

4.1 Research Paradigm

The research conducted is primarily based on empirical techniques to support the "philosophical assumption that evidence, as opposed to thought or discourse, is required to be able to make a satisfactory claim to have added to the body of knowledge" (Remenyi, 1996:25). The conclusions and discussions made are from evidence collected through a survey conducted using a SERVQUAL model that has been modified to specifically adress service quality requirements of the Awali hospital by the general public. A positivistic empirical research paradigm was used. Positivism paradigm assumes that human behaviour is determined by external stimuli and that it is possible to use the principles and methods traditionally employed by the

natural scientist to observe and measure social phenomena (Royal College of Nursing, 2007:14). From a positivism standpoint, Remenyi (1996) describes the researcher as an objective analyst and interpreter of a tangible reality, thus carrying out the study on quantifiable observations that has been statistically analysed.

4.2 Development of the questionnaire

The best-known method of operationalising service quality is the Gaps Model/SERVQUAL approach suggested by Parasuraman, Zeithaml and Berry (1988). It is based on the "expectancy disconfirmation" paradigm and measures service quality perceptions (as opposed to so-called "objective" quality) by comparing customer expectations with the service performance (Boshoff and Gray, 2004: 36). It measures patient satisfaction with human aspects of service (responsiveness, reliability, empathy and assurance); only one factor of the instrument is devoted to the non-human aspect of care rendered (tangibles) (Padgett, 2005:12).

A thorough literature review on SERQUAL and particularly its application in medical situations was undertaken. Having done this the consideration of which dimensions identified by Parasuraman, *et.al.,* (1988) as being appropriate to Awali hospital, whose services had many similar qualities to the original service categories, was considered. Then we adapted the SERVQUAL statements to reflect the service quality aspects of Awali hospital in different dimensions. When developing the statement and dimension definitions, the viewpoint from Awali hospital customers was taken to help stop the development of a biased survey reflecting the service provider's view. This issue was highlighted when the survey was mailed to ten customers and ten staff members. The customers identified a few statements which were unstructured and confusing and changes were made to these statements as a result. The staff challenged some of the statements that they considered not important and difficult to meet because of constraints from available resources. It was decided to leave these statements in as they were not highlighted by customers. Dotchin and Oakland (1994) highlighted that service companies frequently produce questionnaires and use them to assess customer satisfaction and service quality. Although valuable, each emphasises the idiosyncrasies of a particular organisation and so presents problems for generalization.

Appendix 1 shows the final English version of the questionnaire, which contained the 21 statements that reflected the five different SERQUAL dimensions. Customers were first asked to supply some additional demographic information, like gender, number of hospital visits, nationality, patient type (BAPCO worker, general practitioner referred or private) and type of visit (inpatient, outpatient or both). They were then asked to rate their general expectation from a hospital service on a 7-point Likert scale ranging from Strongly Agree (7) to Strongly Disagree (1). On the reverse side of the questionnaire customers were then asked to rate their perceptions of Awali hospital using the same 7-point Likert scale. At the end of the questionnaire was space to write open comments.

Appendix 2 shows the final Arabic version of the questionnaire. The Arabic version was translated by a bilingual expert. The Arabic version was developed through a back-translation from English. This questionnaire was distributed to patients who struggled to read English. The initial translated questionnaire was sent out to 5 Arabic speaking people to evaluate. Comments concerning structure or confusion about statements was forwarded to the bilingual expert to rectify.

4.3 Sampling Technique

The sampling procedure used was random stratified sampling. Each member of the population who used the hospital had an equal chance of being selected. Questionnaires were distributed on a random basis to patients who booked into the hospital as an outpatient or inpatient. Respondents were asked to complete the questionnaire while waiting to use the hospital service or to take the questionnaire home and return it after using the hospital service if they had never used the hospital before. An electronic version of the questionnaire was created using *Insiteful Surveys* (http://www.insitefulsurveys.com). This version was then distributed randomly to refinery workers, a stratified group. Appendix 3 has a copy of the email distributed with the URL link. The electronic link was only available in English.

In total 600 paper questionnaires were distributed in the hospital, 300 English and 300 Arabic. Another 150 electronic questionnaires via emails were sent to refinery

workers. Of the total 750 questionnaires distributed 162 were returned of which 156 (or 21.6%) could be statistically analysed.

Both versions of the questionnaire were placed at the hospital front desk. As patients arrived at the hospital they were handed a questionnaire and asked to complete the form. Many patients took the questionnaire with them and informed reception that they would return the questionnaire later, but never did. The electronic web version URL link was emailed to the refinery workers but unfortunately not all had Internet access, and could not complete the questionnaire.

4.4 Validity and Reliability of SERVQUAL Instrument

To assess the discriminant validity of the dimensionality of the instrument used to measure service quality the data was subjected to exploratory factor analysis. The data used for the factor analysis was the expected values of the hospital service quality. The argument for this was that the dimensionality of service quality should be based on what is expected by the customers and not what is perceived by them. The Kaiser-Meyer-Olkin (KMO) measured 0.892 sampling adequacy which indicated that the variables were able to be grouped into smaller sets of underlying factors. The Bartlett's test of Sphericity compared the correlation matrix to the identity matrix and showed clearly a significant relationship between the variables, approx. Chi-Square 2165.6, df = 210, $p > 0.0001$. A variety of different factor analysis solutions were considered using SPSS version 15.01.1 and XLSTAT version 2007.6 computer programs. The most interpretable factor structure was the one demonstrated in Table 3. When the data was rotated orthogonally, no clear factor pattern emerged. Therefore the 21 items were analysed using oblique rotation assuming that the factors are correlated. The same solution algorithm (principle axis factoring) was employed as in Parasuraman *et.al.,* (1988). In Table 1, is the number of factors extracted that was constrained to 5 to maximise the likelihood of replicating the original five dimensions of service quality proposed and validated by Parasuraman *et.al.,* (1988). The five factors serve as a meaningful framework for summarizing the criteria customers use in assessing service quality (Zeithaml & Parasuraman, 2004: 13). In the factor matrix items were sorted by 0.3 loading differences with any other factor to ensure discriminant validity and any display less than 0.3 were suppressed (Jabnoun and

Hassan Al-Tamimi, 2002: 463). The cumulative percentage of variance extracted by the 5 factors was 61.1. An examination of Table 2.3 revealed that the priori expected items per dimension did not emerge. Table 2.2 shows that the extracted factors were evenly correlated between 0.5 and 0.6.

Table 2.1: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings (a)
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.015	47.690	47.690	9.662	46.009	46.009	6.895
2	1.350	6.427	54.117	.973	4.634	50.643	6.267
3	1.328	6.321	60.439	.960	4.573	55.217	7.741
4	1.034	4.924	65.363	.664	3.161	58.378	7.054
5	.933	4.442	69.805	.565	2.690	61.068	6.139
6	.808	3.846	73.651				
7	.760	3.617	77.268				
8	.673	3.205	80.473				
9	.608	2.895	83.368				
10	.497	2.365	85.733				
11	.461	2.197	87.930				
12	.408	1.943	89.873				
13	.373	1.776	91.649				
14	.340	1.620	93.269				
15	.291	1.386	94.655				
16	.285	1.355	96.010				
17	.249	1.184	97.193				
18	.220	1.048	98.241				
19	.154	.735	98.977				
20	.124	.590	99.567				
21	.091	.433	100.000				

Extraction Method: Principal Axis Factoring. (*N = 156)*

Table 2.2: Promax with Kaiser Normalization rotation Factor Correlation Matrix

Factor	1	2	3	4	5
1	1.000	.559	.639	.599	.529
2	.559	1.000	.626	.557	.529
3	.639	.626	1.000	.687	.672
4	.599	.557	.687	1.000	.596
5	.529	.529	.672	.596	1.000

Extraction Method: Principal Axis Factoring. (*N = 156)*

.

Table 2.3: Promax Factor Loadings with Kaiser Normalization rotation Pattern Matrix

Items	Factor				
	1. Responsiveness	2 Reliability	3 Assurance	4 Empathy	5 Tangible
Q13	.892				
Q6	.573				
Q12	.498				
Q11	.407				
Q15	-				
Q7		.835			
Q9		.835			
Q10		.462			
Q8		.407			
Q16		.401			
Q18			.948		
Q17			.636		
Q5			.592		
Q14			.481		
Q20				.949	
Q21				.693	
Q19				.460	
Q2					.890
Q3					.707
Q1					.430
Q4					.345
Cronbach's alpha	**0.840**	**0.870**	**0.824**	**0.802**	**0.843**

Extraction Method: Principal Axis Factoring. (*N =156)*

Many of the items loaded heavily into different factors from the priori dimensions proposed by Parasuraman *et.al.* (1988). It was decided to keep these dimensions and analyse the data accordingly. The validity of the dimensionality of these groups, supports the suggestions made by Barakus and Boller (1992) and Cronin and Taylor (1992) that the dimensions of SERVQUAL may depend on the type of Industry being studied. Item 15 loaded lower than 0.3 differences with any other factor and because this item was identified as a major service quality gap in Awali hospital it was decided to keep it in its original dimension, namely responsiveness.

The next stage was to assess the internal reliability of the instrument used to test the variables of the newly defined dimensions. Cronbach's alpha was run using XLSTAT software program on the new groups. Table 2.3 shows that all 5 factors returned coefficients above the 0.7, the threshold recommended by Nunnally (1978) and Peterson (1994). Figures 2.5 to 2.9

are exploratory factor loadings with oblique rotation using XLSTAT computer software on each dimension to determine the validity and reliability of the data between expectation and perception. This was to explore inter-relationships between expectation and perception and also the reliability of each dimension in identifying these gaps in service quality. Clearly these figures reflected no inter-relationship and are reliable and valid for further data analysis.

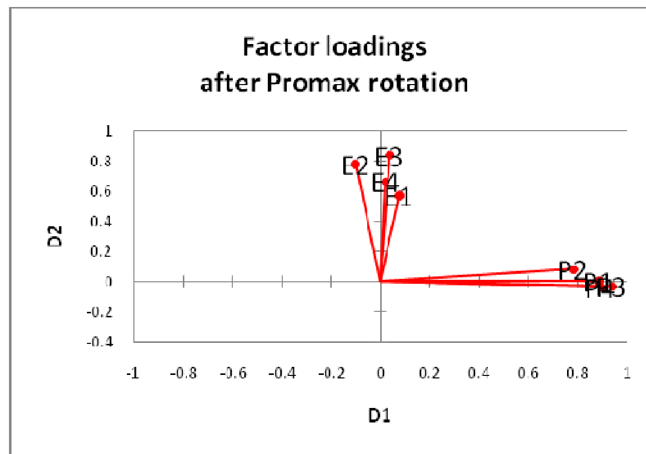

Figure 2.5: Tangible factor loading after oblique rotation (*Cronbach alpha D1:0.929 & D2: 0.806*)

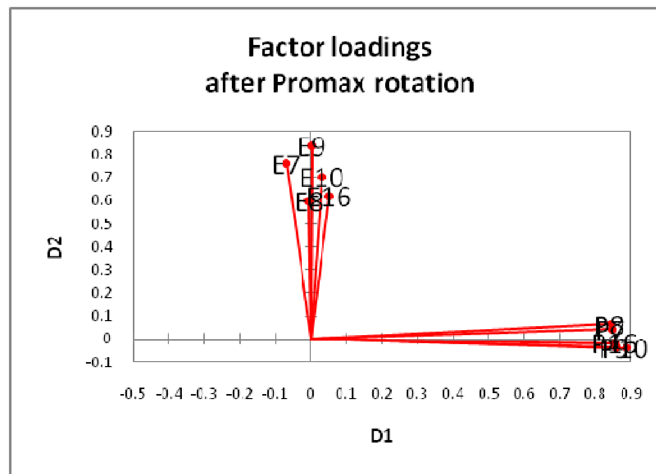

Figure 2.6: Reliability factor loading after oblique rotation (*Cronbach alpha D1:0.933 & D2: 0.830*)

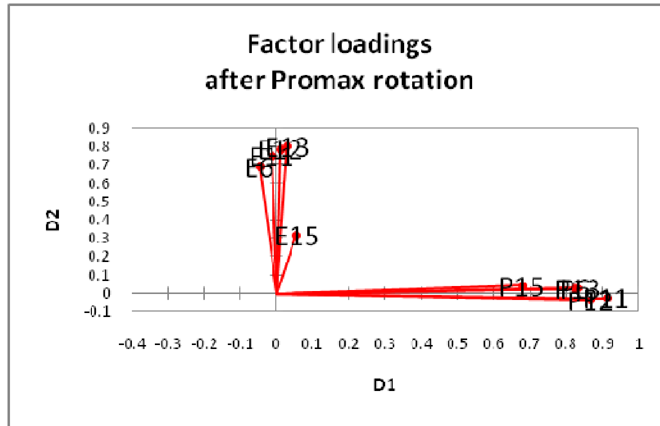

Figure 2.7: Responsiveness factor loading after oblique rotation (*Cronbach alpha D1:0.913 & D2: 0.802*)

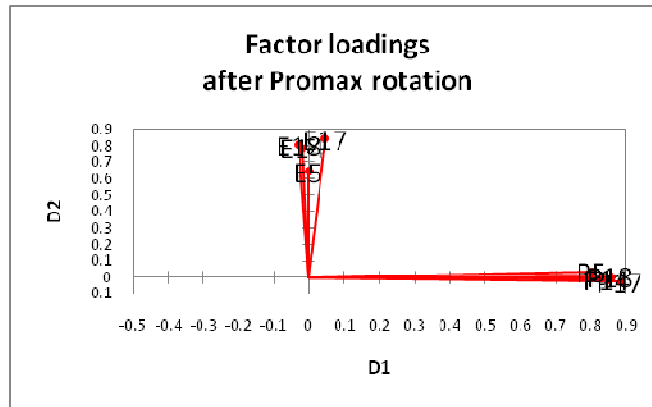

Figure 2.8: Assurance factor loading after oblique rotation (*Cronbach alpha D1:0.911 & D2: 0.851*)

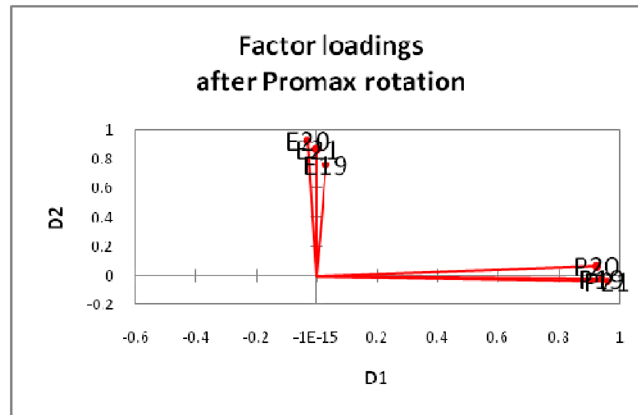

Figure 2.9: Empathy factor loading after oblique rotation (*Cronbach alpha D1:0.961 & D2: 0.890*)

5. SUMMARY

The hypothesis for this research will look at differences in the patient mean scores between their expectations and perceptions. Once all the data been analysed (from the survey questionnaires), statistical analysis will be performed to confirm if there is a significant difference between the means. The differences between the two mean scores will then be linked to patient demographics and used to help answer the research questions. The t-test and one-way ANOVA (analysis of variance) will be used to look at the mean scores and determine if the null hypothesis should be rejected or accepted at the $p < 0.05$ level. The statistical factor analysis in this section validated that the statements from the original questionnaire (Appendix 1 and 2) were distributed into slightly different groups or dimensions that best described those statements of service quality as expected by the research population. The data analysis will be analysed using the same statements but grouped into slightly different dimensions. The Cronbach's alphas demonstrated that these new groups of SERVQUAL dimensions were reliable for analysing the data and determining differences in the mean scores with the t-test or one-way ANOVA.

CHAPTER 3: *Data Analysis*

3.1 DESCRIPTION OF SAMPLE

The demographic data for the descriptive analysis was collected through the survey questionnaire. The SPSS software program was used to calculate the frequencies of the data. Demographic data (Table 3.1) for patients included gender, number of visits to Awali hospital, nationality, patient type and types of visits to Awali hospital (In-patient or Outpatient). The group of participants consisted of 99 males and 57 females. The highest number of visits by a participant to the hospital in the last year was 20 times with the majority of participants ranging between 1 to 6 visits in the last year. The highest number of individuals from a nation to answer the questionnaire was from the United Kingdom (33.3%) followed by Bahraini's, (24.4%). Evident from Table 3.1 is the diversity of the population in Bahrain using Awali hospital with 17 different nationalities filling in the questionnaire. Out of all the survey questionnaires completed, 11 participants did not state their nationality and were labelled "Not Stated". When evaluating the different nationalities, nationalities that only answered one questionnaire were rejected. Questionnaires analysed were from people coming from: the United Kingdom, the United States of America, South Africa, Bahrain, India, Australia, the Philippines and Germany. Of the questionnaires submitted 59.0% were Bapco employers and 41% were private or referred by general practitioner (GP) patients. Most patients that filled in questionnaires were outpatients, (73.1%). 26.3% used both outpatient services and in-patient services.

Descriptive analysis of the mean scores (Tables 3.2 and 3.3) was run using SPSS on the questionnaire data for the expectation and perceptions values. The data analysed was from 156 respondents. In terms of expectation, the mean ranged between 6.49 and 6.87. The lowest "expectation score" was for statement 13 which stated that the hospital should have convenient times for patients to use their services, while the highest score was statement 7 which related to accuracy of medical reports. Mean scores for "perception of actual service" ranged between 4.34 and 5.88. The lowest "perception score" was for statement 15 that related to reception answering outside phone calls promptly. This was expected as this problem had been identified by management as a problem in Awali hospital prior to this survey. The highest "perception score" was for statement 17 which related to care and assurance.

Table 3.1: Descriptive Statistics of the Demographic Variables (*N=156)*

DEMOGRAPHICS:	FREQUENCIES:	PERCENTAGE:
Gender:		
Male	99	63.5
Female	57	36.5
Number of visits to Awali Hospital in the last year:		
0	1	0.6
1	23	14.7
2	22	14.1
3	20	12.8
4	25	16.0
5	17	10.9
6	11	7.1
7	1	0.6
8	9	5.8
9	1	0.6
10	7	4.5
12	5	3.2
15	3	1.9
17	1	0.6
18	1	0.6
20	9	5.8
Nationality:		
Australia	5	3.2
Bahrain	38	24.4
Belgian	1	0.6
Finnish	1	0.6
German	3	1.9
Indian	11	7.1
Kenyan	1	0.6
Lebanese	1	0.6
Malaysia	1	0.6
Not Stated (NS)	11	7.1
New Zealand (NZ)	1	0.6
Pacific Islands	1	0.6
Pakistan	1	0.6
Philippines	4	2.6
South African (SA)	15	9.6
United Kingdom (UK)	52	33.3
United States of America (USA)	9	5.8
Patient Type:		
Bapco	92	59.0
GP Referal	3	1.9
Private	61	39.1
Type of visit to Awali Hospital:		
Inpatient	1	0.6
Outpatient	114	73.1
Both	41	26.3

Table 3.2: Descriptive Statistics of Expectations (E) (N = 156)

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11
Minimum	5	3	3	4	4	2	4	3	3	3	3
Maximum	7	7	7	7	7	7	7	7	7	7	7
Mean	**6.85**	**6.52**	**6.67**	**6.81**	**6.73**	**6.59**	**6.87**	**6.69**	**6.80**	**6.83**	**6.69**
Std. Deviation	0.44	0.87	0.65	0.51	0.6	0.74	0.44	0.74	0.53	0.53	0.6

	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21
Minimum	3	4	3	1	5	2	5	2	3	3
Maximum	7	7	7	7	7	7	7	7	7	7
Mean	**6.58**	**6.47**	**6.71**	**6.62**	**6.8**	**6.71**	**6.83**	**6.49**	**6.62**	**6.61**
Std. Deviation	0.76	0.85	0.63	0.82	0.49	0.7	0.44	0.9	0.74	0.76

Table 3.3: Descriptive Statistics of Perceptions (P) (N = 156)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
Minimum	1	1	1	1	1	1	1	1	1	1	1
Maximum	7	7	7	7	7	7	7	7	7	7	7
Mean	**5.78**	**5.39**	**5.79**	**5.72**	**5.15**	**5.22**	**5.50**	**5.54**	**5.51**	**5.64**	**5.53**
Std. Deviation	1.61	1.75	1.54	1.61	1.71	1.72	1.67	1.62	1.76	1.69	1.67

	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21
Minimum	1	1	1	1	1	1	1	1	1	1
Maximum	7	7	7	7	7	7	7	7	7	7
Mean	**5.67**	**5.51**	**5.21**	**4.34**	**5.67**	**5.88**	**5.57**	**5.76**	**5.74**	**5.82**
Std. Deviation	1.71	1.67	1.67	2.13	1.73	1.46	1.68	1.62	1.57	1.55

3.2 SERVQUAL SCORES

3.2.1 Paired-Sample T-test of all 21 statements

The description, correlations and paired-sample t-test results using SPSS program was used to compare the 21 mean scores for expectation and perception statements. The t-test was to compare the means and confirm H_1 and reject H_0 by showing a significant difference between the expectation and perception of patients who use Awali hospital (Tables 3.4 a, b & c).

Table 3.4 (a): Paired Samples Description Statistics (*Exp=Expectations & Perc=Perceptions)*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Exp-Total	6.6831	156	.46136	.03694
	Perc-Total	5.5450	156	1.40524	.11251

Table 3.4 (b): Paired Samples Correlations (*Exp=Expectations & Perc=Perceptions)*

		N	Correlation	Sig.
Pair 1	Exp-Total & Perc-Total	156	.276	.000

Table 3.4 (c): Paired Samples T-Test (Exp=Expectations & Perc=Perceptions)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Exp-Total - Perc-Total	1.13808	1.35257	.10829	.92416	1.35200	10.509	155	.000

The results presented in Table 3.4 (c) show that the difference between the two sets of mean scores was unlikely to occur by chance. The results do not report the magnitude of the intervention's effect, the degree to which the two variables are associated with one another. In other words a small difference between groups can become statistically significant but this does not mean that the difference has any practical or theoretical significance. In order to assess the importance of the findings the "effect size" (also known as "strength of association") can be calculated. This is a set of statistics that indicates the relative magnitude of the differences between means, or amount of total variance in the dependent variable that is predictable from knowledge of the levels of the independent variables (Tabachnick & Fidell, 2007:54). There are a number of different effect size statistics. The one used for this

analysis to compare the data was the Eta squared. The Eta squared was calculated using the following formula:

$$\text{Eta squared} = \frac{t^2}{t^2 + N - 1}$$

$$\text{Eta squared} \quad \frac{(10.509)^2}{(10.509)^2 + 156 - 1} \qquad \frac{110}{110 + 156 - 1}$$

$$= \mathbf{0.42}$$

The guidelines (proposed by Cohen, 1988:284-287) for interpreting this effect size are as follows: 0.01 = small effect, 0.06 = moderate effect, 0.14 = large effect. Given our Eta squared value of 0.42 for the differences between expectation and perception mean scores, we can conclude that this was a large effect. Therefore from the data we can say, the paired-sample t-test concluded that there is a statistically significant difference in the total perceptions mean score (*M = 5.55, SD = 1.41*) compared to the total expectations mean score (*M = 6.68, SD = 0.46*), t (155) = 10.509, $p<0.0001$ (two-tailed).

3.2.2 Computing the SERVQUAL scores

The SERVQUAL statements (in both the expectations and perceptions sections) are grouped into five dimensions, each with its range of pertinent statements as follows:

1. Tangibility (Statements 1-4).
2. Reliability (Statements 7-10, 16)
3. Responsiveness (Statements 6, 11-13, 15)
4. Assurance (Statements 5, 14, 17-18)
5. Empathy (Statements 19-21)

Table 3.5(a) is the assessment of service quality using SERVQUAL that involved computing (using Microsoft Excel) the difference between the rating which patients assign to expectation statements and to perception statements. For each pair of statements, the SERVQUAL score was computed as follows: Service quality (Q) = Perception (P) – Expectation (E). Awali hospital’s quality of service was assessed along each of the five dimensions by averaging the SERVQUAL scores on the statements making up the dimensions, through the following two steps:

1. For each patient, the SERVQUAL scores on the statements pertaining to the dimension were added and divided by the sum of the number of statements making up the dimension.

2. The quantities obtained in step 1 for all patients were then totalled and divided by the number of patients.

Table 3.5 (a): 156 questionnaire responses grouped into five dimensions

Statements		Expectations	Perceptions	Difference
Tangibles				
Q1	Awali hospital's cleanliness and hygiene are excellent	6.846	5.776	-1.071
Q2	Awali hospital always has visitors parking available	6.519	5.391	-1.128
Q3	Awali hospital's personnel appear neat	6.673	5.795	-0.878
Q4	Awali hospital staff are pleasant to deal with	6.808	5.718	-1.090
Reliability				
Q7	Awali hospital's medical reports are accurate	6.865	5.500	-1.365
Q8	Awali hospital's expense reports are accurate	6.692	5.545	-1.147
Q9	Awali hospital provided me with adequate information about my medical condition	6.801	5.513	-1.288
Q10	I feel confident when receiving medical treatment at Awali hospital	6.827	5.641	-1.186
Q16	Awali hospital employees always respected my privacy	6.801	5.667	-1.135
Responsiveness				
Q6	Awali hospital offers prompt service every time	6.590	5.218	-1.372
Q11	Awali hospital's administration staff were efficient in dealing with my queries	6.686	5.526	-1.160
Q12	Awali hospital employees informed me exactly when services would be performed	6.583	5.673	-0.910
Q13	Awali hospital offered convenient times to use their hospital services	6.468	5.513	-0.955
Q15	Awali hospital reception answered my phone calls promptly	6.615	4.340	-2.276
Assurance				
Q5	Awali hospital has up-to-date equipment	6.731	5.154	-1.577
Q14	There are experienced personnel on duty on weekends at Awali hospital	6.712	5.212	-1.500
Q17	Awali hospital employees are caring	6.705	5.885	-0.821
Q18	Awali hospital make use of proficient medical staff	6.827	5.571	-1.256
Empathy				
Q19	Awali hospital employees gave me individualised medical attention	6.494	5.756	-0.737
Q20	Awali employees always showed understanding towards my feelings of discomfort	6.622	5.744	-0.878
Q21	I was treated with a warm and caring attitude in Awali hospital	6.609	5.821	-0.788

Table 3.5 (b): The five highest expectations

Highest expectation statements	Mean expectations
E7	6.865
E1	6.846
E10 + E18	6.827
E4	6.808

Table 3.5 (e): The five lowest expectations

Lowest expectation statements	Mean expectations
E13	6.468
E19	6.494
E2	6.519
E12	6.583
E6	6.590

Table 3.5 (c): The five highest perceptions

Highest perception statements	Mean perceptions
P17	5.885
P21	5.821
P3	5.795
P1	5.776
P19	5.756

Table 3.5 (f): The five lowest perceptions

Lowest perception statements	Mean perceptions
P15	4.340
P5	5.154
P14	5.212
P6	5.218
P2	5.391

Table 3.5 (d): The five largest differences

Largest differences	Mean Differences
SQ15	-2.276
SQ5	-1.577
SQ14	-1.500
SQ6	-1.372
SQ7	-1.365

Table 3.5 (g): The five smallest differences

Smallest differences	Mean Differences
SQ19	-0.737
SQ21	-0.788
SQ17	-0.821
SQ20	-0.878
SQ3	-0.878

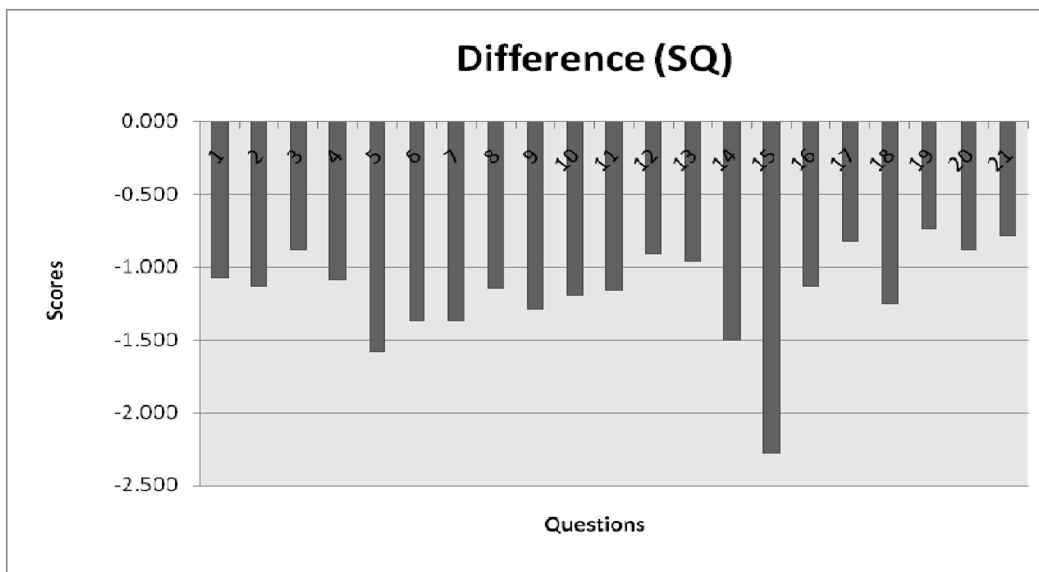

Figure 3.1: SERVQUAL 21 differences

3.2.3 Paired-Sample T-test of the 5 dimensions

The descriptive, correlation and paired-sample t-test using the SPSS program was done in order to compare the 5 mean dimension scores for expectation and perception. The t-test was carried out to compare the means and to confirm H_1 and reject H_0 by showing a significant difference between the expectations and perceptions of the SERVQUAL 5 dimensions in Awali hospital (Tables 3.6 a, b & c).

Table 3.6 (a): Paired Samples Statistics ***(Exp=Expectations & Perc=Perceptions)***

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Exp-Tangilble	6.7115	156	.49932	.03998
	Perc-Tangible	5.6699	156	1.47478	.11808
Pair 2	Exp-Reliability	6.7974	156	.42013	.03364
	Perc-Reliability	5.5731	156	1.50390	.12041
Pair 3	Exp-Responsiveness	6.5885	156	.55983	.04482
	Perc-Responsiveness	5.2538	156	1.52744	.12229
Pair 4	Exp-Assurance	6.7436	156	.49591	.03970
	Perc-Assurance	5.4551	156	1.44816	.11595
Pair 5	Exp-Empathy	6.5751	156	.72195	.05780
	Perc-Empathy	5.7736	156	1.51893	.12161

Table 3.6 (b): Paired Samples Correlations ***(Exp=Expectations & Perc=Perceptions)***

		N	Correlation	Sig.
Pair 1	Exp-Tangilble & Perc-Tangible	156	.298	.000
Pair 2	Exp-Reliability & Perc-Reliability	156	.331	.000
Pair 3	Exp-Responsiveness & Perc-Responsiveness	156	.267	.001
Pair 4	Exp-Assurance & Perc-Assurance	156	.215	.007
Pair 5	Exp-Empathy & Perc-Empathy	156	.153	.056

Table 3.6 (c): Paired Samples T-Test (Exp=Expectations & Perc=Perceptions)

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Exp-Tangilble - Perc-Tangible	1.04167	1.40931	.11284	.81877	1.26456	9.232	155	.000
Pair 2	Exp-Reliability - Perc-Reliability	1.22436	1.42119	.11379	.99959	1.44913	10.760	155	.000
Pair 3	Exp-Responsiveness - Perc-Responsiveness	1.33462	1.48005	.11850	1.10053	1.56870	11.263	155	.000
Pair 4	Exp-Assurance - Perc-Assurance	1.28846	1.42646	.11421	1.06286	1.51407	11.282	155	.000
Pair 5	Exp-Empathy - Perc-Empathy	.80154	1.57870	.12640	.55186	1.05122	6.341	155	.000

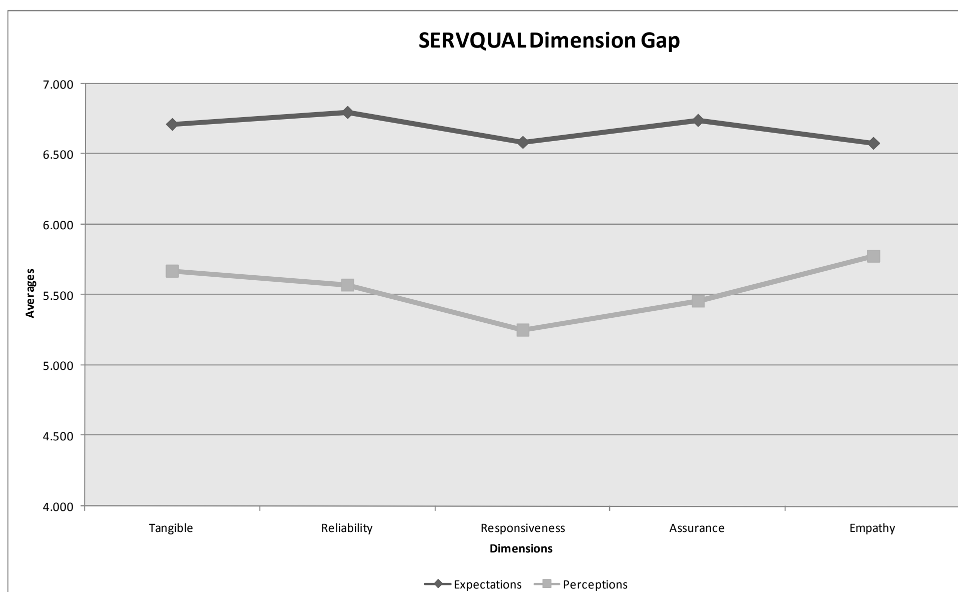

Figure 3.2: SERVQUAL Dimension Gaps between Expectations and Perceptions

From the data calculated using the paired-sample t-test in Table 3.6 (c) on the 5 dimensions of service quality, it can be concluded that there is a statistically significant difference in all 5 perceptions from expectations. This is also clearly illustrated in Figure 3.2. There was a statistically significant difference in “tangible expectations scores” (*M=6.71, SD=0.50*) to “tangible perception scores” (*M=5.67, SD=1.47*), t (155) = 9.232, p< 0.0001 (two-tailed). The mean difference in tangible scores was 1.04 with a 95% confidence interval ranging from 0.82 to 1.26. The Eta squared statistic for tangible scores (0.35) indicated a large effect size. There was a statistically significant difference in “reliability expectations scores” (*M=6.80, SD=0.42*) to “reliability perception scores” (*M=5.57, SD=1.50*), t (155) = 10.76, p< 0.0001 (two-tailed). The mean difference in reliability scores was 1.22 with 95% confidence interval ranging from 1.00 to 1.45. The Eta squared statistic for reliability scores (0.43) indicated a large effect size. There was a statistically significant difference in “responsiveness expectation scores” (*M=6.59, SD=0.56)* to “responsiveness perception scores” (*M=5.25, SD=1.53*), t (155) = 11.263, p< 0.0001 (two-tailed). The mean difference in responsiveness scores was 1.33 with 95% confidence interval ranging from 1.10 to 1.57. The Eta squared statistic for responsiveness scores (0.45) indicated a large effect size. There was a statistically significant difference in “assurance expectation scores” (*M=6.74, SD=0.50*) to “assurance perception scores” (*M=5.46, SD=1.45*), t (155) = 11.282, p< 0.0001 (two-tailed). The mean difference in assurance scores was 1.29 with 95% confidence interval ranging from 1.06 to 1.51. The Eta squared statistic for assurance scores (0.45) indicated a large effect size. There

was a statistically significant difference in "empathy expectation scores" (*M=6.58, SD=0.72*) to "empathy perception scores" (*M=5.77, SD=1.52)*, t (155) = 6.34, p< 0.0001 (two-tailed). The mean difference in empathy scores was 0.80 with 95% confidence interval ranging from 0.55 to 1.05. The eta squared statistic for empathy scores (0.21) indicated a large effect size.

3.2.4 One-Way Repeated Measures ANOVA between 5 SERVQUAL Dimensions

The one-way repeated measures ANOVA was calculated using the SPSS program to compare respondents' responses to the five different dimensions. This result would identify if the patients evaluated the quality of service at Awali hospital differently according to the five different dimensions. This would show that certain dimensions of service are either stronger or weaker. The data used to calculate the one-way repeated measures ANOVA were from the difference mean scores between expectation and perception (Table 3.7a). The one-way repeated measures ANOVA (Table 3.7b) compared the means to confirm H_1 and reject H_0 by showing a significant difference between the SERVQUAL dimensions.

Table 3.7 (a): SERVQUAL Dimension Descriptive Statistics

	Mean	Std. Deviation	N
Tangible	-1.0417	1.40931	156
Reliability	-1.2244	1.42119	156
Responsiveness	-1.3346	1.48005	156
Assurance	-1.2885	1.42646	156
Empathy	-.8016	1.57831	156

Table 3.7 (b): Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Dimensions	Wilks' Lambda	.691	16.979	4.000	152.000	.000	.309

b.
Design: Intercept
Within Subjects Design: Dimensions

Table 3.7 (c): Bonferroni Pairwise Comparisons between SERVQUAL dimensions

Measure: MEASURE_1

(I) Dimensions	(J) Dimensions	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
Tangible	Reliability	.183	.075	.166	-.032	.397
	Responsive	.293 *	.072	.001	.088	.498
	Assurance	.247 *	.066	.003	.058	.436
	Empathy	-.240 *	.078	.024	-.462	-.018
Reliability	Tangible	-.183	.075	.166	-.397	.032
	Responsive	.110	.062	.769	-.066	.287
	Assurance	.064	.064	1.000	-.119	.247
	Empathy	-.423 *	.072	.000	-.629	-.216
Responsive	Tangible	-.293 *	.072	.001	-.498	-.088
	Reliability	-.110	.062	.769	-.287	.066
	Assurance	-.046	.070	1.000	-.246	.154
	Empathy	-.533 *	.076	.000	-.750	-.316
Assurance	Tangible	-.247 *	.066	.003	-.436	-.058
	Reliability	-.064	.064	1.000	-.247	.119
	Responsive	.046	.070	1.000	-.154	.246
	Empathy	-.487 *	.072	.000	-.692	-.282
Empathy	Tangible	.240 *	.078	.024	.018	.462
	Reliability	.423 *	.072	.000	.216	.629
	Responsive	.533 *	.076	.000	.316	.750
	Assurance	.487 *	.072	.000	.282	.692

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

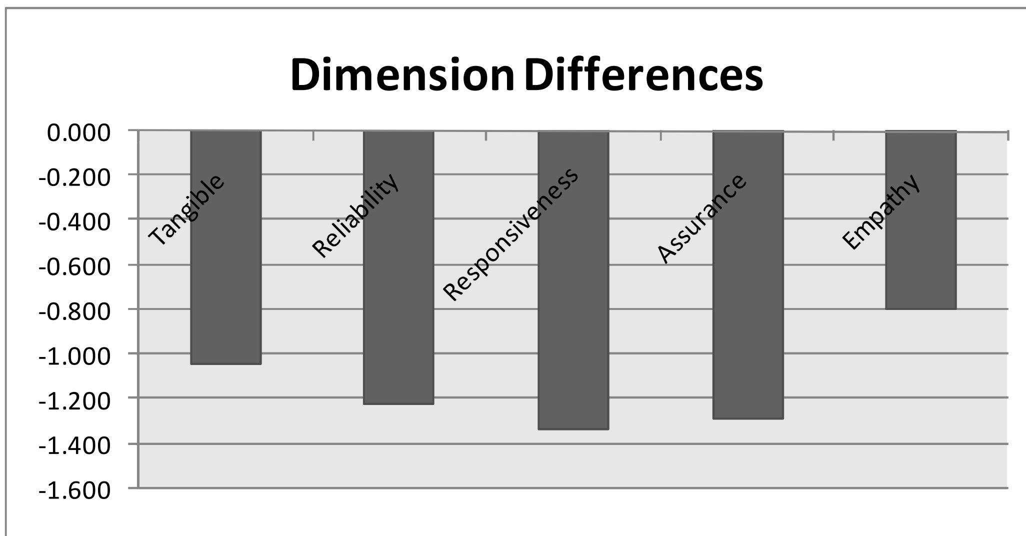

Figure 3.3: SERVQUAL dimension differences

Table 3.7 (b) presents Wilks' Lambda = 0.69, F (4, 152) = 16.98, $p<0.001$, with a multivariate partial eta squared = 0.31. This shows a significant effect in the differences between the five dimensions. The pairwise comparisons in Table 3.7 (c) highlights using an asterisk a significant difference between Empathy (*M=-0.80, SD=1.*58) and Tangible (*M=-1.04, SD=1.41),* Reliability (*M=-1.22, SD=1.42*), Responsiveness (*M=-1.33, SD=1.48*) and Assurance (*M=-1.29, SD=1.43*). The pairwise table also shows that there was no significant difference between Reliability, Responsiveness and Assurance. There was a significant difference between Tangible and Responsiveness, Assurance and Empathy; but no significant difference between Reliability and Tangible. These differences could also be seen illustrated in Figure 3.3.

3.3 DEMOGRAPHIC INFORMATION

3.3.1 Gender

The SPSS program was used to compare one-way analysis of variance (ANOVA) between different genders (Figure 3.4). The one-way ANOVA compared the means of the two genders for expectation, perception and differences and tested the hypothesis to confirm H_1 and reject H_0 by showing a significant difference between the way males and females rate the service quality offered at Awali hospital (Table 3.8 a & b).

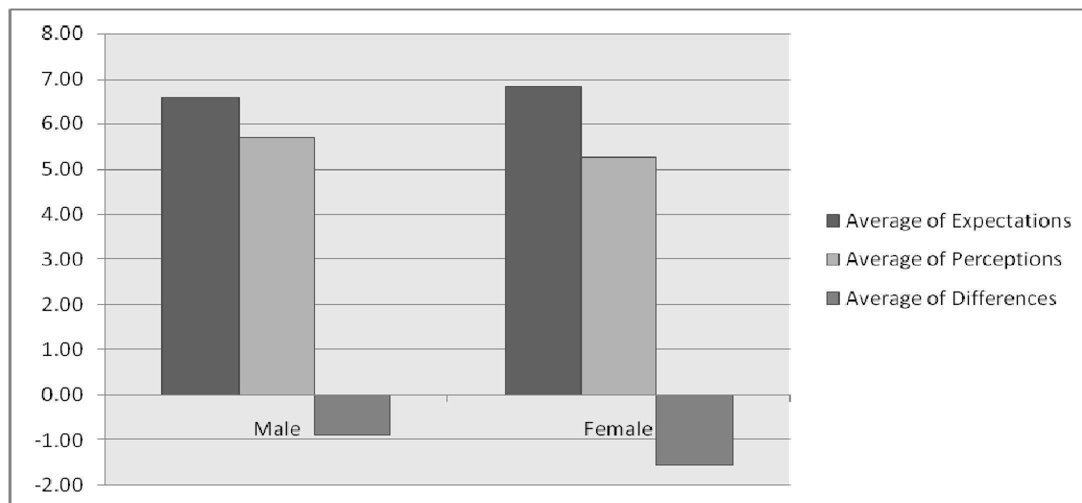

Figure 3.4: Average SERVQUAL scores between Male and Female

Table 3.8 (a): Descriptives of mean scores between male and female

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Expectation	Male	99	6.6066	.53437	.05371	6.5000	6.7131	3.87	7.00
	Female	57	6.8160	.24718	.03274	6.7504	6.8815	6.11	7.00
	Total	156	6.6831	.46136	.03694	6.6101	6.7560	3.87	7.00
Perception	Male	99	5.7077	1.24247	.12487	5.4599	5.9555	1.25	7.00
	Female	57	5.2625	1.62360	.21505	4.8317	5.6933	1.00	7.00
	Total	156	5.5450	1.40524	.11251	5.3228	5.7672	1.00	7.00
Difference	Male	99	-.8988	1.14086	.11466	-1.1263	-.6712	-5.58	.42
	Female	57	-1.5535	1.58455	.20988	-1.9739	-1.1331	-6.00	.00
	Total	156	-1.1380	1.35281	.10831	-1.3520	-.9241	-6.00	.42

Table 3.8 (b): ANOVA of Gender Mean Scores

		Sum of Squares	df	Mean Square	F	Sig.
Expectation	Between Groups	1.586	1	1.586	7.778	.006
	Within Groups	31.405	154	.204		
	Total	32.992	155			
Perception	Between Groups	7.170	1	7.170	3.694	.056
	Within Groups	298.906	154	1.941		
	Total	306.077	155			
Difference	Between Groups	15.506	1	15.506	8.905	.003
	Within Groups	268.158	154	1.741		
	Total	283.663	155			

Subjects were divided into two groups according to their sex (male or female) and then grouped according to SERVQUAL mean scores (expectation, perceptions and differences). There was a statistically significant difference at the $p < 0.05$ level in expectation difference scores for the two gender groups: F (1, 154) = 7.78, p = 0.006. To determine the effect size between the differences of the mean scores for ANOVA, Eta squared was calculated using the following formula:

$$\text{Eta squared} = \frac{\text{Sum of squares between-groups}}{\text{Total sum of squares}}$$

$$\text{Eta squared} \quad \frac{1.586}{32.992}$$

= 0.05

The result of 0.05, which in Cohn's (1988:284-287) terms would be considered a small effect size. Therefore despite reaching statistical significance, the actual difference in expectation mean scores between males (*M=6.61, SD=0.53*) and females (*M=6.82, SD=0.25*) was quite

small. There was no statistically significant difference at the $p < 0.05$ level in perception difference scores for the two gender groups: F (1, 154) = 3.69, p = 0.056. The actual difference in perception mean scores between males (*M=5.71, SD=1.24*) and females (*M=5.26, SD=1.62*) was small and did not differ significantly. The effect size, calculated using Eta squared, was 0.02. There was a statistically significant difference at the $p < 0.05$ level in the difference scores for the two gender groups: F (1, 154) = 8.91, p = 0.003. Despite reaching statistical significance, the actual difference in the difference mean scores between males (*M=-0.90, SD=1.14*) and females (*M=-1.55, SD=1.58*) was quite small. The effect size, calculated using eta squared, was 0.05. Hence the results revealed a significant difference between male and female but with a small effect or little magnitude.

3.3.2 Number of Visits

This was to find out if the number of visits to Awali hospital reflects how customers evaluate the quality of service. Because of the large range of different number of visits, the visits were binned into three groups, Group 1: 4 visits or less; Group 2: 5 to 10 visits; Group 3: 11 visits and above (Figure 3.5). The SPSS program was used to compare one-way analysis of variance (ANOVA) between different groups. The one-way ANOVA compared the means of the visit groups for expectation, perception and differences, and tested the hypothesis to confirm H_1 and reject H_0 by showing a significant difference between the number of visits and how customers rate service quality offered at Awali hospital (Tables 3.9 a & b).

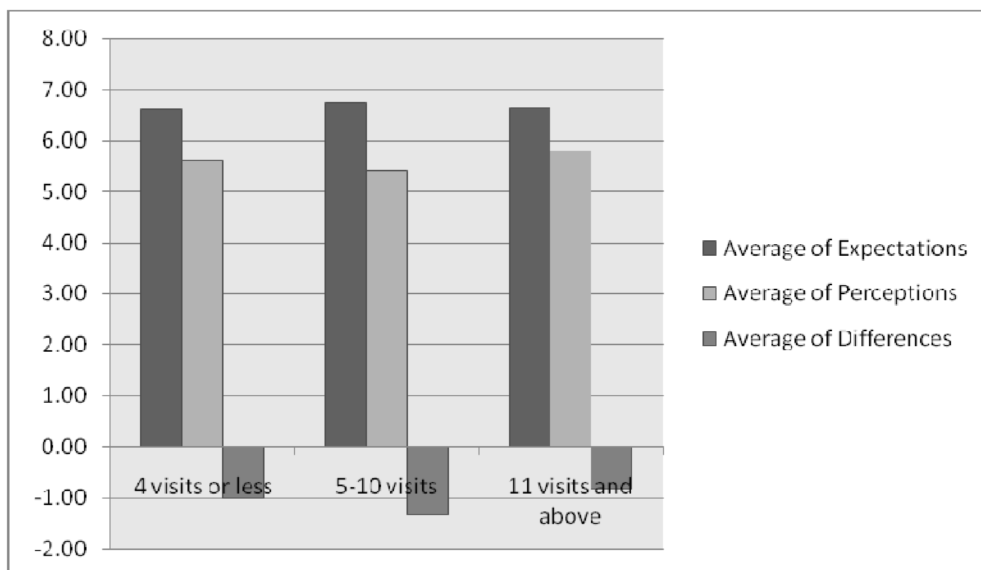

Figure 3.5: Average SERVQUAL scores grouped by number of hospital visits

Table 3.9 (a): Descriptives of mean scores between number of visit groups

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Expectation	4 visits or less	91	6.6768	.44046	.04617	6.5851	6.7685	4.66	7.00
	5 - 10 visits	46	6.7104	.52597	.07755	6.5542	6.8666	3.87	7.00
	11 visits and above	19	6.6468	.40955	.09396	6.4494	6.8442	5.70	7.00
	Total	156	6.6831	.46136	.03694	6.6101	6.7560	3.87	7.00
Perception	4 visits or less	91	5.6401	1.28094	.13428	5.3733	5.9069	1.00	7.00
	5 - 10 visits	46	5.2457	1.70396	.25124	4.7396	5.7517	1.25	7.00
	11 visits and above	19	5.8142	1.09100	.25029	5.2884	6.3401	3.93	7.00
	Total	156	5.5450	1.40524	.11251	5.3228	5.7672	1.00	7.00
Difference	4 visits or less	91	-1.0365	1.20373	.12619	-1.2872	-.7858	-6.00	.24
	5 - 10 visits	46	-1.4652	1.70270	.25105	-1.9709	-.9596	-5.58	.24
	11 visits and above	19	-.8321	.91745	.21048	-1.2743	-.3899	-2.49	.42
	Total	156	-1.1380	1.35281	.10831	-1.3520	-.9241	-6.00	.42

Table 3.9 (b): ANOVA of number of visit mean scores

		Sum of Squares	df	Mean Square	F	Sig.
Expectation	Between Groups	.063	2	.031	.146	.864
	Within Groups	32.929	153	.215		
	Total	32.992	155			
Perception	Between Groups	6.322	2	3.161	1.613	.203
	Within Groups	299.754	153	1.959		
	Total	306.077	155			
Difference	Between Groups	7.641	2	3.820	2.118	.124
	Within Groups	276.023	153	1.804		
	Total	283.663	155			

There was no statistically significant difference at the $p < 0.05$ level in expectation mean scores for the 3 groups of visits: F (2, 153) = 0.15, p = 0.864. The actual difference in expectation mean scores between Group 1 (*M=6.68, SD=0.44*), Group 2 (*M=6.71, SD=0.53*) and Group 3 (*M=6.65, SD=0.41*) was small and did not differ significantly. There was also no statistically significant difference at the $p < 0.05$ level in perception mean scores for the 3 groups of visits: F (2, 153) = 1.61, p = 0.203. The actual difference in perception mean scores between Group 1 (*M=5.64, SD=1.28*), Group 2 (*M=5.25, SD=1.70*) and Group 3 (*M=5.81, SD=1.09*) was small and did not differ significantly. There was no statistical significant difference at the $p < 0.05$ level in the difference mean scores for the 3 groups of visits: F (2, 153) = 2.12, p = 0.12. And the difference in difference mean scores between Group 1 (*M=-1.04, SD=1.20*), Group 2 (*M=-1.47, SD=1.70*) and Group 3 (*M=-0.83, SD=0.92*) was small and did not differ significantly. No relevant information could be concluded from these observations due to lack of significance.

3.3.3 Nationality

This analysis was to determine if different nationalities equate service quality differently (Figure 3.6). The following nationalities: Belgian, Finnish, Kenyan, Lebanese, Malaysian, New Zealand, Pacific Islands and Pakistan only submitted one questionnaire and could not be used to compare means due to less than 95% confidence for mean. Eleven questionnaires were returned without nationality and were also excluded. A one-way analysis of variance (ANOVA) between groups was conducted to explore the impact of nationalities in evaluating differences of service quality, as measured by the SERVQUAL instrument. Subjects were divided into groups according to their nationality and then grouped according to SERVQUAL mean scores (expectation, perceptions and differences). ANOVA also tested the hypothesis to confirm H_1 and reject H_0 by showing a significant difference between expectation, perception and difference groups (Tables 3.10 a & b).

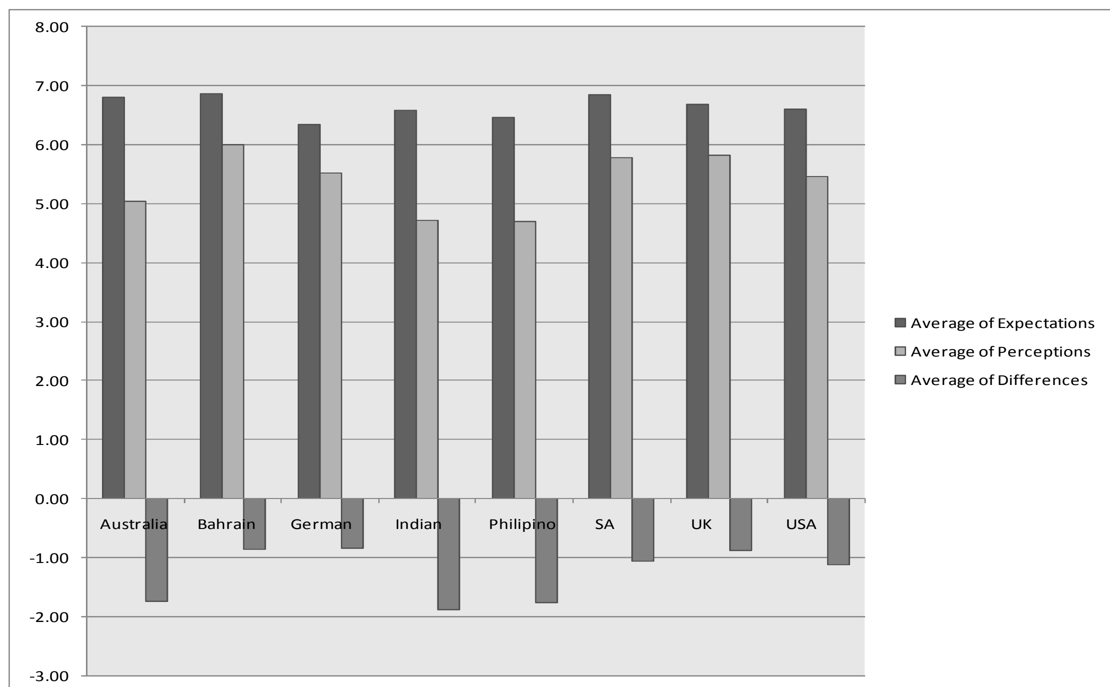

Figure 3.6: Average SERVQUAL scores grouped by Nationality

Table 3.10 (a): Descriptives of mean scores between Nationalities

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Expectation	Bahrain	38	6.8595	.27004	.04381	6.7707	6.9482	6.11	7.00
	UK	52	6.6767	.37373	.05183	6.5727	6.7808	5.44	7.00
	SA	15	6.8300	.22599	.05835	6.7049	6.9551	6.42	7.00
	Indian	11	6.5845	.74468	.22453	6.0843	7.0848	4.66	7.00
	USA	9	6.5878	.35188	.11729	6.3173	6.8583	6.13	7.00
	Australia	5	6.7880	.26939	.12047	6.4535	7.1225	6.35	7.00
	Philipino	4	6.4550	.54102	.27051	5.5941	7.3159	5.68	6.86
	German	3	6.3367	.69716	.40251	4.6048	8.0685	5.61	7.00
	Total	137	6.7211	.39607	.03384	6.6542	6.7880	4.66	7.00
Perception	Bahrain	38	5.9979	.93454	.15160	5.6907	6.3051	3.93	7.00
	UK	52	5.8085	1.03210	.14313	5.5211	6.0958	1.39	7.00
	SA	15	5.7780	.73528	.18985	5.3708	6.1852	4.36	6.85
	Indian	11	4.7091	2.30914	.69623	3.1578	6.2604	1.42	7.00
	USA	9	5.4633	1.23870	.41290	4.5112	6.4155	3.22	7.00
	Australia	5	5.0420	1.19217	.53315	3.5617	6.5223	3.41	6.20
	Philipino	4	4.6950	2.28859	1.14429	1.0533	8.3367	1.51	6.95
	German	3	5.5067	.32868	.18977	4.6902	6.3232	5.21	5.86
	Total	137	5.6796	1.22192	.10440	5.4732	5.8861	1.39	7.00
Difference	Bahrain	38	-.8616	.87219	.14149	-1.1483	-.5749	-2.88	.07
	UK	52	-.8688	1.03730	.14385	-1.1576	-.5801	-5.17	.24
	SA	15	-1.0520	.74314	.19188	-1.4635	-.6405	-2.32	-.15
	Indian	11	-1.8764	1.95793	.59034	-3.1917	-.5610	-5.58	.00
	USA	9	-1.1222	1.19316	.39772	-2.0394	-.2051	-3.78	.00
	Australia	5	-1.7460	1.40115	.62661	-3.4858	-.0062	-3.59	-.20
	Philipino	4	-1.7600	2.49048	1.24524	-5.7229	2.2029	-5.35	.16
	German	3	-.8300	.62746	.36226	-2.3887	.7287	-1.55	-.40
	Total	137	-1.0416	1.15972	.09908	-1.2375	-.8457	-5.58	.24

Table 3.10 (b): ANOVA of Nationality Mean Scores

		Sum of Squares	df	Mean Square	F	Sig.
Expectation	Between Groups	2.122	7	.303	2.035	.055
	Within Groups	19.213	129	.149		
	Total	21.335	136			
Perception	Between Groups	21.640	7	3.091	2.198	.038
	Within Groups	181.420	129	1.406		
	Total	203.060	136			
Difference	Between Groups	15.188	7	2.170	1.669	.122
	Within Groups	167.726	129	1.300		
	Total	182.914	136			

There was no statistically significant difference at the $p < 0.05$ level in expectation mean scores for the different nationalities: $F(7, 129) = 2.035$, $p = 0.06$. The actual difference in the expectation mean scores between Bahraini (*M=6.86, SD=0.27*), United Kingdom (*M=6.68, SD=0.37*), South African (*M=6.83, SD=0.23*), Indian (*M=6.58, SD=0.74*), United States of America (*M=6.59, SD=0.35*), Australian (*M=6.79, SD=0.27*), Philippines (*M=6.46, SD=0.54*) and Germany (*M=6.34, SD=0.70*) did not differ significantly. The effect size,

calculated using eta squared, was 0.10, which in Cohen's (1988:284-287) terms is a medium effect. There was a statistically significant difference at the $p < 0.05$ level in perception mean scores for the different nationalities: F (7, 129) = 2.198, $p = 0.04$. The actual difference in the perception mean scores was medium. The effect size, calculated using eta squared, was 0.11. A post-hoc comparison using the Turkey HSD test indicated that the perception mean score for Bahraini (*M=6.00, SD=0.93*) was significantly different from Indian (*M =4.71, SD=2.31).* There was no significant difference between the other nationality groups. There was no statistically significant difference at the $p < 0.05$ level in difference mean scores for the different nationalities: F (7, 129) = 1.67, $p = 0.122$. The actual difference in the difference mean scores between Bahraini (*M=-0.86, SD=0.87*), United Kingdom (*M=-0.87, SD=1.04*), South African (*M=-1.05, SD=0.74*), Indian (*M=-1.87, SD=1.96*), United States of America (*M= -1.12, SD=1.19*), Australian (*M=-1.75, SD=1.40*), Philippines (*M=-1.76, SD=2.49*) and German (*M=-0.83, SD=0.63*) did not differ significantly. The effect size, calculated using eta squared, was 0.08, which is a medium effect. Hence the only significant observation that could be reported was in the perception scores between Bahraini and Indian nationalities suggesting that Indian nationals have a significantly lower perception of the quality of service in Awali hospital compared to Bahraini nationals.

3.3.4 Type of Patient

This analysis determined if there was a difference between patient type mean scores. This test if patients from the refinery referred by a general practitioner or a private walk-in patient evaluated Awali hospital service quality differently (Figure 3.7). A one-way analysis of variance (ANOVA) between groups was conducted to explore the impact of patient type in evaluating differences of service quality, as measured by the SERVQUAL instrument. ANOVA also tested the hypothesis to confirm H_1 and reject H_0 by showing a significant difference between expectation, perception and difference groups. Subjects were divided into groups according to their visit type and then grouped according to SERVQUAL mean scores (expectation, perceptions and differences) (Table 3.11 a & b).

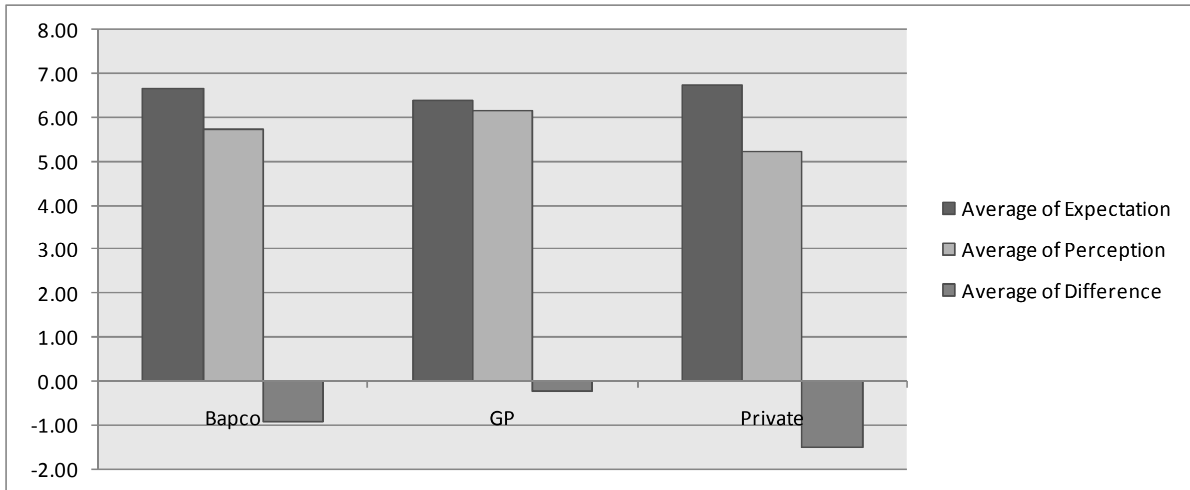

Figure 3.7: Average SERVQUAL scores grouped by type of patient

Table 3.11 (a): Descriptives of mean scores between patient types

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Expectation	Bapco	92	6.6609	.51319	.05350	6.5546	6.7671	3.87	7.00
	GP Referal	3	6.3667	.66161	.38198	4.7231	8.0102	5.68	7.00
	Private	61	6.7321	.35724	.04574	6.6406	6.8236	5.70	7.00
	Total	156	6.6831	.46136	.03694	6.6101	6.7560	3.87	7.00
Perception	Bapco	92	5.7352	1.07536	.11211	5.5125	5.9579	1.48	7.00
	GP Referal	3	6.1567	.82051	.47372	4.1184	8.1949	5.32	6.96
	Private	61	5.2280	1.77444	.22719	4.7736	5.6825	1.00	7.00
	Total	156	5.5450	1.40524	.11251	5.3228	5.7672	1.00	7.00
Difference	Bapco	92	-.9260	.94510	.09853	-1.1217	-.7303	-4.78	.24
	GP Referal	3	-.2100	.16093	.09292	-.6098	.1898	-.36	-.04
	Private	61	-1.5034	1.76759	.22632	-1.9561	-1.0507	-6.00	.42
	Total	156	-1.1380	1.35281	.10831	-1.3520	-.9241	-6.00	.42

Table 3.11 (b): ANOVA of Patient Type Mean Scores

		Sum of Squares	df	Mean Square	F	Sig.
Expectation	Between Groups	.493	2	.246	1.159	.316
	Within Groups	32.499	153	.212		
	Total	32.992	155			
Perception	Between Groups	10.580	2	5.290	2.739	.068
	Within Groups	295.497	153	1.931		
	Total	306.077	155			
Difference	Between Groups	14.866	2	7.433	4.231	.016
	Within Groups	268.798	153	1.757		
	Total	283.663	155			

There was no statistically significant difference at the $p < 0.05$ level in expectation mean scores for the different patient types: F (2, 153) = 1.159, $p = 0.32$. The actual difference in the expectation mean scores between Bapco employees (*M=6.67, SD=0.51*), GP referrals (*M=6.37, SD=0.66*) and Privates (*M=6.73, SD=0.46*) did not differ significantly. The effect size, calculated using eta squared, was 0.01, which is a small effect. There was no statistically significant difference at the $p < 0.05$ level in expectation mean scores for the different patient types: F (2, 153) = 2.74, $p = 0.07$. The actual difference in the expectation mean scores between Bapco employees (*M=5.73, SD=1.08*), GP referrals (*M=6.16, SD=0.82*) and Privates (*M=5.55, SD=1.40*) did not differ significantly. The effect size, calculated using eta squared, was 0.03, which is a small effect. There was a statistically significant difference at the $p < 0.05$ level in service quality difference mean scores for the different patient types: F (2, 153) = 4.23, $p = 0.02$. The actual difference in the difference mean scores was small. The effect size, calculated using eta squared, was 0.05. A post-hoc comparison using the Turkey HSD test indicated that the difference mean score for Bapco (*M=-0.93, SD=0.95*) was significantly different from private (*M =-1.50, SD=1.77).*

3.3.5 Types of Visits to Awali Hospital

For this analysis the type of visit was evaluated (Table 3.12 a & b) to determine if patients compare service quality differently when they have used the hospital as an Outpatient only or used it as an outpatient and inpatient, labelled Both (Figure 3.8). One questionnaire was returned with only inpatient selected and was excluded from the analysis due to less than 95% confidence for mean.

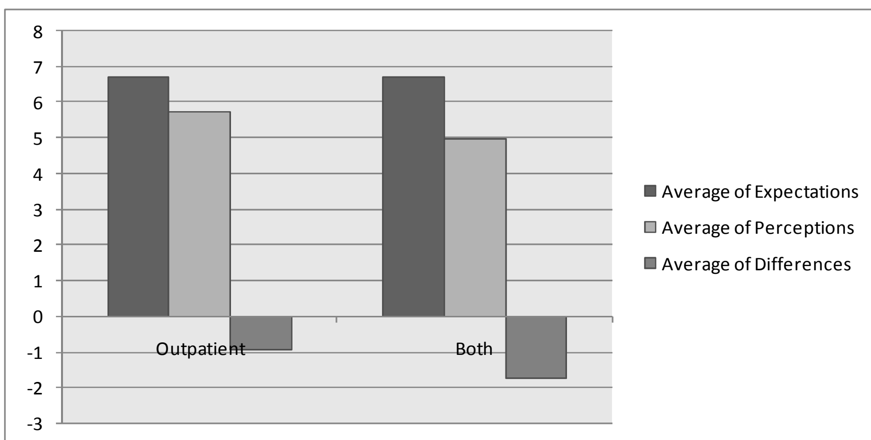

Figure 3.8: Average SERVQUAL scores grouped by type of visit to Awali hospital

Table 3.12 (a): Descriptives of mean scores between types of visits

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Expectation	Outpatient	114	6.6732	.49422	.04629	6.5815	6.7649	3.87	7.00
	Both	41	6.7027	.36277	.05666	6.5882	6.8172	5.70	7.00
	Total	155	6.6810	.46214	.03712	6.6077	6.7544	3.87	7.00
Perception	Outpatient	114	5.7426	1.20213	.11259	5.5196	5.9657	1.00	7.00
	Both	41	4.9844	1.76941	.27634	4.4259	5.5429	1.25	7.00
	Total	155	5.5421	1.40931	.11320	5.3184	5.7657	1.00	7.00
Difference	Outpatient	114	-.9305	1.10431	.10343	-1.1354	-.7256	-6.00	.24
	Both	41	-1.7183	1.78275	.27842	-2.2810	-1.1556	-5.58	.42
	Total	155	-1.1389	1.35715	.10901	-1.3542	-.9236	-6.00	.42

Table 3.12 (b): ANOVA of Type of Visit Mean Scores

		Sum of Squares	df	Mean Square	F	Sig.
Expectation	Between Groups	.026	1	.026	.122	.728
	Within Groups	32.864	153	.215		
	Total	32.890	154			
Perception	Between Groups	17.337	1	17.337	9.193	.003
	Within Groups	288.531	153	1.886		
	Total	305.868	154			
Difference	Between Groups	18.713	1	18.713	10.807	.001
	Within Groups	264.931	153	1.732		
	Total	283.644	154			

There was no statistically significant difference at the $p < 0.05$ level in expectation mean scores for the different type of visits: F (1, 153) = 0.122, p = 0.73. The actual difference in the expectation mean scores between Outpatient (*M=6.67, SD=0.*49) and Both (*M=6.70, SD=0.36*) did not differ significantly. The effect size, calculated using Eta squared, was 0.00, which is a small effect. There was a statistically significant difference at the $p < 0.05$ level in perception mean scores for the different type of visits: F (1, 153) = 9.19, p = 0.03. The actual difference in the perception mean scores between Outpatient (*M=5.74, SD=1.20*) and "Both" (*M=4.98, SD=1.77*) was significantly lower with medium effect. The effect size, calculated using Eta squared, was 0.06. There was a statistically significant difference at the $p < 0.05$ level in the difference mean scores for the different type of visits: F (1, 153) = 10.81, p = 0.01. The actual difference in the difference mean scores between Outpatient (*M=-0.93, SD=1.10*) and Both (*M=-1.72, SD=1.78*) was significantly lower with medium effect. The effect size, calculated using Eta squared, was 0.07.

A further analysis was done using types of visit to determine if there was a statistically significant difference between the five dimensions and types of visit (inpatient or inpatient

and outpatient, both) to Awali hospital. The SERVQUAL difference mean scores were used to run the analysis of variance (ANOVA). Table 3.12 (c & d) shows that a significant difference exist between the mean scores at the $p < 0.05$ level in tangible mean scores for the different type of visits: F (1, 153) = 6.211, p = 0.014. The actual difference in the tangible mean scores between outpatient (*M=-0.88, SD=1.20*) and both types (*M=-1.51, SD=1.82*) was significantly lower with small effect. The effect size, calculated using Eta squared, was 0.04.

Table 3.12 (c): Descriptives of the SERVQUAL dimensions between the different types of visit to Awali hospital

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Tangible	Outpatient	114	-.8750	1.20161	.11254	-1.0980	-.6520	-6.00	1.00
	Both	41	-1.5061	1.82130	.28444	-2.0810	-.9312	-5.75	.50
	Total	155	-1.0419	1.41387	.11357	-1.2663	-.8176	-6.00	1.00
Reliability	Outpatient	114	-1.0474	1.21358	.11366	-1.2726	-.8222	-6.00	.40
	Both	41	-1.7220	1.82257	.28464	-2.2972	-1.1467	-5.80	1.00
	Total	155	-1.2258	1.42568	.11451	-1.4520	-.9996	-6.00	1.00
Responsiveness	Outpatient	114	-1.0825	1.28402	.12026	-1.3207	-.8442	-6.00	1.00
	Both	41	-2.0439	1.76947	.27634	-2.6024	-1.4854	-5.60	.40
	Total	155	-1.3368	1.48460	.11925	-1.5723	-1.1012	-6.00	1.00
Assurance	Outpatient	114	-1.0987	1.21642	.11393	-1.3244	-.8730	-6.00	1.50
	Both	41	-1.8232	1.81852	.28400	-2.3972	-1.2492	-5.50	.50
	Total	155	-1.2903	1.43090	.11493	-1.5174	-1.0633	-6.00	1.50
Empathy	Outpatient	114	-.5502	1.20212	.11259	-.7732	-.3271	-6.00	1.33
	Both	41	-1.4959	2.21252	.34554	-2.1942	-.7975	-6.00	2.33
	Total	155	-.8003	1.58334	.12718	-1.0516	-.5491	-6.00	2.33

Table 3.12 (d): ANOVA of Mean Scores for different patient types

		Sum of Squares	df	Mean Square	F	Sig.
Tangible	Between Groups	12.010	1	12.010	6.211	.014
	Within Groups	295.842	153	1.934		
	Total	307.852	154			
Reliability	Between Groups	13.722	1	13.722	7.015	.009
	Within Groups	299.294	153	1.956		
	Total	313.017	154			
Responsiveness	Between Groups	27.874	1	27.874	13.689	.000
	Within Groups	311.546	153	2.036		
	Total	339.420	154			
Assurance	Between Groups	15.828	1	15.828	8.086	.005
	Within Groups	299.483	153	1.957		
	Total	315.310	154			
Empathy	Between Groups	26.968	1	26.968	11.490	.001
	Within Groups	359.107	153	2.347		
	Total	386.075	154			

A significant difference exist between the reliability mean scores at the $p < 0.05$ level for the different types of visit to Awali hospital: F (1, 153) = 7.015, $p = 0.009$. The actual difference in the reliability mean scores between outpatient (*M=-1.05, SD=1.21*) and both types (*M=-1.72, SD=1.82*) was significantly lower with small effect. The effect size, calculated using Eta squared, was 0.04. A significant difference exists between the responsiveness mean scores at the $p < 0.05$ level for the different types of visit to Awali hospital: F (1, 153) = 13.689, $p = 0.000$. The actual difference in the responsiveness mean scores between outpatient (*M=-1.08, SD=1.28*) and both types (*M=-2.04, SD=1.77*) was significantly lower with medium effect. The effect size, calculated using Eta squared, was 0.08. A significant difference exists between the "assurance" mean scores at the $p < 0.05$ level for the different types of visit to Awali hospital: F (1, 153) = 8.086, $p = 0.005$. The actual difference in the "assurance" mean scores between outpatient (*M=-1.10, SD=1.21*) and both types (*M=-1.82, SD=1.82*) was significantly lower with small effect. The effect size, calculated using Eta squared, was 0.05. And a significant difference exist between the "empathy" mean scores at the $p < 0.05$ level for the different types of visit to Awali hospital: F (1, 153) = 11.490, $p = 0.001$. The actual difference in the "empathy" mean scores between outpatient (*M=-0.55, SD=1.20*) and both types (*M=-1.49, SD=2.21*) was significantly lower with medium effect. The effect size, calculated using Eta squared, was 0.07. These results show that there are differences between the two types of patients in all five dimensions which suggest that patients who use the hospital as both types (inpatient and outpatient) perceive the quality of service differently.

3.4 SUMMARY

Different kinds of analysis were performed to determine any statistically significant differences between the mean scores of expectation and perception. It was clear from the results that a significant difference exists between the expectation mean scores and the perception mean scores with a large effect. The data also revealed significant differences in the mean scores between the five dimensions of quality of service as perceived by patients that used the hospital. The different demographic data highlighted some interesting differences in patient responses that will be discussed in more detail in the next chapter.

CHAPTER 4: *Discussion of Findings*

4.1 QUESTION 1: Is there a difference between perceptions of service quality offered by Awali Hospital and patients expectations?

In chapter 3, Table 3.5(a) shows the differences between expectation and perception scores of service quality by patients treated at Awali hospital. Using t-test analysis we demonstrated in Table 3.4(c) that there is a statistically significant difference at $p<0.05$ level between the perception and expectation SERVQUAL scores. Figure 4.1 below graphically demonstrates this clearly. The highest and lowest mean scores for expectations, perceptions and service quality differences were listed in Tables 3.5 (b-g). Answering question 1, "Is there a difference between perceptions of service quality offered by Awali Hospital and patient expectations" we examined the polarities between the expectation and perception mean scores and discussed these findings below.

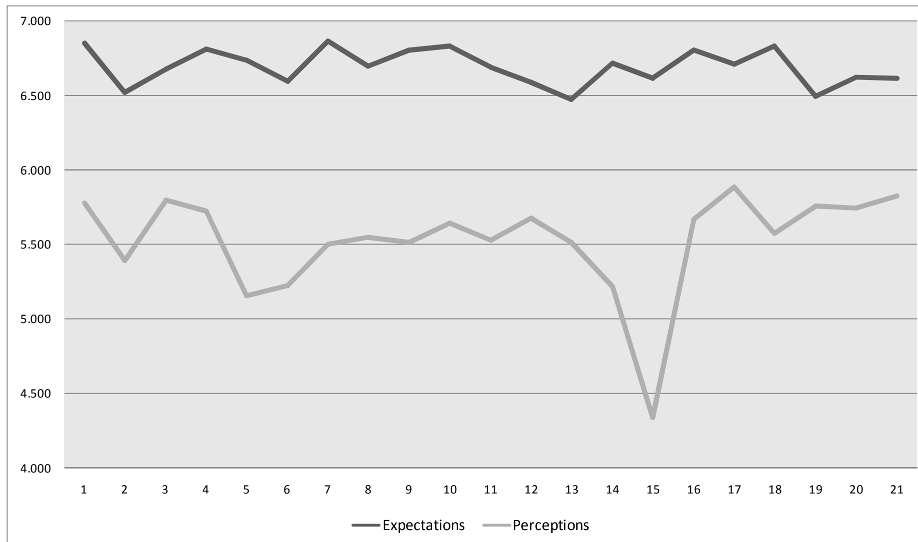

Figure 4.1: Expectation and Perception 21 Statement Scores

4.1.1 What the highest expectations indicate

- Two of the highest expectations (statement E7 and E10) were in the reliability dimension. The other two highest expectations (statement E1 and E4) were in the tangible dimension. While statement E18 is in the assurance dimension.
- The highest expectation of the top five expectations is statement E7 in the reliability dimension which states that "hospital medical reports should be accurate". This high

expectation of accuracy and reliability of the medical reports suggests that patients concern themselves with trust and assurance when receiving medical treatment at Awali hospital.

- Statement E1 and E4 in the tangible dimension, concern the cleanliness and hygiene of the hospital and pleasantness of the staff. A facet of Middle Eastern culture places high expectations on the appearance of service organisations. This high emphasis on the tangible dimension of appearance and politeness is subjective to people living in the Gulf countries.
- The patients' choices show that reliability, tangibility and assurance are critical dimensions of the service they expect from Awali hospital. The results infer an important message to management, namely, that they must ensure that the medical services are reliable, and the hospital is clean with pleasant proficient medical staff.

4.1.2 What the highest perceptions indicate

- Statements P1 and P3 from the tangible dimension were two of the five highest perception scores. This showed that Awali management have identified one of the five patient dimensions, the tangible dimension of cleanliness, hygiene and appearance by matching patient expectations.
- The highest perception statement was P17, of the assurance dimension, which suggested that "Awali hospital employees are caring". Statements P19 and P21, of the empathy dimension indicated that patients were treated with a warm and caring attitude.
- These highest patient perceptions suggested that hospital facilities were perceived to be clean and neat, and the staff were caring by showing individualised care and attention.

4.1.3 What the lowest expectations indicate

- Three of the lowest expectations (statements E6, E12 and E13) were concerning the responsiveness dimension. This showed that patients had low expectations pertaining to promptness when using the hospital services concerning information or relating convenient times to use the hospital services.

- Tangible statement E2 showed low expectations with regard to the available parking for visitors.
- One of the lowest expectations, statement E19, was in the empathy dimension. It was surprising that patients expressed low expectation for individualised medical attention.

4.1.4 What the lowest perceptions indicate

- Two of the lowest perceptions, statements P6 and P15, were in the responsiveness dimension. P15 was the least of the lowest perception, suggesting that considerable upgrading is needed to improve the response times for answering the front desk telephone for incoming outside calls. This is the first perception patients get of the hospital which has been identified as the weakest. The same applies for P6 which is concerned with prompt service. This is a concern because patients' expectations for E6 are of the lowest which, it could be argued, is directly related to their poor perceptions.
- One of the lowest perceptions that was also one of the lowest expectations was statement 5 which was related to the hospital using up-to-date equipment. Statement P2 was also a poorly perceived area of Awali hospital, which referred to the lack of visitors parking. Management need to upgrade these areas to improve the hospital appearance.
- Two of the lowest perceptions, statements P5 and P14, were in the assurance dimension. Statement P5's low perception was probably caused by the small size of the hospital and not being able to provide medical equipment, such as MRI's, CT scans and laboratory equipment etc. These patients are being referred to the larger hospitals. But statement P14's low perception which states, "There are experienced personnel on duty on weekends at Awali hospital", is a concern. This is an area that needs to be addressed by management and upgraded urgently.
- The patients' responses clearly highlight that there is a low expectation concerning responsiveness from Awali hospital staff. The response to outside calls has been raised by management a number of times but has clearly not been resolved. Parking has also been highlighted by patients as a problem in the past and has not been upgraded.

4.1.5 What the largest differences indicate

- The largest differences between expectation and perception were in the reliability, responsiveness and assurance dimensions. It appears, from the differences, that Awali hospital has placed a large amount of focus on the empathy and tangible dimensions of service quality and neglected other key dimensions.
- The largest difference was statement SQ15 which was from the responsiveness dimension. As discussed, many patients are disillusioned with the hospital regarding the response time for answering incoming calls.
- Statement 5, concerning up-to-date equipment, has been discussed and is an aspect that cannot be upgraded due to the size of the hospital.
- Statement SQ7 was the only reliability dimension statement amongst the largest differences found. This difference between the accuracy of medical reports that patients expect and what they actually receive from the hospital is another important concern that management need to investigate. Accuracy is an essential requirement of any hospital and quality gaps in this area need urgent attention.

4.1.6 What the smallest differences indicate

- All three empathy dimension statements, SQ19, SQ20 and SQ21 are in the "5 smallest differences" category. This is clearly seen in Figure 4.1 where the two lines are closing in the last three statements. This small gap between expectation and perception reflects that the staff show great empathy towards the patients, providing individualised medical attention, understanding and caring attitudes.
- Statement SQ17 could have been classified as an empathy dimension statement as well. This adds to the previous point mentioned about the large amount of attention placed on care in Awali hospital.
- The only statement not related to care and attention was SQ3 which highlights a large amount of focus on the patient/medical staff interaction. But SQ3 also shows that the hospital staff place a large emphasis on appearance and pride themselves in appearing neat and caring.

4.2 QUESTION 2: How do the perceptions of Awali hospital service measure up against patients' expectations along each of the five SERVQUAL dimensions?

The key to this section is to evaluate the different dimensions of Awali hospital service to help mould the critical areas that need attention and replicate other areas where patients are satisfied. The data analysis in Table 3.6(c) showed a statistically significant difference between the expectations and perceptions along each of the five SERVQUAL dimensions. Ziethaml and Bitner, 2003 stated that research suggested that customers perceive quality in a unidimensional way. The multivariate test in Table 3.7(b) attested to the fact that a significant difference exists between the different dimensional gaps. This is illustrated graphically in Figure 3.3 which shows the mean differences for each dimension are different. The Bonferroni pairwise comparisons between the SERVQUAL dimensions in Table 3.7(c) showed no significant difference between reliability, responsiveness and assurance. There was, however, a significant difference between the tangible, responsiveness and assurance dimensions but no significant difference with the reliability dimension.

So how well does Awali hospital perform along the SERVQUAL dimensions? The most important finding was that all five dimensions have negative SERVQUAL scores, which implies that none exceeded patients' expectations. The least negative SERVQUAL dimension of service was empathy which was significantly different from the other four dimensions. This was highlighted in the previous section with three of the five smallest differences coming from the three empathy statements. A major problem area in service quality in Awali hospital was that the largest negative dimension of service was responsiveness with no significant difference from reliability and assurance dimensions which all had large negative scores.

> *Quoting from chapter 2: "O'Connor et.al., (2000:10) found in their study that all groups working within the health clinic (employees, administrators, physicians) underestimated their patients' expectations of service reliability, assurance, responsiveness, and empathy, but all overestimated patient expectations for tangible dimension.*

In this study, the empathy dimension has the better of the four scores which is something Awali hospital staff have identified and achieved in delivering to patients.

But the three main weaknesses in service quality are three very important areas in any hospital service: reliability, responsiveness and assurance.

As part of this question it would be very helpful to further breakdown the three dimensions with the greatest service quality differences into their constituent questions to help further focus on particular problem areas.

4.2.1 The Reliability Dimension

- In this dimension the largest service quality difference was, “Awali hospital’s’ medical reports are accurate”, statement 7. This indicated that patients did not feel secure with the standard of reporting when receiving medical testing or treatment in Awali hospital. The departments generating reports and tests need to upgrade and improve their standards. Patients had very high expectations for this statement but their perceptions were the contrary.
- One question in this dimension that had a large service quality difference and needs urgent upgrading and close medical evaluation was, “I feel confident when receiving medical treatment at Awali hospital”, statement 10. The patients’ perceptions about confidence when receiving medical treatment in any hospital should meet or be close to their expectations. This is one area where patients would decide never to use that hospital service again.
- The smallest service quality difference in this dimension was, “Awali hospital employees always respected my privacy”, statement 16. This statement is closely related to the empathy dimension in which it was shown to be the strongest service dimension of Awali hospital.

4.2.2 The Responsiveness Dimension

- The largest service quality difference in all the statements, question 15 which states, “Awali hospital reception answered my phone calls promptly”, is in this dimension. The business concern here is how many potential customers go to another hospital because their phone calls are not answered or they are unable to make an appointment. The other concern is if someone needs to contact either a doctor or require urgent medical attention, they are unable to reach the hospital.

- The second largest service quality difference in this dimension was, “Awali hospital offers prompt service every time”, statement 6. Research has never been conducted to determine patient waiting times and this is clearly a weakness in Awali hospital and needs further investigation by hospital administration.
- Another interesting observation was that patients’ expectations were not as high for responsiveness (*M=6.*59) as the other dimensions (*Tangible M=6.71, Reliability M=6.79, Assurance M=6.74 and Empathy M=6.58)* but their perceptions were very low. This says that patients are willing to wait to be served and understand the demands in medical services but not for unrealistic periods which is the case in Awali hospital.

4.2.3 The Assurance Dimension

- The largest service quality difference in this dimension was, “Awali hospital has up-to-date equipment”, statement 5. This probably relates to the largest difference in reliability statement, “Awali hospital’s medical reports are accurate” whereby patients have perceived that the equipment used in Awali hospital is unreliable and they are not assured of accuracy and reliability of the medical reports.
- The second highest service quality difference that needs further breakdown was, “There are experienced personnel on duty on weekends at Awali hospital”, statement 14. Because the majority of patients come from the refinery and a two day weekend applies for all Bapco employees the hospital is reduced to minimal staff over weekends. This has lead to poor perceptions of experienced staff on duty on weekends. The numbers of private patients have increased over the years and the hospital is now serving a growing private community on the island. As a result, the administration needs to upgrade the services on a weekend. Additional data analysis that was not reported in Chapter 3 due to time constraints showed that the mean perception scores for private patients was lower (*M=4.85, SD=1.*85) than Bapco employees (*M=5.43, SD=1.*52) but was not statistically different at p=0.05 level ($F(2,153) = 2.4$, p=0.096). The hospital administration needs to negotiate with Bapco management to upgrade overtime salary scales for hospital staff, such as doctors and nurses so that weekend after hours are rewarded and more medical staff work weekend duties.

A further breakdown is required to indentify if low or high, expectation, perception or service quality differences are related to demographic issues such as nationalities, patient types or gender etc.

4.3 QUESTION 3: Are service gaps in Awali hospital perceived differently amongst different customer segments?

We used analysis of variation statistics (ANOVA) to look at different patient demographics against the total expectation, total perception and total differences to determine if different segments score the overall evaluation significantly different at p=0.05 level. In the previous sections, we determined that there was a significant difference at p=0.05 level between expectations and perceptions. Now individually we are looking at the different genders, number of visits to the hospital, nationality, patient types and type of visit to Awali hospital and evaluating their expectations, perceptions and service quality differences scores to determine if customer segments view aspects of service quality differently.

4.3.1 Gender Differences

The ANOVA data analysis in Table 3.8(b) showed a significant difference between mean scores for males and females for expectation and SERVQUAL differences but no significant difference for perceptions at p=0.05 level. Though the eta effect size for females was small, data revealed that females who use Awali hospital have higher expectations for service quality but lower perceptions compared to males. The demographics did not indicate what percentage were Arabic locals compared to expatriate females and therefore no significant conclusion could be made as to why female expectations were higher than males. The only assumption that could be made was that Muslim females have preferences due to Islamic laws about being seen by female doctors and in Awali hospital the majority of medical doctors are males. Overall the females SERVQUAL differences were significantly larger than males and suggest that the administration needs to investigate and identify what expectations are identified by females in order to close the SERVQUAL differences.

4.3.2 Number of Visits to Awali Hospital

The data analysis from this demographic revealed no significant difference at $p=0.05$ level between the number of visits by patients and their expectations and perceptions. The data was spread quite broadly and could only be analysed when grouped. The only difference between the groups, but which was not statistically significant, was the service quality differences. The smallest difference was in patients who used the hospital 11 visits and above. While the largest difference was in patients who visited the hospital 5 to 10 times. The smallest differences were expected from patients who use the hospital more than 11 times as it made sense that customers would not use a service they were not happy with.

4.3.3 Nationality

The analysis of variance for nationalities showed a significant difference in the perception mean scores. A post-hoc comparison, using the Turkey HSD test, indicated that the significant difference in perception scores was between Bahraini and Indian nationalities. The Indian nationals had a lower perception compared to Bahraini's. This was not expected as the hospital receives more complaints from Bahraini's than Indian nationals. Another interesting finding was that more expats completed the survey questionnaire than Bahraini locals showing their lack of interest in service quality feedback. The highest expectations observed came from Bahraini nationals which suggested that their expectations from a majority expat staffed hospital were high. The lowest expectation came from Philipino nationals. The majority of Philipino patients that use Awali hospital are Bapco employees and show gratitude for being given free medical treatment. The lowest but not significantly different at $p=0.05$ level perceptions mean score was also from the Philipino nationals. This showed that their overall perception of the service was low even though their expectations were low; possibly due to the overall quality of service offered by Awali hospital being significantly different from people's expectations. The largest service quality mean score difference came from Indian nationals but overall every nationality's rating was largely negative with no significant difference at $p=0.05$ level. This highlighted that the overall expectations were high but the overall perceptions of the hospital services were low regardless of which nationality they were from.

4.3.4 Patient Type

This analysis was to determine whether patients who use the hospital (Bapco employees, patients referred by a general practitioner or private patients) evaluate the overall quality of service differently. Only three questionnaires were returned by GP referrals and showed no significant differences. We have discussed aspects of this topic earlier and identified that private patients were more critical concerning standards of service but this was not proven statistically. Evaluating the mean scores using ANOVA, the following differences were hypothesised. There was no significant difference between expectations and perceptions mean scores but a significant difference in the service quality difference scores at p=0.05 level. Looking at the mean scores, private patients scored the highest expectation and the lowest perceptions. This gave private patients a significantly larger difference score to Bapco patients with a small eta effect. Individual assessments of each statement indicated that private patients were more disillusioned regarding services being performed as and when expected compared to Bapco patients. This is illustrated graphically in Figure 4.2.

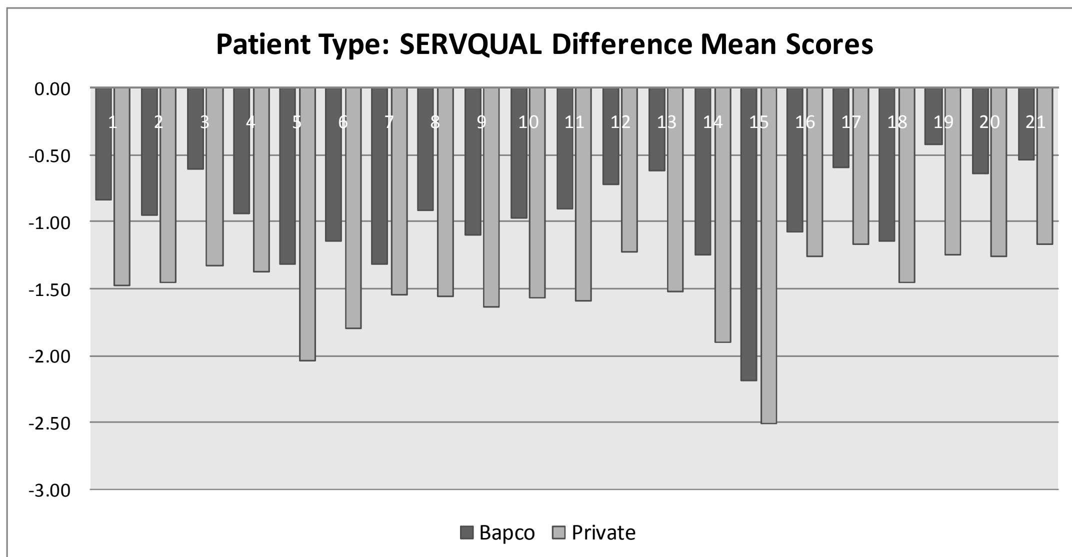

Figure 4.2: Patient Types Comparison of Individual Statements

Table 4.1 lists the differences between Bapco and private patients, from largest to smallest differences, and highlights that only two statements (highlighted grey) were common to both patient types. The two common weaknesses in Awali hospital services were, "Awali hospital reception answered my phone calls promptly",

statement 15 and "Awali hospital has up-to-date equipment", statement 5. These two statements need to be looked at and upgraded considerably by the hospital administration as they are common problems identified by all patient types.

Table 4.1: Common Differences for SERVQUAL Mean Scores

Bapco		Private	
Statement	***Mean Score***	***Statement***	***Mean Score***
15	-2.18	15	-2.51
5	-1.32	5	-2.03
7	-1.32	14	-1.90
14	-1.25	6	-1.80
6	-1.14	9	-1.64
18	-1.14	11	-1.59
9	-1.10	10	-1.57
16	-1.08	8	-1.56
10	-0.98	7	-1.54
2	-0.95	13	-1.52
4	-0.93	1	-1.48
8	-0.91	2	-1.46
11	-0.90	18	-1.46
1	-0.84	4	-1.38
12	-0.72	3	-1.33
20	-0.64	16	-1.26
13	-0.62	20	-1.26
3	-0.61	19	-1.25
17	-0.60	12	-1.23
21	-0.53	17	-1.16
19	-0.42	21	-1.16

4.3.5 Type of Visits to Awali Hospital

This customer segment looks to find out if patients perceive the hospital service differently according to the type of visit or visits to Awali hospital. The data analysis showed a significantly different at p=0.05 level mean score for perception and service quality differences with an eta medium effect. Patients that used the hospital both as an inpatient and an outpatient, had perceptions and differences that were significantly larger than patients that only used the hospital as an outpatient. The data analysis revealed no significant difference between patient expectations. Once again each statement was individually assessed and it was found that patients who used the hospital both as inpatient and outpatient were more disillusioned regarding services being performed as compared with outpatients only. This is illustrated in Figure 4.3.

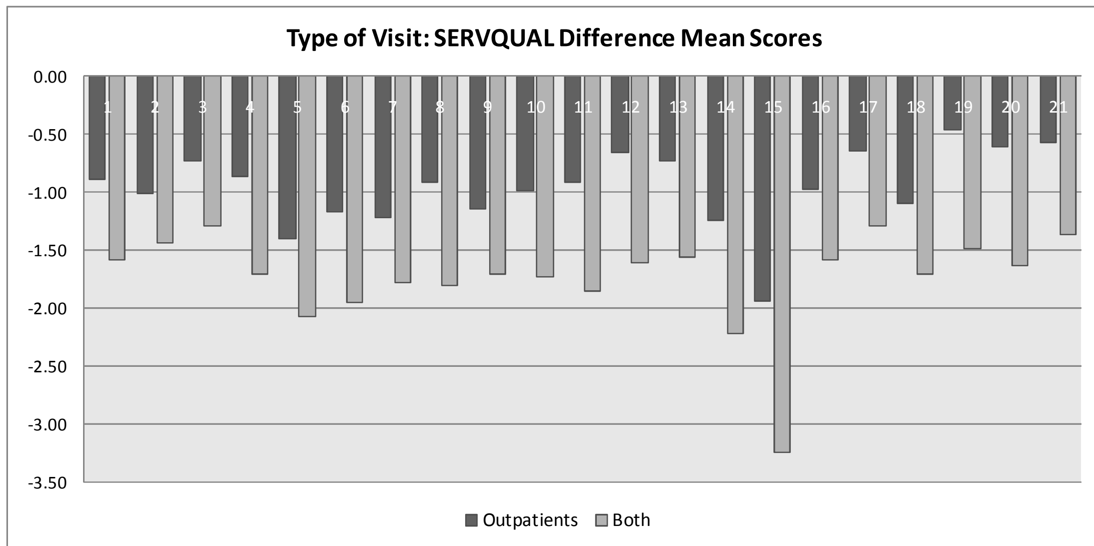

Figure 4.3: Type of Visit Comparison between Individual Statements

All 21 statement mean scores were larger for both visits as compared to patients who only used the hospital as an outpatient. This indicated that patients that used the hospital as an inpatient and outpatient were decisive of weaknesses in the services and scored their perceptions very low. It was difficult to identify which areas were worse than others. It was decided to group the statements into their dimensions to identify which dimension had larger differences between the two types of visits. Figure 4.4 illustrates the five SERVQUAL dimensions as seen by the two patient types.

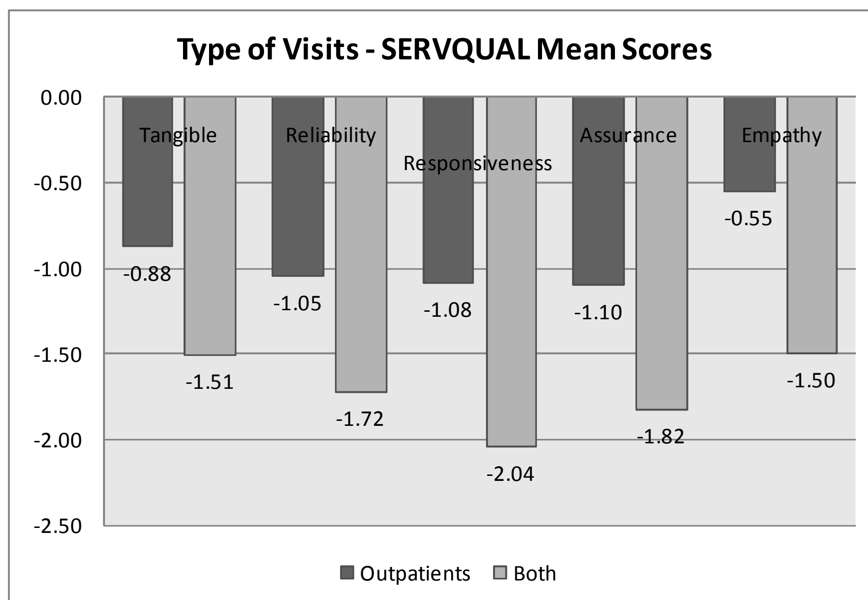

Figure 4.4: Type of Visit Comparison between SERVQUAL Dimensions

One-way analysis of variance was run to determine if there was a statistical significant difference between the different types of visits at p=0.05 level. Table 3.12(d) showed that all five dimensions were significantly different but responsiveness and empathy had greater effect than tangible, reliability and assurance that had a small effect. This is clear in Figure 4.4. All replies showed a weakness in responsiveness but an interesting finding was that patients who had used the hospital as both types of visits had a much greater SERVQUAL difference in empathy. Empathy has been identified as the dimension that Awali hospital showed greater strength in compared to the other dimensions. But patients with both visit types highlight that as an inpatient the services offered are far worse in all five dimensions especially in responsiveness and empathy. As an inpatient these two dimensions are probably the main areas of service you expect to be efficient. Hospital administration need to look into the services offered as an inpatient: rooms, ward nurses response times to calls, theatre etc. and upgrade these services to close these key gap differences.

4.4 PATIENT COMMENTS

At the end of the questionnaire was an open space for comments about the services at Awali hospital. All the comments are listed in Appendix 4. Underlined are all the negative comments concerning areas that need upgrading. An interesting observation was that the negative comments listed matched the main overall SERVQUAL differences, for example "*actual hospital is outdated*", "*there is no choice and simply no continuity which is important in establishing confidence and trust*", "*I have been dissatisfied with the nursing care on A ward some years back. It was frankly very poor. I hope this has improved"* and *"non-availability of essential staff such as surgeon and anaesthesiologist during weekends and back-shifts needs to be addressed"*. It is clear from the data and comments that Awali hospital has definite service quality weaknesses and needs urgent upgrading to close these service quality gaps. There are some positive pointers but the majority, all five dimensions, have negative SERVQUAL scores.

4.5 SUMMARY

- The data revealed a clear difference between what patients expected and what they received. It identified a significant consumer gap (Gap 5) between the expected and perceived services offered by the hospital. The questionnaire identified areas in the daily operations of the hospital where patients expected to receive high quality of service and other areas where they were not as critical about the quality of service they received. The questionnaire did highlight service quality weaknesses as perceived by patients' poor perception scores for services they received when using the hospital.
- The analysis also showed significant differences between the five different dimensions of service quality as perceived by patients using Awali hospital. It identified areas that are expected to be high by hospital standards but which received poor service quality scores, such as responsiveness and reliability.
- The demographic data also highlighted some significant differences. But the main demographic factor that was identified was the large differences between patients who used the hospital only as an outpatient and patients that had been admitted as an inpatient and used the hospital as an outpatient.
- All these difference need to be addressed by management on a continuous improvement process. In the next chapter we will highlight these differences and suggest managerial implications.

CHAPTER 5: *Conclusions*

5.1 INTRODUCTION

It is clear from the SERVQUAL results that there is a gap between what patients expect and what Awali hospital is providing. A lot of criticism, over a number of issues, has been published about the SERVQUAL instrument but clearly this instrument does identify and has identified weaknesses in Awali hospital services that management can now work at upgrading. The research findings show that SERVQUAL identified key service quality shortfalls and is a more than sufficient yardstick to measure service quality in a hospital. Ziethaml and Parasuraman (2004:19) stated that a good listening system could incorporate approaches to address all possible reasons for not understanding what customers expect. Reading the patient comments and connecting it to what the research data has revealed shows that administration and medical staff do not know what customers expect. Knowing what customers expect is the most important step in delivering quality service. Using the Parasuraman, Zeithaml and Berry (1988) SERVQUAL model we need to look at the Gaps 1-4 and identify the service quality delivery shortfalls of Awali hospital thereby identifying ways to close Gap 5 by implementing change.

5.2 GAP 1: Does Awali hospital know what customers expect?

The analysis highlighted that management do not know what customers expect and if they want to close Gap 1 (which is managements' perception of customers' expectations) that will assist in closing Gap 5 (which is closing the gap between expected service and perceived service), they need to carry out the following:

- Marketing research – clearly Awali hospital has not done enough market research to identify why patients' expectations are not being met. Awali hospital has made no effort to understand customers' needs and expectations. Clearly management have not communicated with customers to understand their needs.
- Upward communication – these service quality gaps must have been identified by patient-contact personnel while dealing with the patients but management have not encouraged suggestions, by personnel, to identify and upgrade the

areas of concern. Administration need to arrange more formal or informal meetings to give patient-contact personnel an opportunity to communicate openly. Clearly these channels of communication are closed in Awali hospital and management are not getting feedback about problems encountered in service delivery and about how customers' expectations are changing.

- Levels of Management – the levels of management between Awali hospital and the oil refinery makes communication difficult. Senior refinery management need to be more responsive to hospital concerns and upgrades identified by hospital management. The refinery management need to understand hospital management (who deal with and serve patients). Also related to the previous point that due to lack of communication between patient-contact personnel and management the wrong messages are also being communicated by hospital management to senior refinery management concerning patient expectations. Zeithaml, Parasuraman and Berry (1990:68), stated that a rich reservoir of knowledge about customers' expectations does little good if it is blocked at the upper echelons of management.

5.3 GAP 2: Has Awali hospital selected the right service designs and standards?

We discussed in the previous section that Awali hospital has not managed to meet patient expectations. This would have impacted on implementing the right service designs and standards. Any service company that incorrectly perceives customer expectations will not implement correct customer-driven service designs and standards. A recurring challenge in service companies is the difficulty of translating customers' expectations into service quality specifications (Zeithaml and Parasuraman, 2004). To close Gap 2, Awali hospital management needs to identify and match new-service innovations and actual service process designs with customer expectations. Management must first understand exactly what the customer wants. If this understanding is not present, it will be impossible for management to know whether their expectations are aligned with customer specifications.

Therefore the following are requirements for possible service design and standards upgrades to Awali hospital:

- Getting top refinery management committed to service quality – firstly, for any change to happen top management need to realise that a service quality gap exists and be committed to change and lead the improvement process. Management must also be willing to provide the necessary resources and training to service workers to deliver quality. An example of this would be providing an upgraded switchboard to the hospital with proper receptionist training to improve the response of incoming calls. Management must also be willing to implement accredited hospital quality assurance programs so that an ongoing program exists for improving the quality of services.
- Feasibility – currently the hospital does not have the necessary equipment capabilities to meet all patient requirements for service. Things like up-to-date equipment, sufficient parking and improved reception switchboard need to either be bought or upgraded which would require budgetary planning while other areas such as reliability, response times and assurance can be changed and upgraded. It is these areas that management need to identify and upgrade in the short-term by writing new policies and procedures to improve service quality and meet patient expectations.
- Standardising routine tasks in the hospital to achieve consistency by implementing a hospital information system to deal with patient records (electronically) and issuing blood tests, x-rays or prescribing drugs etc. and thereby delivering services more efficiently. Hospital management also need to evaluate the current operating procedures and identify bottleneck situations, for example on weekends where more medical staff are required to deal with an increased number of patients and make the services more convenient and efficient.
- Goal-setting – Awali hospital does not have a mission statement, a 5-10 year goals statement or an objectives statement displayed anywhere in the hospital. No goals are communicated to patient-contact personnel for the hospital and therefore the staff has no clear direction about what Awali hospital wants to accomplish. The only strategic direction communicated is a brief two day workshop where hospital management discuss strategic direction with refinery

general management but the goals set during this workshop are not fed back to the hospital staff. In addition to this, the service quality goals set are based around company-oriented standards and not the hospital customer-oriented standards. The hospital need to implement some performance measure to meet its service quality goals.

5.4 GAP 3: Is Awali hospital delivering to service standards?

Research shows that employee and customer satisfaction are positively correlated, as are climate for service, climate for employee well-being, and customer perceptions of service quality (Zeithaml and Parasuraman, 2004:20). The difference between service specifications and the actual service delivered is the service performance gap (Gap 3): this is when employees are unable and/or unwilling to perform the service at the desired level (Zeithaml, Parasuraman and Berry, 1990:89). The research has identified patient expectations and has discussed the appropriate standards that need to be implemented in Awali hospital for these to be met. But this does not guarantee that if management make these necessary changes that high quality service performance is a certainty. Standards must be backed by appropriate resources (people, systems, and technology) and must be enforced to be effective – that is, staff must be measured and compensated on the basis of performance along those standards (Parasuraman, *et.al.*, 1988:20).

- Providing role clarity – highlighted in the previous section was the lack of effort by management to communicate goals, mission, objectives and philosophy of the hospital. This lack of communication and feedback has broken down the confidence and competence of patient-contact personnel and is reflected in how patients evaluated the quality of services at Awali hospital. The overall scores showed that patient-contact personnel were empathetic but lacked assurance, responsiveness and reliability when dealing with patients. This highlights that role ambiguity exists within the hospital. Clearly, if hospital staff are not answering the incoming calls they lack the competence or lack the confidence to address this issue with management. They do not understand the urgency and the impact that a delay in response time could have and do not understand the philosophy and objectives of a hospital.

- Eliminating role conflict – the way Awali hospital and Bahrain Petroleum (Bapco) need to go about communicating role clarity and removing role conflict is to determine if the patient-contact personnel have the same expectations as managers and patients. Management need to determine the flow of operations and isolate breakdown areas where one area is delaying another area. Do the doctors have a delayed wait for laboratory or x-ray reports that are causing delays in the response back to the patients? And if there are delays are the patient-contact personnel being informed and communicating this back to the patients. Management need to also investigate if there are departments where employees have more work to do than they have time to do it. Are the demands in certain jobs so high that it is difficult to effectively serve customers? This was one of the issues poorly perceived by patients who were concerned about not having experienced staff on duty during weekends.
- Poor employee-job fit – the big question for management is, "do I have a competent and able employee performing the job". This is a common problem in Bahrain and other countries where governments are trying to develop the human resources by enforcing laws implementing locals or previously disadvantaged people into strategic positions. In Bahrain the law requires companies to recruit a certain percentage of local people. The problem is not if the local-hire performs in their jobs correctly. The problem is if the local-hire employee does not perform their duty correctly it is not easy to dismiss that employee because of labour laws. And the poor employee-job fit affects work morale amongst other employees as they have to work twice as hard to get the job done which thereby affects the quality of service. Bapco senior management need to stand by and support hospital management by giving sufficient time and resources to the recruitment or dismissal process.
- Poor technology-job fit – this was the second lowest perception by patients and we have discussed it as a feasibility issue for upgrading the service design. We also need to mention that for employees to do their jobs well, the hospital needs to give up-to-date tools and equipment.
- Teamwork – patient-contact employees and managers do not work well as a team in trying to resolve problems or contribute to the team effort in serving

customers. The support staff such as stores, cleaning janitors and accounts needs to support each other to provide good service to the customer-contact personnel. Bapco senior management need to recognise and encourage team work that provides quality service with financial incentives.

5.5 GAP 4: Is Awali hospital matching performance to promise?

The hospital is owned by Bapco and run by refinery employees. Because the hospital in not funded by patient numbers, the hospital does not advertise its services. All communication concerning the quality of service about Awali hospital is from word-of-mouth. The two main groups of patient types are Bapco employees and privates. The privates are made up of majority expatriate community in Bahrain and because the hospital is serviced by expatriate medical staff a large number of expatriates prefer to be treated by Western medical staff. It was clear from the data that the majority expatriate (excluding Bahraini) nationalities and private patients had the largest service quality differences. The hospital is clearly not matching performance to what patients are expecting when coming to Awali hospital and management need to implement a number of the points mentioned above to close Gap 5, so patients get what they expect from a private hospital. The fact that Bapco and Awali hospital are not patient number conscious is probably the most significant weakness in the hospital makeup. Managers are not profit driven at almost $100 a barrel of oil and therefore the shortfalls are not addressed or corrected. A paradigm shift is needed by senior management and hospital management to shift the focus from not only offering a service to the refinery workers but offering a world class quality service that is promised to everyone and anyone that uses the hospital over and over again. The shift will turn a current liability to Bapco into a profit generating asset.

5.6 CLOSING GAP 5 AND FURTHER RESEARCH

In this dissertation the findings were analysed and discussed relating to the empirical research data of patients' assessment of the quality of service at Awali hospital. The results revealed four key internal shortfalls or gaps that could contribute to poor quality of service as perceived by patients. The key to closing Gap 5 was to close Gaps 1 through 4 and keep them closed. Zeithaml, Parasuraman and Berry (1990) laid out a sequence of questions in which companies can employ to measure and improve

quality of service. The sequence of questions in Figure 5.1 corresponds to the five gaps and specifically guides managers through a process in helping to understand the nature and extent of Gap 5 and then in turn search for evidence of Gaps 1 through 4, taking corrective action wherever necessary. Identifying these gaps in service quality, Awali hospital needs to look forward and not backwards. What they have done in the past has not delivered the standards expected by patients. The future holds two paths, one to remain doing things as they have and the other to stand up, identify the shortfalls and be selective in what needs to be done first rather than trying to do everything all at once.

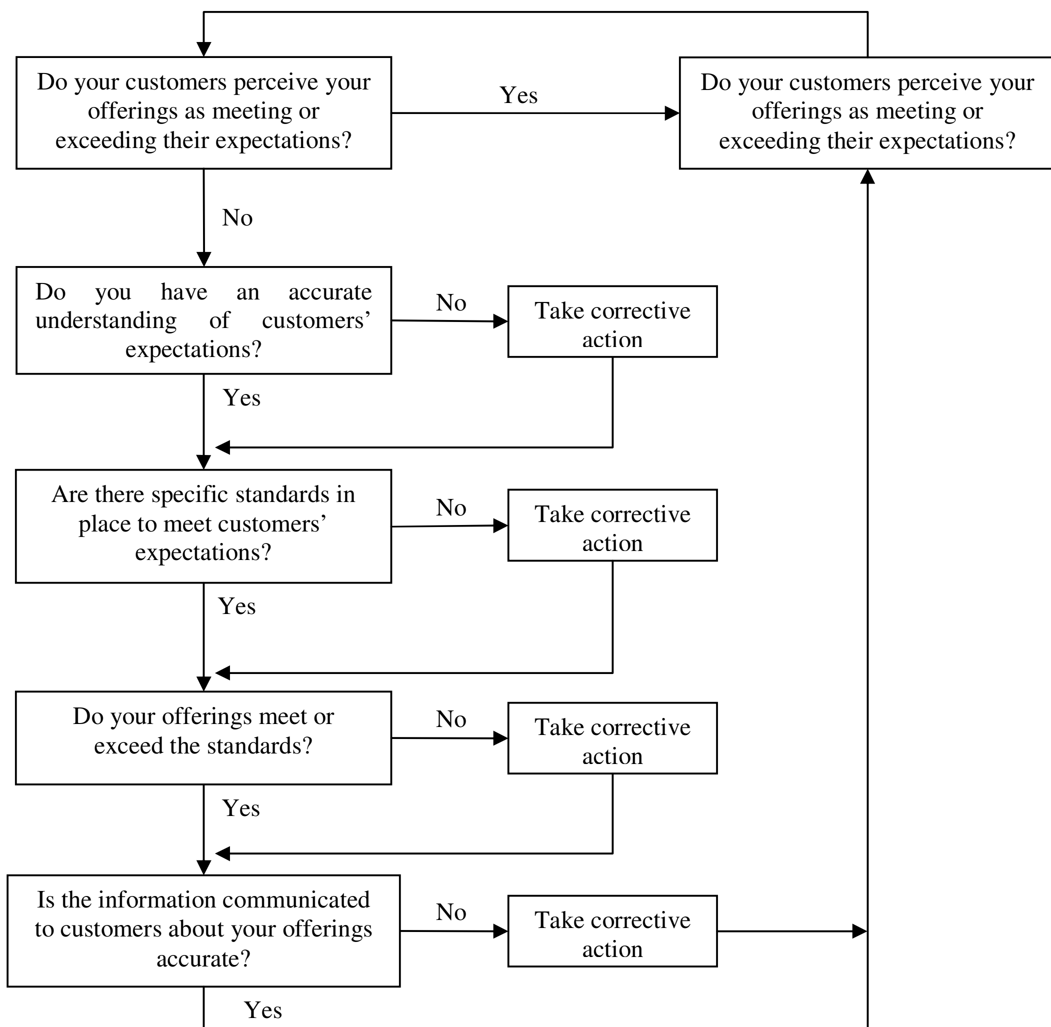

Figure 5.1: Process Model for Continuous Measurement and Improvement of Service Quality (Zeithaml, Parasuraman and Berry, 1990:47)

This would require information – information concerning: what patients desire most from service, how well Awali hospital is serving the private community in the Kingdom of Bahrain compared to competitors, and the causes of service weaknesses that need to be corrected. This type of information would give hospital management a basis for prioritizing and sequencing service-improvement actions for the future.

Quality in a service or product is not what you put into it.
It is what the client or customer gets out of it.
PETER DRUCKER

REFERENCE LIST

BABAKUS,E. and MANGOLD,W.G. 1992. Adapting the SERVQUAL scale to hospital services: an empirical investigation. **Health Services Research.** vol. 26, no. 6, pp. 767-786.

BABAKUS,E. and BOLLER,W. 1992. An empirical assessment of the SERVQUAL Scale. **Journal of Business Research.** vol. 24, pp. 253-268.

BAHRAIN COLLEGE OF HEALTH SCIENCES, 1999. **Health Care in Bahrain.** [Online]. Available: http://www.chs.edu.bh/About%20the%20college.htm. [Accessed 11 July 2004].

BAHRAIN NEWS AGENCY, 2006. **Healthcare top priority for voters.** [Online]. Available: http://english.bna.bh/?ID=52576. [Accessed 20 June 2007].

BATESON,J.E.G. and HOFFMAN,K.D., 1999. **Managing Services Marketing** (4th Edition). Orlando, Florida: The Dryden Press Harcourt Brace College Publishers.

BENNINGTON,L. and CUMMANE,J. 1998. Measuring service quality: A hybrid methodology. **Total Quality Management.** vol. 9, no. 6, pp. 395-405.

BERKOWITZ,E.N., KERIN,R.A., HARTLEY,S.W., and RUDELIUS,W., 2000. **Marketing** (6th Edition). New York: The McGraw-Hill Companies.

BERRY,L.L., PARASURAMAN,A., and ZEITHAML,V.A. 1988. The Service - Quality Puzzle. **Business Horizons.** vol. September-October, pp. 35-43.

BERRY,L.L. and PARASURAMAN,A., 1991. **Marketing Services** New York: The Free Press, A Division of Macmillan, Inc.

BERRY,L.L., PARASURAMAN,A., and ZEITHAML,V.A. 1993. Ten lessons for improving service quality. **Marketing Science Institute.** vol. May, pp. 93-104.

BLANCHARD,R.F. and GALLOWAY,R.L. 1994. Quality in retail banking. **International Journal of Service Industry Management.** vol. 5, pp. 5-23.

BOPP,K.D. 1990. How patients evaluate the quality of ambulatory medical encouters: A marketing perspective. **Journal of Health Care Marketing.** vol. 10, no. 1, pp. 6-15.

BOSHOFF,C. and GRAY,B. 2004. The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry. **South African Journal of Business Management.** vol. 35, no. 4, pp. 27-36.

BROWN,T.J., CHURCHILL,G.A., and PETER,J.P. 1993. Research note: improving the measurement of service quality. **Journal of Retailing.** vol. 69, pp. 127-139.

CAMILLERI,D. and O'CALLAGHAN,M. 1998. Comparing public and private hospital care service quality. **International Journal of Health Care Quality Assurance.** vol. 11, no. 4, pp. 127-133.

CARMEN,J.M. 1990. Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. **Journal of Retailing.** vol. 66, pp. 33-55.

CASARREAL,K.M., MILLS,J.I., and PLANT,M.A. 1986. Improving service through patient surveys in a multihospital organisation. **Hospital & Health Services Administration.** vol. 31, no. 2, pp. 41-52.

CHEN,I.J., GUPTA,A., and ROM,W. 1994. A study of price and quality in service operations. **International Journal of Service Industry Management.** vol. 5, pp. 23-33.

CLEARY,P.D. and EDGMAN-LEVITAN,S. 1997. Health care quality: incorporating consumer perspective. **JAMA.** vol. 278, pp. 1608-1612.

COHEN,J.W., 1988. **Statistical power analysis for the behavioral sciences** (2nd edn.). New York: Erlbaum.

CRONIN,J.J. and TAYLOR,S.A. 1992. Measuring Service Quality: A Reexamination and Extension. **Journal of Marketing.** vol. 56, no. 3, pp. 55-68.

CRONIN,J.J. and TAYLOR,S.A. 1994. SERVPERF versus SERQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality. **Journal of Marketing.** vol. 58, pp. 125-131.

CURRY,A. and SINCLAIR,E. 2002. Assessing the quality of physiotherapy services using SERVQUAL. **International Journal of Health Care Quality Assurance.** vol. 15, no. 4/5, pp. 197-207.

DAVIES,J. 2006. Bahrain Mulls Mandatory Health Plans For Expatriates. **Pharma & Healthcare Insight.** vol. April, no. Issue 11, 1-13.

DONTHU,N. and YOO,B. 1998. Cultural influences on service quality expectations. **Journal of Service Research.** vol. 1, no. 2, 178-186.

DUFFY, P., SKINNER G., and PAGE B., 2002. **Public Service Reform: Measuring and Understanding Customer Satisfaction.** Unpublished report for The Prime Minister's Office of Public Services Reform. MORI, Social Research Institute.

FITZSIMMONS,J.A. and FITZSIMMONS,M.J., 2001. **SERVICE MANAGEMENT Operations, Strategy, and Information Technology** (3rd Edition). McGraw-Hill Companies, New York.

FOSTER,T.S., 2003. **Managing Quality: An Integrative Approach** (2nd Edition). Upper Saddle River, NJ: Prentice-Hall.

FURRER,O., LIU,B.S., and SUDHARSHAN,D. 2000. The Relatinship Between Culture and Service Quality Perceptions. **Journal of Service Research.** vol. 2, no. 4, pp. 355-371.

GRAPENTINE, T., 1998. **The History and Future of Service Quality Assessment - Connecting customer needs and expectations to business processes.** Unpublished report in recognition of the 10th anniversary of the publication of the SERVQUAL scale in the Journal of Retailing, the Academy of Marketing Science sponsored a

special session on the advancements in service quality assessment over the last decade. This article reviews that special session.

GROTH,J.C. and DYE,R.T. 1999. Service quality: perceived value, expectations, shortfalls, and bonuses. **Managing Service Quality.** vol. 9, no. 4, pp. 275-285.

GRÖNROOS,C., 2000. **Service Management and Marketing** (2nd Edition). Chichester, West Sussex: John Wiley & Sons, Ltd.

GWYNNE,A.L., DEVLIN,J.F., and ENNEW,C.T. 2000. The Zones of Tolerance: Insights and Influences. **Journal of Marketing Management.** vol. 16, pp. 545-564.

HARMENING,D.M., 2003. **Laboratory Management** (1st Edition). Prentice Hall Health, Upper Saddle River, New Jersey.

HART, M., 1995. **Measuring perceptions of quality in public services.** Paper read to European Group of Public Administration Conference, Erasmus University, Rotterdam, September.

HART,M. 1996. Improving the quality of NHS out-patient clinics: the applications and misapplications of TQM. **International Journal of Health Care Quality Assurance.** vol. 9, no. 2, pp. 20-27.

HOFSTEDE,G., 1991. **Cultures and Organizations: Software of the Mind** New York, United States: McGraw-Hill Publishers.

HUGHES,R. and CHESTERS,G., 2003. **Living and Working in Gulf States and Saudi Arabia** (1st Edition). London, United Kingdom: Survival Books Limited.

HUSSEY,J. and HUSSEY,R., 1997. **Business Research** (1st Edition). Chippenham, Wiltshire: Macmillan Press Ltd.

IACOBUCCI,D. and OSTROM,A. 2001. Gender Differences in the Impact of Core and Relational Aspects of Services on the Evaluation of Service Encounters. **Journal of Consumer Psychology.** vol. 2, no. 3, pp. 257-286.

JABNOUN,N. and HASSAN AL-TAMIMI,H. 2003. Measuring perceived service quality at UAE commercial banks. **International Journal of Quality & Reliability Management.** vol. 20, no. 4, pp. 458-472.

JABNOUN,N. and CHAKER,M. 2003. Comparing the quality of private and public hospitals. **Managing Service Quality.** vol. 13, no. 4, pp. 290-299.

JAMSHEER,N., 2003. **Bahrain Country Commercial Guide FY 2004.** [Online]. Available: http://strategis.ic.gc.ca/epic/site/imr-ri.nsf/en/gr119160e.html. [Accessed 05 May 2007].

JAZAKUMLLAH,K., 2004. **Woman Working as a Nurse.** [Online]. Available: http://www.islamonline.com/news/newsfull.php?newid=233. [Accessed 15 June 2007].

JOHNS,N. 1999. What is this thing called service? **European Journal of Marketing.** vol. 33, no. 9/10, pp. 958-973.

JOSEPH,S. and NAJMABADI,A., 2005. **Encyclopedia of Women & Islamic Cultures** (1st Edition). Bril Academic Publishers.

KENAGY,J.W., BERWICK,D.M., and SHORE,M.F. 1999. Service Quality in Health Care. **JAMA.** vol. 281, pp. 661-665.

KINGDOM OF BAHRAIN MINISTRY OF HEALTH 2001. Bahrain Health Strategy: Framework for Action 2002 - 2010. **Kingdom of Bahrain Ministry of Health.** vol. pp. 1-67.

KINGDOM OF BAHRAIN MINISTRY OF HEALTH 2002. Ministry of Health Direction: Policies and Strategic Direction. **Kingdom of Bahrain Ministry of Health.** vol. pp. 1-19.

KINGDOM OF BAHRAIN MINISTRY OF HEALTH, 2003. **Health Statistics: 2002.** Unpublished report for the Health Information Directorate. Ministry of Health, Kingdom of Bahrain.

KINGDOM OF BAHRAIN MINISTRY OF HEALTH, 2006. **Health Statistics: 2005.** Unpublished report for the Health Information Directorate. Ministry of Health, Kingdom of Bahrain.

KOTLER,P. and ARMSTRONG,G., 1991. **Principles of Marketing** (5th Edition). Englewood Cliffs, N.J.: Prentice Hall.

KOTLER,P., HAYES,T., and BLOOM,P.N., 2002. **Marketing Professional Services** (2nd Edition). New Jersey: Prentice Hall Press.

LIM,P.C. and TANG,N.K.H. 2000. A study of patients' expectations and satisfaction in Singapore hospitals. **International Journal of Health Care Quality Assurance.** vol. 13, no. 7, pp. 290-299.

LLOSA,S., CHANDON,J., and ORSINGHER,C. 1998. An Empirical Study of SERVQUAL's Dimensionality. **The Service Industries Journal.** vol. 18, no. 2, pp. 16-44.

LOVELOCK,C., 2000. **Services Marketing** (Fourth Edition). Prentice Hall, New Jersey.

LUCK,M., POCOCK,R., and TRICKER,M., 2000. **Market Research in Health and Social Care** (1st Edition). London, Great Britain: Routledge.

LUNSFORD,T.K. and LUNFORD,B.R. 1995. The Research Sample, Part I: Sampling. **Journal of Prosthetics and Orthotics.** vol. 7, no. 3, pp. 105-112.

MCALEXANDER,J.H., KALDENBERG,D.O., and KOENIG,H.F. 1994. Service Quality Measurement. **Journal of Health Care Marketing.** vol. 14, no. 3, 34-39.

MCKINLEY,B., 2006. **State of Health of Migrants 2005: Access to Health** Kuala Lumpur, Malaysia: Caram Asia.

MORGAN,N.A., 1991. **Professional Services Marketing** (1st Edition). Oxford, Great Britian: Butterworth-Heinemann Ltd.

O'CONNOR,S.J., TRINH,H.Q., and SKEWCHUK,R.M. 2000. Perceptual Gaps in Understanding Patient Expectations for Health Care Service Quality. **Health Care Management Review.** vol. 25, no. 2, pp. 7-23.

PADGETT, T., 2005. **Patient satisfaction with rural primary care services: A study of the relationship between provider type and level of satisfaction.** Unpublished Msc thesis. The Florida State University: School of Nursing.

PARASURAMAN,A., ZEITHAML,V.A., and BERRY,L.L. 1985. A Conceptual Model of Service Quality and its Implications for Future Research. **Journal of Marketing.** vol. 49, pp. 41-50.

PARASURAMAN,A., ZEITHAML,V.A., and BERRY,L.L. 1988. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. **Journal of Retailing.** vol. 64, no. 1, pp. 12-40.

PARASURAMAN,A., BERRY,L.L., and ZEITHAML,V.A. 1991. Understanding Customer Expectations of Service. **Sloan Management Review.** vol. Spring, pp. 39-48.

PARASURAMAN,A., BERRY,L.L., and ZEITHAML,V.A. 1993. More on improving service quality measurement. **Journal of Retailing.** vol. 69, no. 1, pp. 140-147.

REIDENBACH,R.E. and SANDIFER-SMALLWOOD,B. 1990. Exploring perceptions of hospital operations by a modified SERVQUAL approach. **Journal of Health Care Marketing.** vol. 10, no. 4, pp. 47-55.

RHODE ISLAND DEPARTMENT OF HEALTH - HEALTH CARE QUALITY STEERING COMMITTEE, 2002. **Consumer and Provider Views on Key Dimensions of Quality Hospital Care: A Review of the Literature.** Unpublished report for Rhode Island Department of Health on health care quality measurement and reporting.

ROBINSON,S. 1999. Measuring service quality: current thinking and future requirements. **Marketing Intelligence & Planning.** vol. 17, no. 1, pp. 21-32.

ROBLEDO,M.A. 2001. Measuring and managing service quality: integrating customer expectations. **Managing Service Quality.** vol. 11, no. 1, pp. 22-31.

ROSE,R.C., ULI,F., ABDUL,M., and NG,K.L. 2004. Hospital service quality: a managerial challenge. **International Journal of Health Care Quality Assurance.** vol. 17, no. 3, pp. 146-159.

ROSEN,L.D., KARWAN,K.R., and SCRIBNER,L.L. 2003. Service quality measurement and the disconfirmation model: taking care in interpretation. **Total Quality Management.** vol. 14, no. 1, pp. 3-14.

ROWLY,J. 1998. Quality measurement in the public sector: some perspectives from the service quality literature. **Total Quality Management.** vol. 9, no. 2-3, pp.321-333.

ROYAL COLLEGE OF NURSING, 2007. **Research Methods Glossary.** [Online]. Available: http://www.bath.ac.uk/e-learning/gold/glossary.html#glossary. [Accessed 5 September 2007].

RUSHTON,A.M. and CARSON,D.J. 1989. The Marketing of Servcies: Managing the Intangibles. **European Journal of Marketing.** vol. 23, no. 8, pp. 23-44.

SCOTT,B., 2004. **Over a century of medical service in Bahrain.** [Online]. Available: http://www.arabdatanet.com/news/DocResults.asp?DocId=5946. [Accessed 20 June 2007].

SHEHABI, M., 2001. **Medical Librarianship: Building the Virtual Health Sciences of the Eastern Mediterranean.** Unpublished conference paper. Kingdom of Bahrain Ministry of Health, Health Information Directorate.

SHOSTACK,G.L. and KINGMAN-BUNDAGE,L. , 1991. How To Design Service. In: Congram,C. and Friedman,M. (eds). **The AMA Handbook for the Service Industries.** New York, NY: Amacom.

SINGH,M., 2006. **GCC healthcare to cost $60bn.** [Online]. Available: http://www.gulf-daily-news.com/arc_Articles.asp?Article=185661&Sn=BNEW&IssueID=30092. [Accessed 21 June 2007].

SPELLER,S. and GHOBADIAN,A. 1993. Change for the public sctor. **Managing Service Quality.** vol. 3, no. 6, pp. 29-34.

TABACHNICK,B.G. and FIDELL,L.S., 2007. **Using multivariate statistics** (5th Edition). Boston: Pearson Education.

TANER,T. and ANTONY,J. 2006. Comparing public and private hospital care service quality in Turkey. **Leadership in Health Services.** vol. 19, no. 2, i-x.

TAYLOR,S.A. and CRONIN,J.J. 1994. Modelling patient satisfaction and service quality. **Journal of Health Care Marketing.** vol. 14, no. 1, pp. 34-44.

VANDAMME,R. and LEUNIS,J. 1993. Development of a Multiple-item Scale for Measuring Hospital Service Quality. **International Journal of Service Industry Management.** vol. 4, no. 3, pp. 30-49.

WARE,J.E. and SNYDER,M.K. 1975. Dimensions of patient attitudes regarding doctors and medical care. **Medical Care.** vol. 8, pp. 669-682.

WILSON,C.R.M., 1987. **Hospital-Wide Quality Assurance - Models for Implementation and Development** W.B. Saunders Company Canada Ltd.

WOOD,J. 2002. The role, duties and responsibilities of technologists in the clinical laboratory. **Clinica Chimica Acta.** vol. 319, pp. 127-132.

WOODALL,T. 2001. Six Sigma and Service Quality: Christian Grönroos Revisited. **Journal of Marketing Management.** vol. 17, pp. 595-607.

YOUNG, L., RYAN D., PINNELL R., SHEPPARD S., HOSFORD A., CRYER N., MURPHY N., and CHUNG J., 2002. **Services Marketing.** One in a series

commissioned by The Chartered Institute of Marketing to contribute to the E-knowledge Centre, part of the ConnectInMarketing initiative.

YOUSSEF,F.N., NEL,D., and BOVAIRD,T. 1996. Health-care quality in NHS hospitals. **International Journal of Health Care Quality Assurance.** vol. 9, no. 1, pp. 15-28.

ZEITHAML,V.A., PARASURAMAN,A., and BERRY,L.L., 1990. **Delivering Quality Service - Balancing Customer Perceptions and Expectations** The Free Press, A Division of Macmillan, Inc. New York.

ZEITHAML,V.A., BERRY,L.L., and PARASURAMAN,A. 1993. The Nature and Determinants of Customer Expectations of Service. **Journal of the Academy of Marketing Science.** vol. 21, no. 1, pp. 1-12.

ZEITHAML,V.A. and BITNER,M.J., 2003. **Services Marketing** (3rd Edition). New York, United States of America: The McGraw-Hill Companies, Inc.

ZEITHAML,V.A. and PARASURAMAN,A., 2004. **Service Quality** (1st Edition). Cambridge, United States: Marketing Science Institute.

APPENDICES

APPENDIX 1: English Survey Questionnaire

AWALI HOSPITAL QUALITY SURVEY

We hope you enjoyed your visit with us! To help us better serve you, please complete this survey and return it to the reception desk at your convenience. Thank you!

Demographic Information :

Gender: Male ☐ Female ☐

Number of visits to Awali Hospital in the last year: ____________

Nationality: Bahraini ☐ Indian ☐ Philipino ☐ Other ☐

Specify Other: ____________________

Patient Type: Bapco ☐ GP Referal ☐ Private ☐

Types of visit to Awali hospital: Inpatient ☐ Outpatient ☐ Both ☐

Below are list of points describing EXPECTED hospital services. On a 1 to 7 scale, with "1" being Strongly Disagree and "7" being Strongly Agree, how do you rate hospital services on the following attributes?

	Tangibles Statement	Strongly Disagree			Neutral			Strongly Agree
E1	Hospital cleanliness and hygiene should be excellent	1	2	3	4	5	6	7
E2	Hospitals should always have visitor parking available	1	2	3	4	5	6	7
E3	Hospital personnel should appear neat	1	2	3	4	5	6	7
E4	Hospital staff should be pleasant when dealing with patients	1	2	3	4	5	6	7
E5	Hospitals should have up-to-date equipment	1	2	3	4	5	6	7
	Reliability Statement							
E6	Hospital services should be prompt every time	1	2	3	4	5	6	7
E7	Hospitals medical reports should be accurate	1	2	3	4	5	6	7
E8	Hospitals expense reports should be accurate	1	2	3	4	5	6	7
E9	Patients should receive adequate information about their medical condition	1	2	3	4	5	6	7
E10	Patients should feel confident when receiving medical treatment in a hospital	1	2	3	4	5	6	7
	Responsiveness Statement							
E11	Hospital administration staff should be efficient at dealing with patients' queries	1	2	3	4	5	6	7
E12	Hospital employees should inform patients exactly when services will be performed	1	2	3	4	5	6	7
E13	Hospitals should have convenient times for patients to use their services	1	2	3	4	5	6	7
E14	Hospitals must have experienced personnel on duty at weekends	1	2	3	4	5	6	7
E15	Hospital reception should answer outside phone calls promptly	1	2	3	4	5	6	7
	Assurance Statement							
E16	Hospital employees should always respect patients' privacy	1	2	3	4	5	6	7
E17	Hospitals employees should care about their patients	1	2	3	4	5	6	7
E18	Hospitals should always provide proficient medical staff	1	2	3	4	5	6	7
	Empathy Statement							
E19	Hospital employees should provide individualised medical attention	1	2	3	4	5	6	7
E20	Medical staff should always show understanding towards patients' feelings of discomfort	1	2	3	4	5	6	7
E21	Patients should be treated with a warm and caring attitude in hospitals	1	2	3	4	5	6	7

Many thanks for your participation in this hospital quality survey.
Page 1 of 2

AWALI HOSPITAL QUALITY SURVEY

We hope you enjoyed your visit with us! To help us better serve you, please complete this survey and return it to the reception desk at your convenience. Thank you!

Below are list of points describing your PERCEPTIONS of Awali Hospital services. On a 1 to 7 scale, with "1" being Strongly Disagree and "7" being Strongly Agree, how do you rate hospital services on the following attributes?

	Tangibles Statement	Strongly Disagree			Neutral			Strongly Agree
P1	Awali hospital's cleanliness and hygiene are excellent	1	2	3	4	5	6	7
P2	Awali hospital always has visitors parking available	1	2	3	4	5	6	7
P3	Awali hospital's personnel appear neat	1	2	3	4	5	6	7
P4	Awali hospital staff are pleasant to deal with	1	2	3	4	5	6	7
P5	Awali hospital has up-to-date equipment	1	2	3	4	5	6	7
	Reliability Statement							
P6	Awali hospital offers prompt service every time	1	2	3	4	5	6	7
P7	Awali hospital's medical reports are accurate	1	2	3	4	5	6	7
P8	Awali hospital's expense reports are accurate	1	2	3	4	5	6	7
P9	Awali hospital provided me with adequate information about my medical condition	1	2	3	4	5	6	7
P10	I feel confident when receiving medical treatment at Awali hospital	1	2	3	4	5	6	7
	Responsiveness Statement							
P11	Awali hospital's administration staff were efficient in dealing with my queries	1	2	3	4	5	6	7
P12	Awali hospital employees informed me exactly when services would be performed	1	2	3	4	5	6	7
P13	Awali hospital offered convenient times to use their hospital services	1	2	3	4	5	6	7
P14	There are experienced personnel on duty on weekends at Awali hospital	1	2	3	4	5	6	7
P15	Awali hospital reception answered my phone calls promptly	1	2	3	4	5	6	7
	Assurance Statement							
P16	Awali hospital employees always respected my privacy	1	2	3	4	5	6	7
P17	Awali hospital employees are caring	1	2	3	4	5	6	7
P18	Awali hospital make use of proficient medical staff	1	2	3	4	5	6	7
	Empathy Statement							
P19	Awali hospital employees gave me individualised medical attention	1	2	3	4	5	6	7
P20	Awali employees always showed understanding towards my feelings of discomfort	1	2	3	4	5	6	7
P21	I was treated with a warm and caring attitude in Awali hospital	1	2	3	4	5	6	7

Other Comments:

Many thanks for your participation in this hospital quality survey.
Page 2 of 2

APPENDIX 2: Arabic Survey Questionnaire

استبيان الجوده لمستشفى العوالي

نتمنى أن تكونوا قد استمتعتم بزيارتكم لمستشفى عوالي. من أجل مساعدتنا في خدمتكم بشكل أفضل، نرجو منكم إكمال هذا الاستبيان وتسليمه إلي مكتب الاستقبال في أقرب فرصة.
شكراً لكم على تعاونكم. مع أطيب الأمنيات بدوام الصحة والعافية.

معلومات إحصائية

الجنس: ذكر ☐ أنثى ☐

عدد الزيارات لمستشفى عوالي في العام الماضي ____________

الجنسية : بحريني ☐ هندي ☐ فليبيني ☐ أخرى ☐ حدد الجنسية: ____________

نوع المريض: موظف بابكو ☐ محول من طبيب عام ☐ خاص ☐

نوع الزيارة لمستشفى عوالي: تحت المعالجة ☐ عيادة خارجية ☐ الاثنين معاً ☐

يضم الاستبيان قائمة نقاط تتدرج من 1 إلي 7 حول مستوى الخدمات المتوقعة في المستشفيات، حيث يشير الرقم "1" إلى عدم الموافقة، بينما يشير رقم "7" إلى الموافقة

أوافق		م - حايد			لا أوافق		مستوى الخدمة	
7	6	5	4	3	2	1	يجب أن تكون النظافة والعناية الصحية ممتازة في المستشفيات	E1
7	6	5	4	3	2	1	يجب أن تتوافر بالمستشفيات مواقف لسيارات الزوار	E2
7	6	5	4	3	2	1	يجب أن يظهر جميع موظفي المستشفيات بمظهر لائق ومرتب	E3
7	6	5	4	3	2	1	يجب أن يتعامل موظفو المستشفيات بكل ود مع المرضى	E4
7	6	5	4	3	2	1	يجب أن تتوفر بالمستشفيات أحدث المعدات الطبية	E5
							الاعتمادية	
7	6	5	4	3	2	1	يجب أن توفر المستشفيات خدمات فورية في جميع الأوقات	E6
7	6	5	4	3	2	1	يجب أن تتميز التقارير الطبية للمستشفيات بالدقة	E7
7	6	5	4	3	2	1	يجب أن تكون أرصدة وتقارير تكلفة العلاج بالمستشفيات دقيقة	E8
7	6	5	4	3	2	1	يجب أن يتلقى المرضى معلومات وافية حول حالاتهم الصحية	E9
7	6	5	4	3	2	1	يجب أن يشعر المرضى بالثقة عند تلقى المعالجة الطبية في أي مستشفى	E10
							الاستجابة	
7	6	5	4	3	2	1	يجب أن يتميز موظفو إدارة المستشفيات بالكفاءة عند التعامل مع استفسارات المرضى	E11
7	6	5	4	3	2	1	يجب على موظفي المستشفيات إبلاغ المرضى بموعد تقديم الخدمات بدقة	E12
7	6	5	4	3	2	1	يجب أن تكون مواعيد خدمات المستشفيات ملائمة للمرضى	E13
7	6	5	4	3	2	1	يجب أن يتوفر بالمستشفيات أطقم عمل من ذوي الخبرة خلال عطلة نهاية الأسبوع	E14
7	6	5	4	3	2	1	يجب على موظفي الاستقبال بالمستشفيات أن يتلقوا المكالمات الخارجية بسرعة عالية	E15
							الاطمئنان	
7	6	5	4	3	2	1	يجب أن يحترم موظفو المستشفيات خصوصيات المرضى	E16
7	6	5	4	3	2	1	يجب أن يعتني موظفو المستشفيات بمرضاهم	E17
7	6	5	4	3	2	1	يجب أن توفر المستشفيات دائماً أطقم طبية مؤهلة	E18
							المعاملة	
7	6	5	4	3	2	1	يجب أن يقدم موظفو المستشفيات عناية فردية خاصة للمرضى	E19
7	6	5	4	3	2	1	يجب أن يتفهم الطاقم الطبي مشاعر المرضى أوقات الألم	E20
7	6	5	4	3	2	1	يجب أن يتم التعامل مع المرضى في المستشفيات في أجواء من المودة والدفء والرعاية	E21

ولكم جزيل الشكر لمشاركتكم في هذا الإستبيان

ةحفص1 نم 2

استبيان الجوده لمستشفى العوالي

يضم الاستبيان قائمة نقاط تتدرج من 1 إلي 7، بحيث تحدد القائمة مدى تصوراتكم عن مستوى الخدمات المقدمة في مستشفى عوالي، حيث يشير الرقم "1" إلى عدم الموافقة، بينما يشير

	مستوى الخدمة	لا أوافق			م - حايد			أوافق
P1	النظافة والعناية الصحية بمستشفى عوالي ممتازة	1	2	3	4	5	6	7
P2	م ستشفي عوالي توفر مواقف لسيارات الزوار	1	2	3	4	5	6	7
P3	جميع موظفي مستشفى عوالي يتمتعون بحسن المظهر	1	2	3	4	5	6	7
P4	موظفو مستشفى عوالي يتعاملون بكل ود ودفء	1	2	3	4	5	6	7
P5	مستشفى عوالي تستعين بأحدث المعدات والتجهيزات الطبية	1	2	3	4	5	6	7
	الاعتمادية							
P6	مستشفى عوالي تقدم خدمات فورية في جميع الأوقات	1	2	3	4	5	6	7
P7	التقارير الطبية لمستشفى عوالي تتميز بالدقة	1	2	3	4	5	6	7
P8	تقارير تكلفة العلاج بمستشفى عوالي دقيقة	1	2	3	4	5	6	7
P9	مستشفى عوالي قدمت لي معلومات وافية عن حالتي الصحية	1	2	3	4	5	6	7
P10	أشعر بالثقة عند تلقي المعالجة الطبية في مستشفى عوالي	1	2	3	4	5	6	7
	الاستجابة							
P11	موظفو إدارة مستشفى عوالي تميزوا بالكفاءة عند التعامل مع استفساراتي	1	2	3	4	5	6	7
P12	موظفو مستشفى عوالي قاموا بإبلاغي عن موعد تقديم الخدمات الطبية بدقة	1	2	3	4	5	6	7
P13	مستشفى عوالي تحدد مواعيد ملائمة للمرضى	1	2	3	4	5	6	7
P14	مستشفى عوالي توفر طاقما طبيا مؤهلا خلال عطلة نهاية الأسبوع	1	2	3	4	5	6	7
P15	موظف الاستقبال بمستشفى عوالي تلقى مكالمتي الهاتفية بسرعة عالية	1	2	3	4	5	6	7
	الاطمئنان							
P16	موظفو مستشفى عوالي يحترمون خصوصياتي بصورة دائمة	1	2	3	4	5	6	7
P17	موظفو مستشفى عوالي يظهرون قدرا كبيرا من الرعاية والاهتمام	1	2	3	4	5	6	7
P18	مستشفى عوالي تستعين بكوادر طبية مؤهلة	1	2	3	4	5	6	7
	المعاملة							
P19	موظفو مستشفى عوالي قدموا لي عناية طبية خاصة	1	2	3	4	5	6	7
P20	موظفو مستشفى عوالي تفهموا مشاعري وقت الألم	1	2	3	4	5	6	7
P21	تم التعامل معي في مستشفى عوالي في أجواء من المودة والدفء والرعاية	1	2	3	4	5	6	7

تعليق إضافي:

ولكم جزيل الشكر لمشاركتكم في هذا الإستبيان

APPENDIX 3: Electronic Request for Online Entry

From: GARY LUKE [GARY_LUKE@bapco.net]   Sent: Wed 11/07/2007 15:28
To:
Cc:
Subject: Awali Hospital Quality Survey

Dear Valued Customers,

If you have use the Awali hospital services please click on the link below to complete the service quality survey online. The survey will take no longer than 5 minutes. Your feedback will be greatly appreciated and held strictly confidential. Any questions please do not hesitate to contact me.

http://www.insitefulsurveys.com/survey.asp?SI=276563812667

Kind regards and many thanks,
Gary Luke
Ext. 3594
Mobile: 39238350

APPENDIX 4: Patient Comments

- Thanks
- Additional training required in the operation of ABP machines
- All I can say is that over the last 16 years we have always had a good service from the hospital
- BAPCO Employees should be allowed to see the doctors in Awali and not have to go to the Refinery to get treatment.
- In general, the Awali hospital admin does its best to provide the quality of service requires with the personnel and equipment currently available. The medical records should be kept electronically. All doctors whether there at the Refinery Clinic or Awali Hospital can view patient reports. The current method of delivering the records from the Refinery to the Hospital is the old way of doing business. I would like to thank the wonderful staff for giving me comfort and medical treatment during my last in house visit. Thank you very much.
- AWALI HOSPITAL HAS A VERY CURTIOUS CMO, -CHIEF NURSING OFFICER, AND ASSISTANT.
- I wish Steven Hardcastle was still at Awali Hospital!
- I have no hesitation in using Awali Hospital whenever I can.
- The hospital needs to decide whether it wants to be a large efficient unit and competing or whether it will stay more as a country town type hospital where everyone knows everyone else.

  In the efforts to modernise there are understandably far more administrative staff and offices and one can't avoid the impression that the hospital has become too commercial (but without offering exceptional services) and more distant from the patients.

  The actual hospital is outdated and no amount of patching will change that. The entrance and waiting area is busy, noisy, and scruffy, the entrance doors are open more than closed and it is a most unwelcoming environment. Even the pharmacy is located in the wrong area for a modern hospital.

  I tend to see one doctor on a regular basis but I object to seeing a different GP every time I or my family come to the hospital - there is no choice and simply no continuity which is important in establishing confidence and trust. The hospital doesn't seem to be able to retain qualified, experienced medical staff which further aggravates this

situation.

Most people I come into contact do try to be helpful and seem interested in helping but the hospital is unfortunately limited in the services it can provide and referrals are used more often than not - this also means that relationships cannot be established.

- Generally reasonably satisfied with the level of care offered. However I have been dissatisfied with the nursing care on A ward some years back. It was frankly very poor. I hope this has improved.
- The non-availability of essential staff such as surgeon and anaesthesiologist during weekends and back-shifts needs to be addressed.
- There is such an amazing group of nurses how are qualified in many areas that are not utilised. The doctors and nurses need to be more proactive
- Communication is always a problem in any facility but more so with language barriers. More clearly documented systems may help resolve this.
- None
- Major problem with reception not answering phone calls and making incorrect or inappropriately timed appointments with Doctors leaving patients to wait for long periods of time or having to reschedule appointments resulting in treatment delays. Patient confidentiality is also of significant concern and professional standards are not always adhered to with open discussion of patient's cases and private circumstances. On a positive note staff provide good care, are well presented and approachable. The cleaning staffs do an excellent job!
- I have no information about expenses. Keep up the good work! BAPCO employees are so fortunate to have such a resource.
- As many people do not like hospitals as such, I can say that when I have had the misfortune to be admitted or attend as an outpatient, I have only the highest praise for the staff of Awali Hospital (great work guys and gals)
- NOT A VERY FRIENDLY ENTRANCE. WAITING AREAS NOT COMFORTABLE AND FRIENDLY. NO CHILDREN PLAY AREA. WINDOW NOT ACCOMMODATING WHEN MAKING APPOINTMENTS!! SWITCHBOARD NEEDED URGENTLY!!!

- Perhaps clarify that p 2 is desirable, p 3 actual.
- Question 6 and 7 seem to be the same, but couldn't check as unable to go back.
- Lack of team work with regards to entire work staff. Lack of interaction between departments and personnel.
- The medical staff is excellent
  The reception very often doesn't answers the phone and the cleaners doesn't clean well enough
- Is a good service to have BUT requires continuous update in term of Doctors and Nurses.
- Employee of the month scheme need to be promoted for the hospital
- Everyone is very friendly at the hospital. Thank you
- I have very special memories of Awali hospital. Our three children were born there and have been treated there over the years, in particular Dr Jean, Anton and Eleanor have been very kind and experienced, and we have been lucky to deal with them.
- While it is easy to identify expected services it is more difficult to judge whether the medical care I received in Awali Hospital is the best as it is difficult to compare it with any other. In addition my visits to Awali Hospital have been few and far between over the years and like many other service industries, it depends on the individual doctor or nurse. Having said that, I have received very welcoming treatment many times over the years and feel very confident in returning there for future consultations as they arise. Useful anecdote about Brett's diagnosis (within 2 minutes) of my mum's condition during a recent visit.
- It is an excellent hospital
- Worst experience with Dr ...._
- Awali hospital sponsored medical services for a large event at Bahrain school. They were wonderful, on-time, trained nurses and treated each student's minor injuries with expertise, care and warmth. Rick was especially helpful.
- Medical care was good but had trouble with the business and accounting side. Took far too long to get our needed financial business correct and completed.
- Only highest honours for Awali with treatment of my pregnancy, caesarean and stay in hospital.
- I had a bad experience with a midwife 5 years ago because she was leaving the 2nd day. Just be careful of the disinterest of leaving staff if they not interested they can

cause big problems before leaving the hospital.

- I was surprised by the attractive medical care my wife got, the overall was very good but 2 things shocked me the rooms (very old) and housekeeping staff not up to expectations.
- The main issue I have is the convenience times. The times should be more flexible and the appointments with doctors should be made also later in the day (beyond 4:30)
- Awali hospital is unique in its services - doctors esp. are caring and meet patients psychosomatic (both body & mental) attention patients feel very comfortable at Awali hospital atmosphere.
- Having arrived on 25-04-07 at 12 midday for a midday appointment with Dr ...., I have been kept waiting for 40 minutes and I am extremely unhappy about the consultation. The doctor does not speak adequate English and she does not even know what an MRI machine is. I did not feel comfortable about her giving an internal exam.
- Although I have only been to the hospital once, this is my reaction after that one visit
- My experience of having a baby at Awali Hospital was very positive and I would recommend it to others.
- Hospital needs an ophthalmologist and orthopaedic specialist.
- Doctors do not always understand the Arabic patients
- Is there a general clinic especially diabetes, high blood pressure and cholesterol?
- Parking is not sufficient for all patients and needs to be enlarged.
- Wish you all the best.
- Wish you all the best with your work. Very good hospital.
- Thank you for the service from Awali hospital.