



**An Investigation of Service Quality  
in the Healthcare Sector**

**A Study of an Independent Private  
Physiotherapy Practice**

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of Edinburgh Napier University, for the award of Doctor  
of Business Administration

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## **Declaration**

I declare that this thesis is my own work and that all critical and other sources (literary and electronic) have been specifically and properly acknowledged, as and when they occur in the body of the text.

Signed:        Audrey Gow

Date: 29 May 2014

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## **Abstract**

This study was concerned with an investigation into the service quality of an independent private physiotherapy practice using a mixed method approach. The Directors of the private physiotherapy practice (*the practice*) required an understanding of their customer services; however, this did not include the services of the treatment. It was anticipated that the findings of the study would enhance the service quality of *the practice* in order that it may remain competitive.

A review of the literature revealed a gap for the independent private practice and, in particular, a gap in service quality.

The two main debates in the literature pertained to the instrument of measurement for service quality and the appropriate conceptual model. The literature review suggested that the SERVQUAL Instrument was the most suitable method to meet one of the objectives of this study. It also revealed that there were two main models of service quality (American and Nordic) and that the American model was the conceptual model most related to services and therefore suited to the objectives of this study.

The study comprised of two phases, phase one was the more dominant phase and was accomplished utilising the SERVQUAL Instrument with a sample of 62 *practice* customers. The analysis in phase one informed the basis for the semi-structured interviews for the second phase. Phase two specifically investigated areas of the service quality where customers had rated their *perceptions* lower than their *expectations*. Nine interviews were conducted for phase two.

The key findings for phase one identified, that overall, the service quality of *the practice* was positive. This was in contrast to other healthcare studies that were in the UK public healthcare sector. On further analysis it was revealed that there were areas of service quality that the customers had rated with a negative perception, in particular the reliability factor. Further, phase one identified that previous experience of physiotherapy services significantly influenced the customers' expectations of services. In addition the study was in accord with previous literature that suggested that expectations were also culture and socio economic dependent.

The key findings for phase two identified that an investigation into negative perceived service quality was crucial to understanding the 'why' of the customers' perception of

the service quality of *the practice*. Phase two revealed that not only were customers' expectations formed through experiences, but also that perceptions were formed through other people's experiences i.e. relatives. Another key finding in phase two was, that despite the customers being informed on several occasions that the study was in relation to service quality and not the treatment, they could not distinguish between the two constructs.

Finally, the study concluded that the SERVQUAL Instrument was suitable for the independent private practice and should be slightly amended to fit the context and culture of the study. In addition, it was concluded that it was of academic and managerial benefit to measure both the *expectations* and the *perceptions* of service quality. The core service (service quality and treatment) is required to be taken into consideration in any future healthcare study. Face to face interviews sequentially following the analysis of the SERVQUAL questionnaire provided deeper and perhaps more meaningful information. The data and information gathered could be translated into staff training to maintain the competitiveness of the service quality of *the practice*.

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## Chapter One – The Introduction

### 1 Introduction

The purpose of this study was to investigate service quality in the healthcare industry, in particular an independent private physiotherapy practice (*the practice*). Service quality is a complex concept and is described in detail in the next chapter. The physiotherapy sector like many private industries is competitive and competing on service quality is an area over which management can have control. Research has highlighted that service quality is a key factor in maintaining competitive advantage (Jabnoun and Rassai, 2005). Spreng *et al.*, (1996) identified service quality to be highly important for retaining and satisfying customers. The term ‘service quality’ is not new to the healthcare industry. Since the creation of the UK National Health Service (the NHS) in 1948, the notion of improving or measuring quality has increased decade upon decade. There have been several trends for service quality; Total Quality Management (TQM), involving business innovation in relation to reductions in costs and increased productivity, Continuous Improvement Programmes, refining TQM and ensuring company-wide improvements on costs and productivity (Sewell, 1997). Davies *et al.*, (2000) articulated the changes to the healthcare sector as a cultural link to the market reforms in the 1990s. The functions of purchasers and providers were separated to develop more of a business culture. The central theme became the quality strategy set out in the white paper *The New NHS: modern, dependable* (1998). The white paper detailed three factors, defining appropriate quality standards, delivering healthcare congruent with these standards and monitoring to ensure that uniformly high quality of care is achieved. Quality of care is not to be confused with quantity of care (Hopkins *et al.*, 1994), in other-words a series of medical tests on a patient does not equal quality of care. Quality of care is a concept that is applied to the individual user of healthcare (Campbell *et al.*, 2000).

Over the last two decades the legislation pertaining to service quality in the healthcare industry has increased two fold. One of the main UK white papers ‘Working for Patients’ (1989) described how patients should no longer be passive about the quality of their care and that services should be more customer focussed. Other legislation around service quality in the healthcare sector included the 1991 ‘Framework for Action’ which sought to identify people’s wishes and needs. The Patients’ Charter (1991) set out the guidelines and standards that patients should expect. ‘Designed to Care’ (1997) further

impressed the need to consult with consumers of healthcare and 'A First Class Service: Quality in the New NHS' (1998) set out a 10 year framework for setting quality standards, delivery and monitoring of those standards. More recently the white paper 'Caring for our Future' (2012) has shifted the focus from general quality to quality in care. This move towards quality in care is, according to the Chartered Society of Physiotherapy, due to rising patient expectations, the development of improved information, advances in treatment, concerns around patient safety and the emergence of evidence-based guidelines within the healthcare sector. Service providers are increasingly having to report on all aspects of the patients' experience. Robledo (2001) argued for the importance of encompassing customers' experiences into any service quality research and presented the notion that expectations are formed from experiences.

There is no universal definition for quality in the healthcare sector, as quality is linked to individual values and expectations (Sewell, 1997). Sewell goes on to say that unless an organisation has a thorough understanding of its customers' expectations, then any quality programme will have serious deficiencies. Whilst the NHS is expected to include in their quality framework, improvements in the quality in care and support (Care for our Future, 2012) this includes the whole experience of the patient not just the customer services.

Previous UK healthcare studies regarding service quality have in the main, concentrated on the public sector (Youseff *et al.*, 1996; Curry and Pagouni, 1997; Curry *et al.*, 1999, Curry and Sinclair, 2002; Resnick and Griffiths, 2011). Other global studies on service quality in the healthcare sector have resulted in researching service quality through a mix of public and private healthcare service providers (Ahmed and Samreen 2011; Butt and Cyril de Run, 2010; Chakravarty, 2010; Petrovici and Philips 2009; McGorry, 1999; Camilleri and O'Callaghan, 1998). Many of the service quality studies have involved the measurement of service quality utilising popular instruments such as SERVQUAL (Parasuraman *et al.*, 1988) and SERVPERF (Cronin and Taylor, 1992); both instruments have been used universally to determine service quality in particular settings.

The physiotherapy industry sits within the UK healthcare sector which is split between the public sector (the NHS) and the private sector. The private sector is further divided between private hospitals and independent practices all of which provide physiotherapy

services to the public. Physiotherapy is the largest of the Allied Health Professions (AHPs) with more than 50,000 practitioners. AHPs are an essential part of the NHS and the private practice workforce.

There has been one study on service quality for the physiotherapy industry (Curry and Sinclair, 2002) and several other physiotherapy studies around customer satisfaction, behaviours and treatment (Goldstein *et al.*, 2000; Potter, Gordon and Hammer, 2003 (a) and 2003 (b); May, 2007).

To improve customer services and therefore service quality, management must first know and benchmark what their customers expect and then what the customers perceive the service quality to be. Thus, the rationale for the study was twofold: (1) The practical management desire to benchmark the quality of the services of *the practice* in order to compete in the current market; *The practice* desired to know what their customers thought of their services. (2) To add to the existing theory of service quality where there was a gap.

### **1.1 The Aim**

To assess the service quality of an independent private physiotherapy practice.

### **1.2 The Objectives**

1. To establish and apply an appropriate conceptual framework to assess service quality within the private physiotherapy practice.
2. To explore customers' insights of service quality of a private physiotherapy practice.
3. To provide recommendations to *the practice* in relation to service quality.
4. To contribute to the development of service quality debates through the example of *the practice*.

Throughout the literature the terminology for service quality is intertwined with the term customer satisfaction and some authors refer to the measurement of both as one entity. For the purposes of this study, service quality and customer satisfaction are separate entities, the reasons are discussed in chapter two.

### **1.3 The Study**

The independent physiotherapy practice (*the practice*) in this study is located in Edinburgh. It has several satellite units based in gyms throughout the East of Scotland where the therapists also attend. *The practice* has a turnover of £500,000 and is privately owned by two directors referred to as Director A and Director B. *The practice* is serviced by 8 self-employed physiotherapists and two receptionists. The monthly average number of customers at the practice is 450. The practice is governed by the Health and Care Profession Councils (hpc-uk.org).

The researcher had direct access to both Director A and B through a previous assignment. Permission was therefore sought from both directors for the study. The Directors had two initial concerns with the research; firstly, that the study would not involve the quality of the treatment that the therapists provided and secondly, that the ethics of the patients would not be compromised by the research. In relation to the research of any treatment, the directors stated their reasons as (1) the researcher was not a qualified physiotherapist and (2) that both director A and B realised from their professional experience that it is difficult to measure both customer service and treatment from the same questionnaire. This was echoed by Vinagre and Neaves (2008) who found a link between a patient's emotional state and their satisfaction with the healthcare service they received. As a result it would be a more complex approach, to take into account, both the service quality of *the practice* and the treatment they received. Measuring both the service quality of the treatment of patients and the service quality of the business unit would have involved additional questions in relation to their treatment that would include the patient's psychological state, social backgrounds and tangible and intangible aspects of treatment outcomes (Hudak *et al.*, 2002). For this reason, this study refers to patients as customers throughout the thesis and has investigated only service quality of the services of *the practice* and not the treatment from the therapists. The ethics of the study followed the Edinburgh Napier University Guidelines and the directors were assured that the confidentiality of the patients would not be compromised.



#### **1.4 The Structure of the Thesis**

The thesis is structured over five further chapters. Chapter two examines the service quality literature in relation to the healthcare sector and determines the gaps in the literature and the research questions from the theory. The chapter concludes by identifying the final conceptual framework. Chapter three provides details of the research philosophy, research design, research justification for a two phased approach to this study. Chapter four reports the analysis, discussion and key findings of the first phase of the study and chapter five reports the analysis, discussion and key findings for the second stage of the study. The overall conclusion, recommendations, including areas for future research development and contribution to practice are provided in chapter six.

## **Chapter Two – A Review of the Service Quality Literature**

### **2 Introduction**

This chapter reviews service quality from both the marketing and the healthcare literature. The first section contextualises the nature of services, service quality and customer satisfaction. The second section introduces the concept of service quality including the models associated with service quality. It focusses on the two main service quality models, the American and the Nordic model. That section includes an outline of the instruments utilised for the measurement of service quality and the section debates those main instruments. The next section discusses how the instruments were applied to the healthcare sector, the research that has resulted using the SERVQUAL instrument and its application. The last section details service quality in the physiotherapy sector and the research to date. The chapter concludes with the gaps in the literature and the recommended conceptual model for the study.

#### **2.1 The Nature of the Service Industry**

In the UK, the service industries have replaced the manufacturing industries and the measurement and monitoring of service quality has become an essential feature of many businesses in order to remain competitive (Jabnoun and Rasasi, 2005). Sureshchandar *et al.*, (2002) stated that delivering excellent customer service was the key to sustainable competitive advantage and this included service quality.

Historically goods were for buying and selling and termed commodities, they were intrinsically linked with ownership, implying that they were a possession and therefore tangible. Services that could not be touched, smelt or heard were termed intangibles and there was a notion of inseparability between the two variables. Lovelock and Wirtz (2007) described a definition of services as:

*Services are economic activities offered by one party to another, most commonly employing time-based performances to bring about desired results in recipients themselves or in objects or other assets for which purchasers have responsibility. In exchange for their money, time and effort, service customers expect to obtain value from access to goods, labour, professional skills, facilities, networks and systems; but they do not normally take ownership of any of the physical elements involved (Lovelock and Wirtz 2007: 15)*

Kotler *et al.*, (2008) further defined service characteristics as: (1) *Service Intangibility* (services that cannot easily be seen, heard or touched before purchase); (2) *Inseparability* (services that cannot be separated from the people they are servicing); (3) *Variability* (the quality of services depends on the person giving the service) and (4) *Perishability* (the services cannot be sold or stored at a later date).

The typology of services has derived from the marketing literature. The type of services the healthcare sector offers is a combination of what Kotler *et al.*, (2008) described as *intangible, inseparable, variable and perishable*. Grönroos (1984) termed this collection of services as ***heterogeneous*** (diverse in character). Quality is often therefore seen through a perceived lens rather a more objective viewpoint, termed by Grönroos (1984) as *homogeneous* (of the same kind). Much of the service literature from the marketing perspective was in relation to the type of services offered and the vertical and horizontal integration of those services between the consumer and the organisation (Kotler *et al.*, 2008). This study investigated services that are ***heterogeneous***.

## **2.2 The Nature of Customer Satisfaction and Service Quality**

The marketing and the healthcare literature included many articles on customer satisfaction, however the terms service quality and customer satisfaction are intertwined within the literature. Dabholkar (2000) argued that customer satisfaction is an antecedent of service quality. Miller (1976) described customer satisfaction as disconfirmation and later disconfirmation was described by Oliver (1981) as an antecedent of satisfaction. Westbrook (1983) described satisfaction as a construct equated with emotion, further Oliver and Westbrook (1991) then described emotion as an antecedent of satisfaction. Dabholkar (2000) described service quality as a construct of various dimensions. Baker and Taylor (1994); Gotlieb, Grewal and Brown (1994); Dabholkar (1995a) and Bansal and Taylor (1997) examined the difference of customer behaviour between customer satisfaction and service quality.

Different studies produced alternative data and Dabholkar (2000) stated that more research was required in order to investigate the relationship between service quality, satisfaction and customer behaviours and to question whether it does in fact lead to more business recommendations or loyalty. Nicholls *et al.*, (1998) stated that customer satisfaction is important to organisations that deliver products rather than services, and claimed that satisfaction lies with a product, whether the product is fit for purpose or not. Satisfaction with services is intangible, it is an experience, it is about the perception of performance (Nicholls *et al.*, 1998). A study undertaken by Shemwell *et al.*, (1998) in healthcare facilities in Turkey found that there was a link between satisfaction in service quality that led to overall customer satisfaction. Kim *et al.*, (2009) found a link between positive word of mouth recommendations, satisfaction with the service quality and overall customer satisfaction in restaurants in Taiwan and the US. Customer satisfaction is a complicated multi-dimensional construct that is intertwined with service quality. Customer satisfaction is commonly referred to by both suppliers of services and consumers of services without fully realising the implications of the terms. For the purposes of this study, only the service quality was investigated as the two variables (service quality and customer satisfaction) are appreciated as two separate constructs.

## 2.3 The Service Quality Concept

Parasuraman *et al.*, (1990: 19) described Service Quality as:

*The extent of discrepancy between customers' expectations or desires and their perceptions.*

In other words, there were two variables to service quality: **expectations** and **perceptions**. Parasuraman *et al.*, (1985) were the academic pioneers of service quality. Their extensive empirical and qualitative study into service quality in America in the 1980s was ground-breaking and their instrument for measuring service quality is still used extensively today, the tool is discussed later in the chapter. Parasuraman *et al.*, (1985; 1988; 1991; 1994) identified that nearly all organisations compete with each other in terms of service, they believed that excellent customer service pays off in the long run and that customers will continue to return to an organisation where the service is excellent.

Grönroos, (1984; 1990; 2000; 2001) was the Nordic pioneer of the other main approach and described service quality as *perceived service quality* as:

*The outcome of an evaluation process (whereby) the consumer compares his expectations with the service he perceives he has received i.e. he puts the perceived service against the expected service. The result of this process will be the perceived quality of service (Grönroos 1984: 37).*

There is no real consensus in the literature around the definition of the term **perceived service quality**, however Parasuraman *et al.*, (1985; 1988); Cronin and Taylor, (1992); Boulding *et al.*, (1993) agreed that it is a consumer's evaluative judgement following the service performed.

## 2.4 The American Approach to Service Quality

Parasuraman *et al.*, (1985); Berry *et al.*, (1988) and Zeithaml *et al.*, (1996) were the main contributors to the American school of service quality. The increase in the services industries brought about an idea that service quality was as important as the services that an organisation was offering. Many well-known companies in the 1980s were convinced that superior service quality was the winning formula (McDonald's, Federal

Express, Nordstrom, American Airlines, American Express, L.L. Bean, Domino's Pizza, Disney World, Club Med, Marriott and IBM). Setting out what to measure as part of the service quality was becoming increasingly more important to distinguish.

From a large groundbreaking study into service quality within service industries (appliance repair, credit cards, insurance, long-distance telephone, retail banking and securities brokerage) Parasuraman *et al.*, (1985) proposed an initial ten determinants of service quality as described in Appendix 1. They further consolidated the ten categories into five determinants (***Tangibles, Reliability, Responsiveness, Assurance and Empathy***) described in table 1 overleaf. When considering the concept of service quality, these determinants have been referred to globally in many service quality studies.

**Table 1: The Five Determinants and their Definition**

| <b>Determinant</b>    | <b>Definition</b>   |
|-----------------------|---|
| <b>TANGIBLES</b>      | The appearance of physical facilities, equipment, personnel and communication materials.  |
| <b>RELIABILITY</b>    | The ability to perform the promised service dependably and accurately.                    |
| <b>RESPONSIVENESS</b> | Willingness to help customers and to provide prompt service.                              |
| <b>ASSURANCE</b>      | The knowledge and courtesy of employees and their ability to convey trust and confidence. |
| <b>EMPATHY</b>        | Caring individualised attention the firm provides its customers.                          |

**Source:** Parasuraman *et al.*, (1985)

Table 1 describes services as five determinants and explains how they are categorised. The main components relate to the appearance (tangibles), the ability (reliability), the willingness (responsiveness), the knowledge (assurance) and the caring (empathy) of the organisation when providing services to the customer. The five dimensions were systematically analysed as the core criteria that customers employ in evaluating service quality and therefore cite as important to service quality (Zeithaml *et al.*, 1990). Zeithaml *et al.*, (1990) ranked the five determinants in different industries and found that all five were critical to the determination of service quality. It was found in the research that reliability, responsiveness, assurance and empathy were 9 out of 10 on a 10 point scale from 1 (not all important) to 10 (extremely important). By comparison, tangibles ranked lower and ranged from 7.14 to 8.56. Across banking, repair and maintenance, telephone and credit card companies, customers ranked reliability as the most important factor. From four different industries, most of the customers wanted the suppliers to be reliable, in other words, *do what they say they are going to do*.

Zeithaml *et al.*, (1990) further applied those determinants to measure a gap between customers' *expectations* of any service and customers' *perceptions* of a particular service following the service performed. This gap between customers' *expectations* and

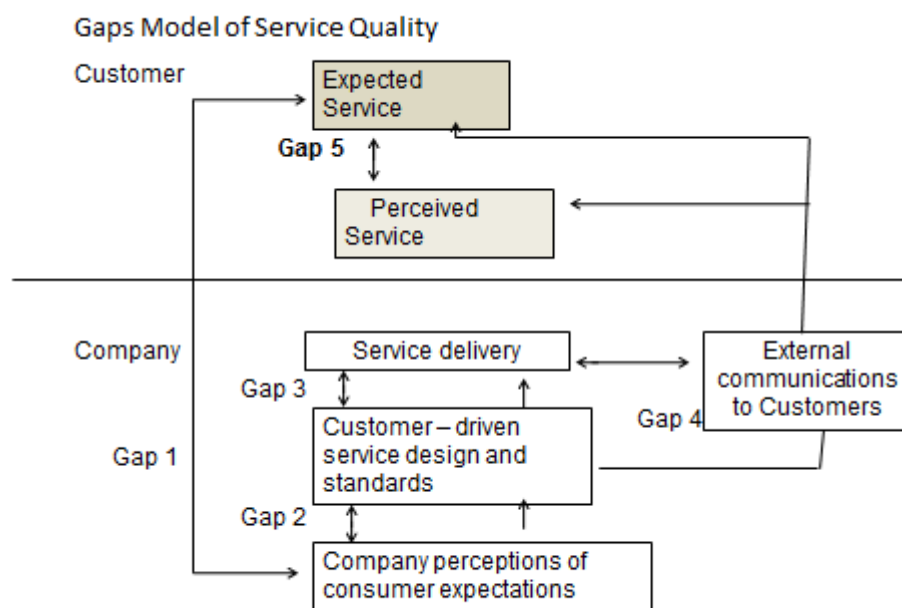
customers' *perceptions* is known as *Gap 5* of *The Gaps Model of Service Quality* Parasuraman *et al.*, (1985), as described in figure 1.



### 2.4.1 The Gaps Model of Service Quality

Parasuraman *et al.*, (1985) conceptualised perceived quality of service as a Service Quality Gap i.e. what the customer feels they have experienced against what the customer perceives, known as **Gap 5**. The wider the gap between the variables (*expected service* and *perceived service*) the less positive perceived service quality and the narrower the gap the more positive perceived service quality. Parasuraman *et al.*, (1985) named this model as the **Gaps Model of Service Quality** as described in fig 1: below:

**Figure 1: The Gaps Model of Service Quality**



**Source: (Zeithaml, Parasuraman and Berry, 1990)**

Gaps 1-4 are the four main causes of the service quality gap customers perceive (Zeithaml *et al.*, 1990). Gaps 1-4 denote the discrepancy between the organisation's shortfalls, in other-words areas in the business where service improvements could be made between the organisation and the customer. Key determinants of the service expected by customers include: word of mouth communications, personal needs, past experience and external communications from the service provider.

Gap 1 – is concerned with what the customers expect and what the managers of the company perceive the customers expect. The gap is the discrepancy between the two

variables. The issues are concerned with insufficient marketing research, inadequate use of marketing research findings, lack of interaction between management and customers, insufficient upward communication from contact employees to managers and too many managerial levels between contact personnel and top management.

Gap 2 – is the difference between management’s perceptions of customers’ expectations and the standards they set to fulfil these expectations. Gap 2 includes: inadequate management commitment to service quality, lack of perception of feasibility, inadequate task standardisation and absence of goal setting.

Gap 3 – this is termed the *service performance gap*, and factors that contribute to this gap are: role ambiguity, role conflict, poor employee-job fit, poor technology job-fit, inappropriate supervisory control systems leading to an inappropriate evaluation/reward system, lack of perceived control on the part of the employees and lack of teamwork.

Gap 4 – when there is a discrepancy between service delivery and external communications. The factors include: inadequate horizontal communication among operations, marketing and human resources as well as across branches and propensity to overpromise in communications.

Gap 5 - is only concerned with the customer; it is the gap between the customers’ *expectations* of any similar service and the *perceptions* formed following the service provided by the organisation.

Gap 5 is the service quality gap that Zeithaml, Parasuraman and Berry, (1990) are renowned for. The main advantage of this model is the measurement instrument, SERVQUAL, developed to measure *gap 5*, and is discussed later in the chapter. The remaining four gaps are part of the conceptual model that serves as a framework for understanding, measuring and improving service quality.

## 2.5 The Nordic Approach to Service Quality

Grönroos (1984); Gustafsson (1990); Gummersson (1991) and Edvardsson (1997,1990) played a part in the Nordic school of services and service quality, Grönroos was perhaps the most well-known author. Grönroos distinguished services into two main parts (1) technical and (2) functional. This is further described in table 2 below:

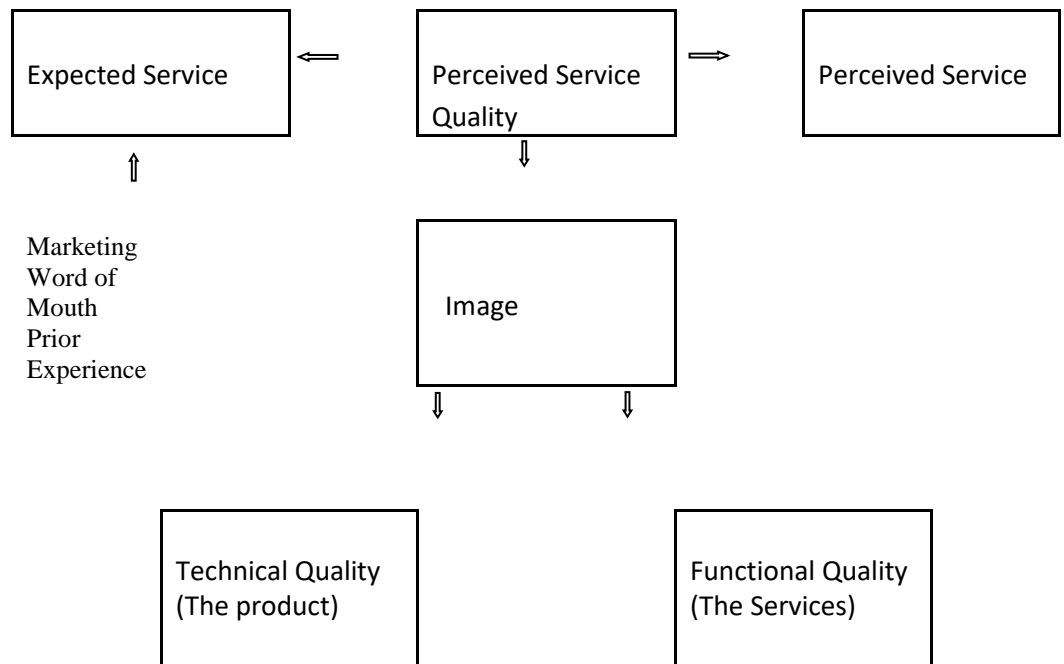
**Table 2: The Difference between Services and Physical Goods**

| Technical (physical goods)  | Services (functional)  |
|---|--|
| <ul style="list-style-type: none"> <li>• Tangible<br/>(Can be seen, felt and heard)</li> <li>• Homogeneous<br/>(Of the same kind)</li> <li>• Production and Distribution separated from consumption</li> <li>• Core value produced in factory</li> <li>• Customers do not (normally) participate in the production process</li> <li>• Can be kept in stock</li> <li>• Transfer of ownership</li> <li>• A product</li> </ul> | <ul style="list-style-type: none"> <li>• Intangible<br/>(Cannot be seen felt or heard)</li> <li>• Heterogeneous<br/>(Diverse in character)</li> <li>• Production, Distribution and Consumption are simultaneous processes</li> <li>• An activity or process</li> <li>• Core value produced in buyer-seller interactions</li> <li>• Customers participate in production</li> <li>• Cannot be kept in stock</li> <li>• No transfer or ownership</li> </ul> |

**Source: Grönroos, C. (2000: 47)**

Grönroos focussed on the physical aspect (the product) in addition to the services offered (the functionality of the services). Grönroos emphasised two aspects to buying and selling a product. Grönroo's research into service quality was different to the American research, it was service and product led as opposed to just services. The division between the technical (the product) and the function (services) was the difference between what customers thought and expected of the product and what they thought and expected of the services. This is described overleaf in the model in figure 2. This model is more suited to organisations that are driven by the quality of the product, in addition to the service provided.

**Figure 2: Grönroos, (1984) Service Quality Model**



**Source: Grönroos (1984: 40)**

Grönroos (1984) introduced the quality dimension, *image*. The corporate image depended on technical and functional quality, price, external communications, physical location, appearance of the site and the competence and behaviours of the service firm's employees. Martinez and Martinez (2010) were of the opinion that *image* can act as another service quality dimension but in reality it is another variable in the relationship between technical and functional and perceived quality.

In contrast to Parasuraman et al., (1985), Grönroos (1984) purported that customers distinguish services through two variables: (1) technical quality and (2) functional quality rather than a gap that can be narrowed or widened by management through the control of service quality in their organisation.

The advantage of the Grönroos model, is that it does distinguish between the quality of the product and the quality of the services, however both constructs may need a different set of variables for measurement. The disadvantage to this model is that there is no defined tool for the measurement of the variables and the two constructs (technical and functional) are not clearly defined. This is in contrast to the Gaps Model where the SERVQUAL Instrument can provide management with information of where the

perceived service quality gaps lie in relation to the two variables, *expectations* and *perceptions*.

## 2.6 Other Models

In addition to the two aforementioned models, there are further references to other models within the literature: Rust and Oliver (1994), a tri-component model of service quality; Teas (1993, 1994) developed the Evaluated Performance Model that measured the gap between perceived performance and the feature of the study rather than expectations; Dabholkar *et al.*, (1996) developed a hierarchical model for the retail industry offering the Retail Service Quality Scale and Brady and Cronin (2001) proposed a multi-dimensional and hierarchical model combining the work of Rust and Oliver and Dabolkhar. These models suited the objectives of the research of those studies. There have been many contributors to the concept of service quality and the main distinction between the American and the Nordic approach is the technical aspect to the service. The American approach is less technically orientated than the Nordic approach which is more centred around the product or core service. The current study was concerned with the service of *the practice* not the service quality of a product or the core product (the physiotherapy treatment).

The American view of service quality was therefore more suited to the current study. The concept for this study therefore became a disconfirmation concept, identified by Robledo (2001) as the gap between customers' expectations and the actual performance of the service provider. The model that completes this concept is the Gaps Model of Service Quality as described in figure 1.

## 2.7 Service Quality Models in the Healthcare Setting

Many healthcare studies have utilised the Gaps Model of Service Quality (Parasuraman *et al.*, 1990) and the SERVQUAL Instrument in which to measure that service quality gap. Some studies have adapted the instrument to suit the context of the research. This is discussed in more detail later in the chapter. Choi *et al.*, (2005), Bopp (1990), Babaskus and Mangold (1992) argued that patients could not distinguish between *functional* and *technical* quality adequately, however Ruyter *et al.*, (1998) pointed out that both factors are an integral part of the overall service offering.

Grönroos (1984) adapted the model for the healthcare industry as outlined below:

*Functional Quality* – How a patient receives a service (food quality, access to care)

*Technical Quality* - The quality of the delivery of care (competence and outcome)

Whether to measure functional and or technical quality is an ongoing debate within the healthcare literature as the measurement of quality in a healthcare setting is unique, in so much as part of the service is provided by professionals and frequently no tangible output is measured (Karassavidou *et al.*, 2009).

## 2.8 Service Quality Instruments

This section details the instruments that are commonly used to measure service quality. There is a continuing debate in the literature as to whether *expectations* and *perceptions* should be measured (Parasuraman *et al.*, 1985, 1990) or whether *perceptions* only should be measured (Cronin and Taylor, 1992, 1994).

### 2.8.1 Why Measure Expectations and Perceptions?

*Expectations* have been defined as an experience an individual may have that would affect their anticipated future performance of a provider and *perceptions* as an opinion of a service after they have attended the organisation (Camilleri and O'Callaghan, 1998). As an example, many people in the UK can identify with the services of the NHS through experience and will have formed an expectation for future visits. Their perception may change with each visit but if an individual has never attended a private hospital or a private practice both their expectations and perceptions may be new. Depending on the culture of the country, Butt and Cyril de Run (2010) stated that customer expectations could be manipulated by marketing and advertising materials. This for example could happen if a private hospital was marketing itself as the best private hospital in the city/country and customers would therefore have a pre-existing expectation as a result of the publicity. However, it was suggested by Chaniotakis and Lympelopoulos (2009) that word of mouth is critical to the success of the service provider. Carman (1990) suggested that word of mouth and media played a key role in developing an individual's expectation of a service. McGorry (1999) researched service quality of healthcare services in a Latino population and found that the low income of the population may have affected their lower expectations and perceptions of the healthcare services they received.

Carman (1990) stated that customers naturally expect more from a five star establishment than a two star and it is therefore reasonable to expect their experiences will both influence their expectations and their perceptions of a service and that measuring expectations is important. Holmlund and Kock (1996) stated that if customers are to stay with the service provider, then the service quality that they experience must meet their expectations.

Robledo (2001) found that if expectations were not met, dissatisfaction occurred. Robledo (2001) considered past experience, reputation, corporate image, formal



recommendations, informal recommendations, personal needs, promotions and price as variables that all affected customers' experiences that in turn formed their expectations. These variables can play a large part in the customers' expectations particularly in the UK between the private and public healthcare services where experiences of the private and public sector can be widely different (Camilleri and O'Callaghan, 1998).

Boulding *et al.*, (1993) argued that taking the consumers' expectations into account has a unique effect on the customers' perceptions of service quality. Robledo (2001) declared that understanding customers' expectations is vital to the delivery of excellent service quality since customers evaluate a service by comparing their perceptions of a current service with their past experiences and thus forming an expectation. Robledo (2001) further discussed the fact that the inclusion of expectations or not has led to two differing paradigms (1) The perception paradigm that supports the fact that expectations are irrelevant (the SERVPERF Instrument) and (2) The disconfirmation paradigm that includes perceptions and expectations (the SERVQUAL Instrument).

Robledo's (2001) research demonstrated that customers' expectations are formed through a variety of factors including their past experience. It is therefore important to ask customers of their past experiences to gain a better understanding of their expectations. This is important where services are commonplace with customers, i.e. Hotels, Healthcare and Restaurants and therefore it is even more important that management understand what the customers are actually expecting from a particular service offering. Much of the service quality literature pertains to expectations and little has been written about the subject of perceptions other than the view that it is an outcome of an evaluation of service provided (Grönroos, 1984). When the service quality gap is negative, that is when customer perceptions do not meet the expectations of a service, there is little reference to why customers or patients rated their perception lower than their expectations of a service. The literature revealed a gap with regard to the 'why' when referring to a negative perception of service quality and one that this study sought to address.

### **2.8.2 SERVQUAL and its Characteristics**

The SERVQUAL instrument devised by Parasuraman *et al.*, (1985) was a result of their research into service quality in the US in the 1980s. Parasuraman *et al.*, (1985) focussed their research on what formed customers' *expectations* of a service and what formed

their *perceptions* of the actual service. SERVQUAL is a 22 paired item questionnaire split over five determinants: *tangibles* (questions 1-4), *reliability* (questions 5-9), *responsiveness* (questions 10-13), *assurance* (questions 14-17) and *empathy* (questions 18-22). The *expectations* questions are set around the customers' expectations of any service (the context related to the services in the study) and the *perceptions* questions were related to the perceptions of the organisation that the customers have received the services from. The instrument measured the **Service Quality Gap (SQG)** between *perceptions* (P) (22 questions) and *expectations* (E) (22 questions) of service quality. The formula for the service quality gap: perceptions minus expectations = service quality gap i.e.  $[P-E= SQG]$ . The scale of the questionnaire sat alongside a 7 point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Appendix 2 provides an example of the questionnaire used in the study.

### 2.8.3 Criticisms of the SERVQUAL Instrument

There have been many critiques of the SERVQUAL Instrument. Carman (1990) raised a concern about the psychometric differences between expectations and perceptions, further endorsed by Babakus and Boller (1992). Cronin and Taylor (1992; 1994) have criticised the instrument heavily stating that perceptions of service performance need only be measured and not expectations.

Sureschandar *et al.* (2002) criticised SERVQUAL for not covering fully the areas such as servicescape (physical location and external/internal buildings) in the questionnaire. Babaskus and Boller (1992) felt that the gap scores i.e.  $P-E=SQG$  did not provide any additional contribution to the overall understanding of service quality. Teas (1994) argued that the gap scores were not a clear indication of the actual gap as expectations scores and perceptions scores could have the same gap but different scores e.g. using  $P-E = SQG$ ; **example 1:** P score =6 and E score = 5,  $P-E = 1$  and in **example 2:** P score =4 and E score =3 = 1, in other-words different scores gave the same gap. Lee and Yom (2007) reported that when the perceived performance is higher than the customers' expectations, it is positive in terms of service quality and the reverse indicates the opposite, that is, a negative perception of service quality. Parasuraman *et al.* (1990) argued that it is the difference between expectations and perceptions that is important not the scores of the two variables and therefore the mean score is a good indication of a positive or negative perception. Positive mean gap scores suggest that overall customers have a positive perception of service quality whilst the reverse is a negative perception.

Chowdhary and Prakash (2005) suggested that a different approach was needed to measure service quality and that each variable should be considered independently. Caro and Garcia (2007) also challenged the use of SERVQUAL and supported the use of different instruments for different sectors.

Ladhari (2008) confirmed that different industries need different measurements and that SERVQUAL was not a universal tool for all industries. Ladhari (2008: 78):

It is apparent that the criteria used to evaluate service quality differ among customer groups and circumstances.

Ladhari (2008: 191) reported that there were several empirical and theoretical problems associated with the SERVQUAL model

- The use of difference scores
- The reliability of the model
- The convergent validity
- The discriminant validity
- The predictive validity
- Its emphasis on process (rather than outcome)
- The hierarchical nature of service-quality constructs
- The use of reflective (rather than formative) scales
- The applicability of a generic scale for measuring service quality in all service settings
- The applicability of SERVQUAL to the online environment
- Applicability to different cultural contexts

Despite the critics of SERVQUAL, it is undoubtedly a well- known global instrument used throughout many industries including the healthcare industry.

Ladhari (2008) did agree that despite the shortcomings of SERVQUAL, many researchers found the SERVQUAL questionnaire an appropriate tool for measuring service quality. Ladhari (2008) went on to suggest that the SERVQUAL instrument could be adapted to be industry specific to fit the context of the study. As the SERVQUAL instrument was developed for the US market, caution was required when using SERVQUAL in other countries or cultures (Ladhari, 2008). Diamantopoulos *et al*, (2006) stated that there were cultural differences in relation to response scales (such as the use of the mid-point) that could threaten the validity of the scales. Van Herk *et al*. (2005) found problems in the translation of the SERVQUAL questionnaire and reported that it can result in higher measurement error.

Sultan and Simpson (2000), in the research of an airline industry, found that the reliability factor was the most important of SERVQUAL's five determinants, however they also found that the expectations and perceptions varied between nationalities. Martinez and Martinez (2010) found that the findings were culture and/or country specific and this important element should be taken into consideration when comparing SERVQUAL in a global setting. Chand (2010) in a study into Indian tourism suggested that consumers' perceptions of the importance of the different factors were influenced by national and cultural differences.

#### **2.8.4 The SERVPERF Instrument**

Cronin and Taylor (1992) claimed that the conceptualization of the service quality construct was better measured by only perceptions, this they called a performance measurement and named the instrument SERVPERF. Cronin and Taylor (1994: 125) stated:

*Our results suggest that the performance minus expectations is an inappropriate basis for use in the measurement of service quality.*

SERVPERF, a 22 item scale questionnaire of perceptions (often referred to in the literature as a measure of performance) was devised by Cronin and Taylor (1992). Cronin and Taylor (1992) further argued that the gap theory of service quality (Zeithaml, Parasuraman and Berry, 1990) was supported by little empirical and theoretical evidence. They felt that a customer's attitude to a service was best established through perceptions of the service provided.

According to Buttle (1996), there is little evidence to suggest that customers assess service quality in terms of expectations and perceptions. Cronin and Taylor (1992) investigated the conceptualisation of the measurement of service quality and their results suggest that a perception only measurement (that they termed the performance measurement) was an alternative and more improved version of the SERVQUAL Instrument, namely their instrument SERVPERF. They claimed that organisations should care more about the performance aspect of service quality rather than the expectations of customers and that perceived service quality leads to consumer satisfaction.

### **2.8.5 The SERVPEX Instrument**

Robledo (2001: 22) stated:

*Understanding customer expectations is a prerequisite for delivering superior service, since customers evaluate service quality by comparing their perceptions of the service with their expectations.*

Robledo (2001) developed SERVPEX that measured expectations and perceptions on a single scale from “Much worse than expected” to “Much better than expected”.

Customers devolve their expectations through their own experiences (Robledo 2001), in addition Robledo stated that this was an area in the literature that required further and deeper understanding.

### **2.8.6 A Comparison of SERVQUAL, SERVPERF and SERVPEX**

Robledo (2001) undertook research into three commercial airlines and distributed questionnaires to a sample of 1152 passengers; the response rate was 35.4%. The questionnaires were a combination of all three instruments (SERVQUAL, SERVPERF and SERVPEX). The reliability factors of the three questionnaires using Cronbach’s Alpha coefficient  $\geq 0.70$  are show in table 3 below.

**Table 3: Reliability Factors of SERVQUAL, SERVPERF and SERVPEX**

| Instrument | Factor |
|------------|--------|
| SERVPERF   | 0.9635 |
| SERVPEX    | 0.9593 |
| SERVQUAL   | 0.9548 |

**Source: Robledo (2001: 24)**

All three instruments demonstrated similar results, there was no significant difference between them. Robledo (2001) observed that airline passengers had uniformly high expectations. This could be linked to price in return for an expected service. This is a very interesting comment as customers may have different expectations depending on the establishment, the price, environment or culture. McGorry (1999) found in a study of a Latino population in a healthcare setting, that they had lower expectations than expected possibly due to culture and socio-economic factors. Curry and Sinclair (2002) found there were lower expectations and lower perceptions of certain elements of physiotherapy services and this was possibly due to the context of the services provided; both these studies are further explained in the next section.

Parasuraman et al., (1991) argued that the measurement of expectations served as a diagnostic function for managers and therefore SERVQUAL offered more information than the other instruments. Despite the fact that SERVPEX operates from one scale, it is not a widely used instrument. The main debates within the literature are the advantages and disadvantages that centre around the usability of SERVQUAL and SERVPERF as discussed below. There is no conclusion to this on-going debate.

### **2.8.7 SERVQUAL Vs SERVPERF**

According to Jungki (2007) the psychometric properties of SERVPERF are slightly more sound than SERVQUAL in terms of reliability, however SERVQUAL outperformed SERVPERF in validity. They also stated that the inclusion of customers' expectations impacts on culture and therefore would decrease the precision of the measurement. SERVPERF has been used extensively in many industries to measure service quality in the following industries: airline; air cargo; hotels; retail; public transportation and tourism. SERVQUAL has also been used extensively to measure service quality: airlines, (Chou *et al.*, 2011; Pakdil and Aydin, 2007); Higher

Education, (Smith *et al.*, 2007); Police Service, (Donnelly *et al.*, 2006); Retail, (Carman, 1990); (Gagliano and Hathcote, 1994); Tourism, (Hokey and Hyesung, 1997); Travel, (Urdang and Howey, 2000); Banking, (Kumar *et al.*, 2009); Healthcare (Babakus and Mangold, 1992; Yousseff, 1996; Camilleri and O'Callaghan, 1998; Curry *et al.*, 1999; McGorry, 1999; Curry and Sinclair, 2002; Chaniotakis and Lymperopoulos 2009; Resnick and Griffiths, 2011).

Ladhari (2008) suggested that SERVQUAL could be adapted to various industries depending on their context. It is evident from the list of industries above that both SERVQUAL and SERPERF have been used extensively to measure service quality in a variety of industries. Moreover the lack of agreement on whether a service quality study should be conducted using SERVQUAL or SERVPERF continues to be a main debate within the literature.

From the evidence, it appears that the SERVQUAL tool is a valid and reliable instrument and can be applied to many settings. Parasuraman *et al.* (1991) stated that there was much academic support for using the SERVQUAL instrument in its entirety as much as possible as deletion of items could affect the integrity of the scale. The literature has indicated that the SERVQUAL Instrument is appropriate for a healthcare setting; it also measures both *expectations* and *perceptions*. The measurement of both variables is consistent with the study's aim and objectives that allows for a deeper investigation of service quality.

There is a convincing opinion in the literature (Robledo, 2001) that both **expectations** and **perceptions** should be measured and that benchmarking customers' expectations against their perceptions can help management understand what their service quality strengths and weaknesses are in relation to positive or negative gaps. This study therefore sought to measure both *expectations* and *perceptions* of the service quality of *the practice* utilising the SERVQUAL instrument.

## **2.9 Service Quality in the Healthcare Sector**

The UK National Health Service (the NHS) is a public service that deals with over 1 million patients every 36 hours. The measurement and provision of service quality has become an increasing parameter for the NHS and other regulated healthcare services including the physiotherapy sector. Despite the regulatory framework, there is an expanding difference between the UK private and the public healthcare sectors and the cost of the service is one of the main differentiators. The cost of the service also brings an expectation of service quality (Robledo, 2001, Camilleri and O'Callaghan, 1998).

The UK Government legislation has influenced the growing requirement for the healthcare sector to identify service quality determinants and to find and adapt tools for measurement. *1991 'Framework for Action'* sought to identify people's wishes and needs whilst the *Patients' Charter (1991)* set out the guidelines and standards that patients should expect. *'Designed to Care' (1997)* has further impressed the need to consult with consumers of healthcare and *'A First Class Service: Quality in the New NHS' (1998)* set out a 10 year framework for setting quality standards, delivery and monitoring of those standards. *The Clinical Governance: Quality in the NHS (1999)* set out a model for pulling together previous approaches to service quality and more recently the white paper *'Caring for our Future' (2012)* has shifted the focus from general service quality to quality in care. Quality in care considers the care for the patients, the way they are looked after within the NHS system. This has been further highlighted with the implemented NHS complaint system; patients are encouraged to utilise the complaints system and indeed, any claim of negligence is required first to be lodged with the NHS complaint system. Much of the legislation was centred on the quality of the treatment, care, feedback and complaint system as opposed to consistency of components that should or should not be included in the measurement of service quality. This section of the chapter outlines a selection of healthcare studies that demonstrate the range of variables included in healthcare studies in the measurement of service quality.

### **2.9.1 SERVQUAL and the Healthcare Sector**

Many previous studies in the healthcare sector have predominantly used SERVQUAL despite comments from Bowers *et al.*, (1994) who declared that SERVQUAL was devised for other industries and not the healthcare sector because of the treatment elements to the service. Buttle (1996) disputed the use of SERVQUAL as a global tool.



Butt and Cyril de Run (2010) expressed that SERVQUAL was an instrument that was highly valid and reliable in the healthcare sector and was therefore an excellent tool for measuring service quality. Carman (1990) stated that it was an excellent tool that is extremely stable. Petrovici and Phillips (2009) suggested that the debate between the two main instruments still continues and claimed that SERVQUAL is of more use to practitioners because of its diagnostic value and validity.

Some studies have amended the SERVQUAL questionnaire and included factors such as cost, competence and demeanour (Andaleed, 1998), other studies have included security, performance and aesthetics (Raduan *et al.*, 2004). Sureshchandar *et al.*, (2002) were adamant that social factors and servicescape were absent from the SERVQUAL questionnaire and that the questionnaire therefore did not capture all the relevant customer information. Lovelock (1998) described servicescape as the internal and external décor relating to the organisation. Many of the healthcare studies have changed the wording to fit with the terminology of the hospital services.

Bowers *et al.*, (1994) stated that the treatment and the caring were two separate constructs and that SERVQUAL was not intended to capture both sets of data. They conveyed that treatment involved a relationship with the therapist or doctor and outcomes of the treatment will instil different expectations and perceptions of an overall performance rather than the services only. In contrast Hassanien *et al.*, (2010) termed the whole service offering as the core service and that customers would evaluate the core service (the treatment) along with the services (facilities, location, reception, appointments, servicescape etc.) and that customers would have expectations and perceptions of the overall service. Sureshchandar *et al.*, (2002) stated that the core service is the essence of any service. In the healthcare industry their primary objective was to provide quality care in an effort to improve the individual's health (Hudak *et al.*, 2002). Vandamme and Leunis (1993) felt that patients were unable to evaluate the quality of the treatment offered by hospitals or doctors and therefore relied more on experience. Despite the critics of separating both the services and the treatment, previous studies within the healthcare sector have involved the measurement of both the treatment and the services of that provider in one questionnaire. The measurement of both services and treatment continues to be a debate in the literature.

The question of which components should or should not be included in a study of service quality depends on the aim and objectives of the study and the context therein. The healthcare studies in table 4 below have adapted the SERVQUAL instrument to the context of the study, in addition, the mean gap score has been utilised as the method of calculating the SERVQUAL data which is similar to the current study. The healthcare studies in table 5 have also adapted the SERVQUAL instrument to the context of the study but statistically tested the SERVQUAL instrument in addition to calculating the output of the questionnaire. Appendix 3 further describes the amended SERVQUAL instrument in studies other than the healthcare sector.

**Table 4: Application of the SERVQUAL Instrument in Healthcare Studies**

Table 4 outlines the healthcare studies that have calculated the SERVQUAL analysis as a mean gap score. The table also describes the adaptations to the SERVQUAL questionnaire. The physiotherapy studies are detailed later in the chapter.

| <b>AUTHOR(S)</b>                   | <b>ORGANISATION</b>  | <b>APPLICATION OF SERVQUAL</b>  | <b>SAMPLE</b>  | <b>METHOD FOR SERVQUAL ANALYSIS</b>     |
|------------------------------------|--|---|--|---|
| Butt and Cyril de Run (2008)       | Private healthcare quality: applying a SERVQUAL model to Malaysian hospitals.  | Adapted SERVQUAL to 17 item questionnaire.  | Sample 400. Respondents 340 participants from a healthcare facility in Malaysia. | Mean Gap Scores                         |
| Camilleri and O'Callaghan (1998)   | Healthcare-comparison of Maltese Public and Private Hospitals.                 | The application of both SERVQUAL and Donabedian Framework. Two paired questionnaires developed. | No sample figures available. 76.5% of the sample responded (patients).           | Mean gap scores and weighted gap scores |
| Chakravarty (2010)                 | A hospital outpatient department in India.                                     | Original SERVQUAL questionnaire.  | 50 patients.   | Mean Gap Scores.                        |
| Curry, Stark and Summerhill (1999) | Patient and stakeholder consultation in healthcare; 88 care homes in Scotland. | Minor changes to SERVQUAL 22 item questionnaire and the Nominal Interview Technique.            | Sample 153 (78 residents and 75 relatives).                                      | Mean Gap Scores                         |

| <b>AUTHOR(S)</b>             | <b>ORGANISATION</b>   | <b>APPLICATION OF SERVQUAL</b>  | <b>SAMPLE</b>   | <b>METHOD FOR SERVQUAL ANALYSIS</b> |
|------------------------------|---|---|---|-------------------------------------|
| Karassavidou (2009)          | Aimed to identify the service quality dimensions aimed at patients of Greek public hospitals    | A 26 item SERVQUAL questionnaire was utilised.  | A sample of 137 patients in 6 hospitals located in Northern Greece.   | Mean Gap Scores                     |
| Lee and Yom (2006)           | A comparative study of patients' and nurses' perceptions of the quality of nursing services.    | Adapted SERVQUAL, 20 item questionnaire and translated into Korean; 5 point Likert scale.   | Sample 300 patients and 300 nurses of 6 Korean hospitals. Respondents: 272 patients and 282 nurses.         | Mean Gap Scores                     |
| McGorry (1999)               | An investigation of expectations and perceptions of healthcare services with Latino population. | Adapted SERVQUAL to 5 point Likert scale. 22 item questionnaire.                            | 106 patients of an obstetrics/gynecology clinic in urban USA with large Latino population. 105 respondents. | Mean Gap Scores                     |
| Resnick and Griffiths (2011) | A study of privately funded alcohol treatment services in the UK.                               | SERVQUAL was used as a tool to capture the information in an interview setting.             | Two groups: one group of 32 patients and a second group of 15 clinical staff.                               | Mean Gap Scores                     |
| Youseff et al., (1996)       | Healthcare quality in NHS hospitals   | Adapted words on SERVQUAL to suit the hospital environment. Retained 22 item questionnaire. | Sample 300, respondents 174 patients in the UK West Midland region.   | Mean gap Scores                     |

From the studies in table 4, there is a mixture of private and public sector studies with one comparison study of both the public and the private sectors. Camilleri and O'Callaghan (1998) conducted their comparison study of private and public hospitals in Malta. Higher *expectations* in the private healthcare sector were found for price, environment, catering and accessibility. Many of the studies have adapted the SERVQUAL instrument with minor changes to the wording to fit the context of the study. The results are study specific but one common theme was the negative perceptions in all five determinants for four of the studies (Chakravarty, 2010; Karassavidou, 2009; Butt and Cyril de Run, 2008; Youseff *et al.*, 1996). The customers of those hospitals perceived all the services that they were questioned on to have a negative service quality score. Three of the hospitals were in the public sector (Chakravarty, 2010; Karassavidou, 2009; Youseff *et al.*, 1996) and one was a study of private Malaysian hospital facilities (Butt and Cyril de Run, 2008). The three studies in the public sector were conducted in India, Greece, and the UK. Many countries have funding issues for the public healthcare sector and this was highlighted in those three studies as having affected the service quality of the hospitals. From a hospital management perspective, the studies have demonstrated a serious service quality problem in those hospitals. The funding issue for the public healthcare sector is a global problem and with a growing population it will continue to affect the public healthcare sector in many countries (Irfan and Ijaz, 2011). There was one study of the private healthcare sector (Butt and Cyril de Run, 2008) that found negative perceptions in all five determinants. Service reliability and responsiveness received the highest negative scores which indicated to the researchers that the patients did not trust the service providers and this could have been one of the main reasons for the negative perceptions. Butt and Cyril de Run (2008) stated that the private healthcare providers in Malaysia were required to emphasise employee training to reduce response times and introduce a genuine urgency when responding to their customers.

There were two studies that compared the results of two groups of respondents within the same study (Lee and Yom, 2006) who compared the responses of patients and nurses and Curry *et al.*, (1999) who compared the responses of residents and relatives of the nursing home service. Both studies found different results for each group of respondents. Discovering different results for groups that are affected by the same services are very interesting findings for the management of these service providers.

The findings can act as a strategic management tool to improve the service quality of the healthcare services.

Culture also forms an aspect of any study as was the case in the study by McGorry (1999). The study was in relation to healthcare of a Latino population who were of low income. The study found that the respondents had low expectations of the healthcare services and this was attributed to the culture of the respondents. The *perceptions* were greater than the *expectations* in 12 areas of a 22 item questionnaire. McGorry (1999) stated that this was a relatively strange finding and that socioeconomics were a strong factor in this study.

There are similarities in the studies in terms of outcomes for the public sector in so much that the lack of government funding has affected the service quality of the public hospitals globally in addition to being country specific.

**Table 5: Other Healthcare Studies and the SERVQUAL Instrument**

Table 5 illustrates studies that have tested the validity and reliability of the SERVQUAL Instrument in addition to other statistical calculations.

| <b>AUTHOR(S)</b>            | <b>ORGANISATION</b>   | <b>APPLICATION OF SERVQUAL</b>   | <b>SAMPLE</b>  | <b>METHOD FOR SERVQUAL ANALYSIS</b>   |
|-----------------------------|---|--|--|---|
| Ahmed and Samreen (2011)    | Karachi Hospitals   | 26 item questionnaire to include accessibility and affordability. Translated into Urdu.<br><br>5 point Likert scale. | Private Hospital 96. Semi-public Hospital 90<br>Public Hospital 66<br>Total sample= 252                      | Factor Analysis<br><br>Regression model linked to patient satisfaction.   |
| Alrubaiee (2011)            | Investigated the relationship between service quality and satisfaction in public and private Jordanian Hospitals. | Refined and modified the SERVQUAL scale.<br>32 item questionnaire on a 5 point Likert scale.                         | 330 questionnaires given to patients in 4 private and public hospitals. 290 useable questionnaires returned. | Factor Analysis.<br><br>Multiple regression model linked to patient satisfaction.   |
| Babaskus and Mangold (1992) | Assessed Patient's perceptions of service quality in a multi-hospital corporation in the US.                      | A modified SERVQUAL scale 15 item questionnaire.   | 2036 patients discharged within 13 months. 443 responses.  | Factor Analysis and correlation used to assess the validity and reliability of the Instrument. All five dimensions were found to be greater than 0.5. |

**Table 5 continued**

| <b>AUTHOR(S)</b>                     | <b>ORGANISATION</b>   | <b>APPLICATION OF SERVQUAL</b>  | <b>SAMPLE</b>   | <b>METHOD FOR SERVQUAL ANALYSIS</b>                        |
|--------------------------------------|---|---|---|--|
| Chaniotakis and Lympelopoulus (2009) | Service quality on satisfaction and word of mouth in the healthcare industry in Greece.   | Adapted SERVQUAL, 5 point Likert scale and 20 item questionnaire  | Population 25,000, Sample 1000, Respondents 1000.   | T-test<br>Cronbach Alpha                                   |
| Irfan and Ijaz (2011)                | A comparison of a private and public hospital in Lahore, Pakistan.                        | Modified the 22 item scale to a 5 point Likert scale. Changed the wording to suit the study. Kept 22 questions. | 500 questionnaires, 320 useable questionnaires. The sample had all attended both hospitals. | Cronbach Alpha. Mean Score, standard deviation.<br>T-test. |
| Kim and Han (2012)                   | Improving service quality in long term care hospitals.                                    | Adapted SERVQUAL to 18 item questionnaire and linked the questionnaire to job satisfaction.                     | 230 hospital employees in 18 long term care hospitals. 198 responses.                       | Multivariate Analysis                                      |
| Lim and Tang (2000)                  | Examined patients' expectations and perceptions of hospital service quality in Singapore. | 25 item SERVQUAL adapted questionnaire adding affordability and accessibility.                                  | A sample of 252 surveys were collected.   | Mean standard deviation and the Mann Whitney-test.         |



|                              |  |  |  |  |
|------------------------------|--|--|--|--|
| Manaf and Nooi (2009)        | Out-patients and in-patients on the basis of the SERVQUAL model in public Malaysian hospitals.                   | SERVQUAL 22 item questionnaire used.   | A sample of 646 inpatients and 570 outpatients   | Factor analysis  |
| Mostafa (2005)               | Tested perceptions of service quality in 12 private and public Egyptian hospitals.                               | SERVQUAL 22 item questionnaire, 5 point Likert scale.  | 500 questionnaires distributed, 332 successfully collected from 12 hospitals.  | A statistically significant difference in terms of service quality between public and private hospitals. |
| Petrovici and Philips (2009) | Used the basis of SERVQUAL to develop SERVHOSP, an instrument designed for use in a private hospital in Romania. | SERVHOSP had eight determinants, tangibles, responsiveness, empathy, ambience, communication, credibility and risk management over 31 item paired questions. | Two studies.<br>Study one: 30 in-depth interviews with patients, doctors and nurses to develop the SERVHOSP instrument.<br>Study two: Sample of 384 patients | Cronbach Alpha.<br>T-Test  |
| Vandamme and Leunis (1993)   | Development of a multi-item scale for a general hospital in Brussels healthcare sector.                          | Adapted SERVQUAL to 28 item questionnaire (extended tangibles and responsiveness questions).   | Conducted in Brussels hospitals. Sample 90, 70 respondents.  | Cronbach Alpha (range: 0.58-0.75)<br>Factor Analysis   |

Two studies in table 5 have linked service quality with patient satisfaction (Ahmed and Samreen, 20011; Alrubaiee, 2011) A study linked service quality and word of mouth (Chaniotakis and Lympelopoulus, 2011) and a third study linked service quality with job satisfaction (Kim and Han, 2012) . Five studies were conducted in the public sector, two in the private sector and four in the public and private sector. The studies were more difficult to compare than the studies in table 4 as different statistical calculations were conducted for each of them.

Lim and Tang (2000) found in their study of public Singapore hospitals that two of the highest expectations were in the *reliability* dimension and *responsiveness* dimension. Lim and Tang suggested that hospital management required to be responsive, friendly, courteous, treat patients with dignity and respect and most of all, explain to patients their medical condition thoroughly. The largest difference between expectations and perceptions was in the waiting times (*responsiveness* dimension); patients were unhappy with the long waiting time of more than one hour for services. The study did indicate to management where customers were least happy and this was valuable information.

Irfan and Ijaz (2011) in the comparison study of private and public hospitals in Pakistan found similar results to Camilleri and O’Callaghan (1998) in the comparison study of Maltese private and public hospitals; that the customer expectations were greater for the private hospitals. Mostafa (2005) found a statistically significant difference in the service quality between private and public hospitals.

The results of some of the studies in table 5 indicated that that there was a difference in *expectations* and *perceptions* between the private and the public sector. Private healthcare owners should be aware of the *expectations* and *perceptions* that customers have of private healthcare services. Babaskus and Mangold (1992) stated that the measurement of patient *expectations* in addition to *perceptions* provided a valuable insight into business processes for service quality of a private hospital corporation in the USA.

## **2.10 A Review of Studies in the Healthcare Industry**

Specifically in the UK, the private sector consists of private hospitals (who often have the same medical personnel as the public NHS sector but provide different services e.g.

free coffee in reception, free car parking) and other ancillary medical services such as physiotherapy, podiatry, dentistry, cosmetic treatment, fertility etc. operating from regulated private practices. Lafond (1995) stated that the growth in the UK private practice for healthcare, is mainly due to the perception that the quality is poorer in the public sector alongside lengthier waiting times for appointments. The studies outlined below are in the main from table 3 as they are studies that have utilised the SERVQUAL instrument in a similar method to the current study. There are also two studies from table 4 that are relevant.

### 2.10.1 Healthcare Sector Studies

Ahmed and Samreen (2011) explored the dimensions of the SERVQUAL model and patient satisfaction in three selected hospitals in Karachi (public, private and semi-public). They compared the service quality gaps between the three hospitals. They added *Feedback and Guidance* (informative brochures were available, patients explained their condition thoroughly and doctors and staff understood the specific needs of the patient). Also added was *Affordability* (consistency of charges and charges for the services rendered were affordable). In the public hospital, they found **Reliability, Responsiveness, Tangibility, Professionalism** and **Empathy** as the statistically significant predictors of patient satisfaction. They noted for management that more attention was needed in the cleanliness of the hospital, waiting times and feedback on the medical condition. In the private hospitals **Reliability, Responsiveness, Feedback, Guidance** and **Affordability** were found to be statistically significant determinants of patient satisfaction. They mentioned that management needed to concentrate on reducing waiting times to ensure that the doctors were available at the allocated times. The semi-public hospitals resulted in factors **Reliability, Responsiveness, Tangibility, Professionalism** and **Empathy** as statistically significant in patient satisfaction. In particular they noted that management had to take more notice of the record keeping (making it error free), the cleanliness of the hospital and for staff to be more courteous. Ahmed and Samreen (2011) provided service quality information to the management of the hospitals and compared the three hospitals in terms of service quality and customer satisfaction. They found that the service quality determinants **reliability** and **responsiveness** featured as a significant link to customer satisfaction in all three hospitals.

Butt and Cyril de Run (2010) argued that customers' perception of quality in the private healthcare service formed part of their decision to select a particular private provider. They conducted a study into 340 randomly selected participants visiting a private Malaysian healthcare facility during a three month data collection period. Butt and Cyril de Run (2010) kept the five determinants of the SERVQUAL scale but reduced the questions from a 22 item scale to a 17 item scale. The analysis of the mean gap scores were of a negative perception of service quality in all of the five areas (***Tangibles, Reliability, Responsiveness, Assurance and Empathy***). The conclusion drawn from the negative perceived service quality was that it was an unimpressive assessment of the private Malaysian healthcare facility. The findings represented a good example of when the perception is negative, the reasons why are limited and therefore are unable to provide adequate management information with which to make strategic business decisions.

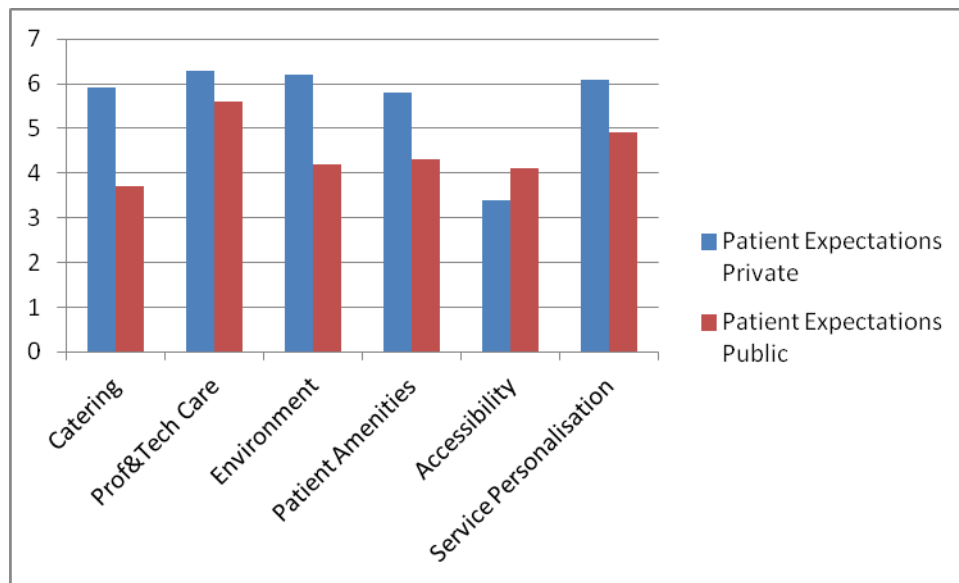
A further study by Camilleri and O'Callaghan (1998) compared Service Quality in both Public and Private Hospitals in Malta. The service quality issues in Malta were primarily as a result of the economics of the country; the decrease in public hospitals to an increase in private hospitals. This led to a requirement to look at service quality in a different light due to the competitiveness between the private hospitals. Camilleri and O'Callaghan (1998) compared the expected and perceived service quality in the private and public healthcare sector in Malta using an adapted SERVQUAL questionnaire. They conducted the research using two frameworks (Donabedian, 1980 and Parasuraman *et al.*, 1990). The first questionnaire measured the patients' expectations of service quality for private and public hospitals and the second questionnaire measured the perceptions of the particular hospital they attended. Camilleri and O'Callaghan's (1998) questionnaire measured: Catering, Hospital Environment, Professional and Technical Quality, Patient Amenities, Service Personalisation and Accessibility. The results and comparison of both the private and public hospitals is displayed in table 6 and graph 1 below.

**Table 6: Rank Order of the Different Service Quality Groups (Camilleri and O'Callaghan, 1998)**

| <b>Rank</b> | <b>Public Sector</b>            | <b>Private Sector</b>           |
|-------------|---------------------------------|---------------------------------|
| 1           | Professional and technical care | Professional and technical care |
| 2           | Service personalisation         | Service personalisation         |
| 3           | Price                           | Environment                     |
| 4           | Environment                     | Accessibility                   |
| 5           | Patient amenities               | Patient Amenities               |
| 6           | Accessibility                   | Catering                        |
| 7           | Catering                        | Price                           |

The table demonstrates the different ranking for the private hospital compared to the public hospital. There are two factors that rank the same at the top of the list (Professional and technical care and Service personalisation). The other factors are not too dissimilar in the ranking apart from one that stands out (price). Price is also a clear differentiator in the UK between the public and the private sectors as the public sector is funded from public money. The second part that is interesting in this study was the patients' expectations in both the public and the private hospitals as displayed in graph 1.

**Graph 1: A Comparison of Patient Expectations for Public and Private Hospital Care Service Quality in Maltese Hospitals (Camilleri and O’Callaghan, 1998)**

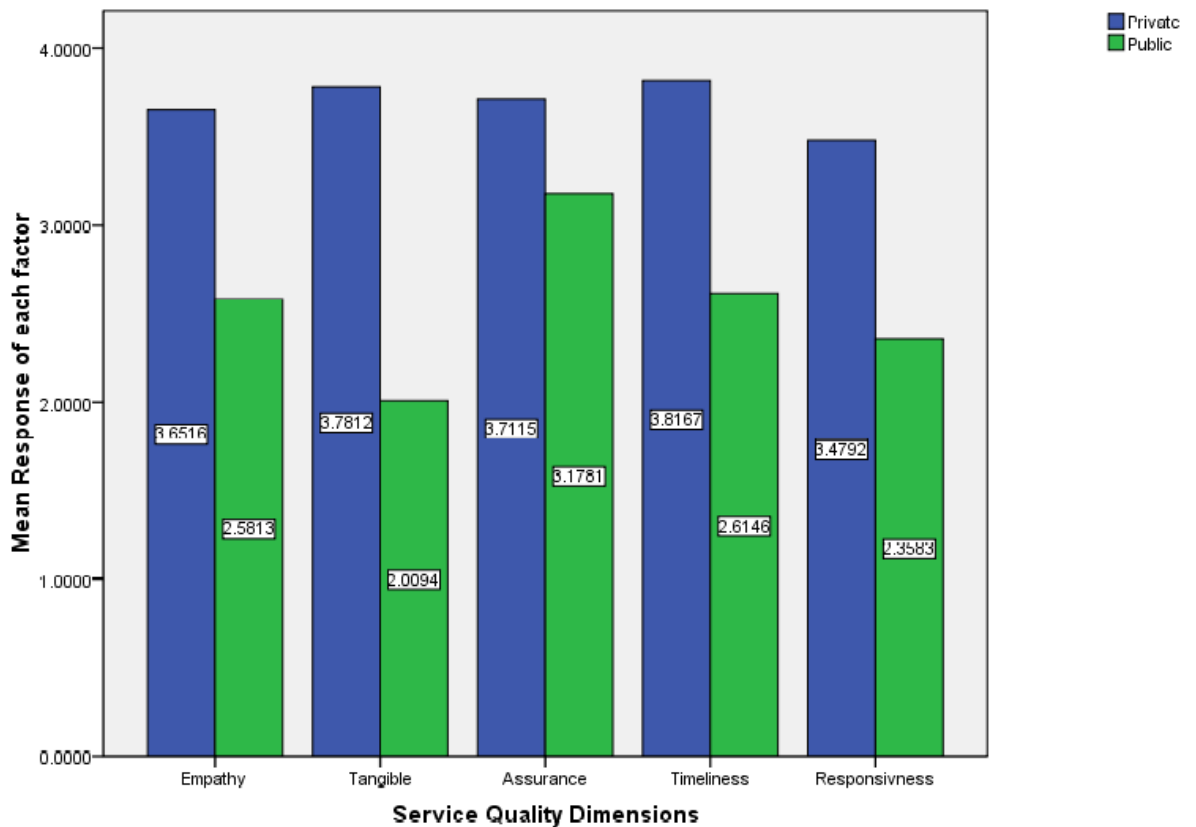


The graph shows that whilst the patients’ rankings in table 6 were not too dissimilar, the expectations of the two hospitals are quite different. The expectations of the private hospitals were higher than the public hospitals with the exception of accessibility. Camilleri and O’Callaghan (1998) stated that the price factor may have played a significant role in the difference between the private and public hospitals. Interestingly, they note that because of limited professional resources, often the public and private sectors employ the same personnel, however the expectations of both those services remain different. Perhaps the marketing of the private hospital had a greater impact on the expectations of the patients for the private sector (Camilleri and O’Callaghan, 1998).

Graph 1 demonstrates that customers do have different **expectations** of private services and this is essential information for any services provider. In order to meet the expectations, the provider needs to know what they are. Hart (1996) argued that by ignoring customer expectations, deep rooted problems in service quality can surface.

Irfan and Ijaz (2011) conducted research into both a public and private hospital in Lahore, Pakistan. The sample consisted of 320 patients that had attended both hospitals. Irfan and Ijaz changed the wording of SERVQUAL to suit the study and changed the term *responsiveness* to *timeliness*. Patients’ perceptions were measured in both hospitals and graph 2 below demonstrates the difference in perceptions between the two hospitals.

**Graph 2: Pakistani Hospitals, Private and Public**



Source: Irfan and Ijaz (2011: 15)

The perception following the visit to the hospital was that the private hospitals were perceived to have better service quality. Comparing the two hospitals, the *assurance* dimension was higher than the other dimensions, this was as a result of the hospital being a training hospital where top medical professionals train. It was thought that the doctors at the training hospital *assured* the patients nearly as much as in the private hospital giving the higher assurance response factor for both the private and the public hospitals.

Like many countries, the private hospitals in Pakistan depend on customers to meet their financial budgets and constraints. The results of the study above show that the private hospital is focussing on aspects around the patient experience. The public hospital relies on government funding, government interest and the development of the public healthcare sector. Due to the rapid growth in population, the public hospitals have found themselves increasingly underfunded and this has affected the service quality of the public hospitals (Irfan and Ijaz, 2011). This is similar to other findings of

comparisons of public and private healthcare (Camilleri and O'Callaghan, 1998; Mostafa, 2005).

Chakravarty (2010) conducted research at a peripheral military hospital outpatient department. The sample consisted of 50 patients. The research was conducted using the original SERVQUAL 22 item questionnaire with only minor word changes to fit the context of the hospital outpatient services. They found that there were negative perceptions of the service quality in all five determinants in the following order: **Responsiveness -0.65, Tangibles -0.55, Assurance -0.28, Empathy -0.11 and Reliability -0.04**. From a management perspective, it was important to note where some of the largest negative service quality gaps were. Two included: *question 1 in Tangibles*: Excellent outpatient services should have modern equipment (-1.50) and *question 11 in Responsiveness*: Excellent outpatient services should give prompt service (-1.14). This may have indicated to management that there was unhappiness around the equipment used and the service provided at the reception desk or when the patient called to make an appointment. It was difficult to know precisely what the issues were with both of those negative service quality gap scores and a deeper investigation would in this instance have been helpful. It was noted from the discussion in this paper that further analysis as to the reasons behind the negative perceptions would have been of benefit to the management of the hospital services. There was a negative score for waiting times (-0.16) in the *Tangibles* determinant. Chakravarty (2010) thought that this was because of the location of the outpatient services; being a military hospital, the services were on the military campus and not always easy to access. With all five areas having a negative service quality gap, Chakravarty (2010) indicated that the analysis was a significant prompt to management to re-structure the outpatient services. There were only two questions that had a positive service quality gap and they were both in the *Empathy* determinant including, giving individual attention to patients and readiness for personal attention. Overall *Empathy* had the least negative service quality gap score -0.11 but responsiveness had the most negative service quality gap -0.65 indicating that the patients' expectations of the services were not quite met for the Empathy determinant but the expectations for responsiveness were not met at all. Responsiveness was concerned with the ease of appointments, prompt service, willing staff and prompt response to any request. This is one of the areas that management could identify as an area for improvement.



Curry *et al.*, (1999) researched service quality in care homes and compared the SERVQUAL results between the residents of the care home and the relatives of the residents. Further they used a mixed method approach of the SERVQUAL instrument and the nominal group technique for three key stakeholders (patients, general practitioners and clinical staff). Their SERVQUAL research **from residents** found that highest expectations came from the *assurance* and *responsiveness* determinants. *Tangibles* were the lowest priority. For **the relatives**, the highest expectations came from *assurance* and *reliability* dimensions whilst *responsiveness* and *reliability* received the most positive gap scores. Comparison of both sets of data, residents rated assurance more highly than the relatives; relatives rated empathy more highly than the residents and tangibles were more important to the residents. This data was also valuable information for the management of the care homes. Training could be provided to the staff to improve the areas of concern where there were service quality gaps.

Karassavidou *et al.* (2009) conducted research into service quality in Greek public hospitals using an adapted SERVQUAL questionnaire similar to Ahmed and Samreen (2011). Karassavidou *et al.* (2009) added accessibility and affordability as a sixth determinant. Karassavidou *et al.* (2009) split the questionnaire into three factors: Factor 1 Human Aspect, Factor 2 Physical Environment and Infrastructure and Factor 3 Accessibility, all factors had a negative service quality gap. The least positive gap (-2.08) fell under factor 2: physical environment and infrastructure and was for *question 23*: informative brochures about the provided service are available to patients; followed by *question 17*: the hospital's equipment is up-to-date and well maintained (-1.88). The highest score, although still a negative mean gap score was in factor 3: accessibility, *question 24*: (-0.85) the hospital is easy to access (e.g. parking facilities), followed by *question 20*: Doctors and staff are always neat (-1.08).

The study articulated that the Greek hospitals were seriously underfunded and this may have accounted for such a negative perception compared to the patient's expectations. Karassavidou *et al.* (2009) suggested that their research did not fully cover the reasons for the negative perception and recommended that qualitative methods employed alongside quantitative methods would provide a better understanding of the complex issue of service quality in the healthcare sector.

Lee and Yom (2006) investigated service quality in Korean hospitals with a sample of 272 patients and 282 nurses, using the SERVQUAL 22 item paired questionnaire on a 5 Likert scale. The study compared the patients' mean service quality gap score and the nurses' mean service quality gap score. The highest expectations for both groups were for the *reliability* factor whilst *tangibility* received the lowest expectations for both groups. Their findings contrasted with Lim and Tang (2000) whose research of Singapore hospitals placed *assurance* as the highest expectation. The nurses had consistently higher expectations than the patients. Lee and Yom (2006) stated that the nurses should discover what the patients' expectations are and not just simply assume that they are equal or the same. The overall mean gap score was negative and most statements had a negative perception for the patients apart from *question 3 under tangibles: provide a good feeling because of appearance* and *question 12 under responsiveness: provide medication and treatment at the correct time*. The nurses' perception of the service quality of the hospitals was negative for all 22 questions and again further information would have been beneficial for the hospital management.

McGorry (1999) conducted a study with a Latino population in a public healthcare setting (obstetrics/gynecology unit) in an urban area of the north-eastern USA with a large Puerto-Rican population. SERVQUAL was adapted to a 5 point Likert scale but the original SERVQUAL determinants were utilised in the study and the wording moderately adapted for the environment. 106 patients were asked to complete the survey and 105 questionnaires were returned. Perceptions were higher than expectations in: staff/doctor showing sympathy, the unit providing prompt service, the unit responding to requests promptly, trusting the staff, feeling safe in transactions, staff being polite, given personal attention, staff knowing the needs of the patient and convenient hours of the unit. McGorry (1999) noted that 13 *expectations* were higher than the *perceptions* and that Brown *et al.* (1993) stated that this was unusual. McGorry (1999) presented that this phenomenon could be a result of the socio-economic factors of the population i.e. low income and therefore the sample had lower expectations of service standards.

Petrovici and Philips (2009) used the basis of SERVQUAL to develop SERVHOSP, an instrument designed for use in a private hospital in Romania that encompassed 6 determinants: **Tangibles** (standards of appearance, equipment and consumables) **Empathy** of personnel (comfort and availability of employees); **Responsiveness** to

patient needs (to be seen promptly and convenient visiting hours), **Reliability** (keep appointments and to receive a good service); **Ambience** (of reception) and **Risk Management** (competent doctors, feel safe from risks and clean hospital). One of their main findings was that perceived security from risks (risk management) from malpractice was one of the main components of patient assurance. The Romanian study may have implications for the context and culture in which it was set. Further studies are required using SERVHOSP to determine the applicability for UK hospitals. The study further endorsed the requirement for the need to use a method that suits the purpose, culture and context.

Resnick and Griffiths (2011) undertook a study into privately funded alcohol treatment services in the UK. Data was gathered via interviews with two groups of participants using the SERVQUAL questionnaire as the tool from which to capture the information. The first group comprised 32 patients and the second group comprised 15 clinic staff. The original SERVQUAL instrument was utilised with no adaptations other than demographic questions. From the patient group, there was one category (*reliability*) that had a *negative service quality gap score -0.2*. For the clinical staff group, there were four categories that were negative (*Reliability-0.6, Assurance -0.5, Responsiveness -0.2 and Empathy -0.1*). Resnick and Griffiths (2011) concluded that achieving consistent service quality and improving empathy between staff and patients would benefit the overall service quality perceptions. This was an interesting conclusion as the patient group had a **positive empathy score of 0.1**. It may however indicate that empathy between the staff and management was the problem and not between the patients. Further information on this matter would have given management a very valuable insight into why the empathy factor was lower with the staff group than with the patient group.

Youseff *et al.* (1996) found a negative perception of service quality when they conducted a study into West Midlands Hospitals. 300 questionnaires were distributed to patients chosen from West Midlands Hospitals who had attended surgical, orthopaedic, spinal injury, medicinal, dental and other specialities. The total response rate was 174 (29% from mailed questionnaires, 80% from questionnaires handed to patients and 36% distributed by GPs). A 9 point Likert scale was utilised throughout the questionnaire from strongly agree (9) to strongly disagree. The researchers adapted the original SERVQUAL questionnaire with minor wording relating to hospital services i.e.

*question 14 Assurance: Patients would feel secure at receiving medical care at excellent NHS hospitals for all five determinants (**Tangibles, Reliability, Responsiveness, Assurance and Empathy**). Youseff *et al.* (1996) found that the patients' highest **expectation** dimension was reliability, followed by empathy, responsiveness, assurance and tangibility and yet their lowest **perception** of the service quality (in order of descent) was reliability, empathy, responsiveness, assurance and tangibility. Their study therefore resulted in an overall negative perception of the West Midlands NHS hospitals. This represented a serious finding for the management and staff of the hospitals. It was difficult to interpret why those patients had negative perception scores other than pinpointing that reliability was a major factor. Included in reliability was: *question 5*: providing services at a time they said they would, *question 6*: when a patient has a problem, NHS shows a sincere interest in solving it, *question 7*: excellent NHS hospitals will carry out the services right the first time, *question 8*: excellent NHS hospitals will provide error free records and *question 9*: hospital staff in excellent NHS hospitals would carry out services right the first time. For management information, it is useful to note the gaps between the perceptions and expectations for each determinant but again it is difficult to know the deeper reason for the negative perceptions of the service quality within the hospitals.*

Many of the service quality studies on the healthcare sector are empirical studies based around the SERVQUAL questionnaire or an adapted version of SERVQUAL as described in tables 4 and 5. The studies analysed the service quality gap but they did not describe the reasons for the positive or negative perceptions, in particular the negative perceptions when the customers' expectations have not been met.

### **2.11 Service Quality in the Physiotherapy Industry**

Predominantly in the UK, the physiotherapy industry sits under the umbrella of the NHS or within the Private Hospitals e.g. (BUPA and The SPIRE) or operates as an independent regulated Private Practice. All physiotherapists are covered under the Chartered Society of Physiotherapy. It is the largest of the Allied Health Professions (AHPs) with more than 50,000 practitioners in the UK. AHPs are an essential part of the NHS and Private workforce, delivering services across health and social care services (csp.org.uk)

Through the Health Care Professions Council (HCPC), the call for service quality in the physiotherapy industry has increased in line with Government legislation and as a result increased pressure on the private independent practice. Quality Assurance Standards for physiotherapy service delivery appear under the Chartered Society of Physiotherapy guidelines ([csp.org.uk/standards](http://csp.org.uk/standards)). The concept of delivering a quality service falls under category nine of the guidelines (9) **Evaluation of clinical care and services**. This is further broken down into four parts: (1) that effective quality improvement processes are in place; (2) that a clinical audit programme ensures continuous improvement; (3) that there is a clear and responsive procedure for making and dealing with complaints; and (4) any treatment plan is evaluated to ensure that it is effective and relevant to the goals (<http://www.csp.org.uk/professional-union/professionalism/what-professionalism>).

In the physiotherapy industry, the Quality Assurance Framework ([csp.org.uk/standards](http://csp.org.uk/standards)) does expect a quality improvement process to be in place. Quality of services in the private practice remains a very important strategic element of a physiotherapy business. The private practice competes not only on the core service (the physiotherapy treatment) but very much on the services element of the practice (the reception area, appointment system process, staff behaviour, the manner in which customers feel they have been dealt with and the fee they pay for that service). Camillerri and O'Callaghan (1998) and Ahmed and Samreen (2011) suggested that both expectations and perceptions of the private sector were higher than the public sector. Price did play a factor in the study of Camillerri and O'Callaghan (1998) where it was ranked much higher in the private sector as a consideration. Table 7 overleaf describes studies in the physiotherapy sector, the type of hospital or service, the methods utilised, the sample, and the analysis of the data or information.

**Table 7: Physiotherapy Studies**

| AUTHOR(S)                          | STUDY  | METHOD   | SAMPLE   | ANALYSIS OF DATA OR INFORMATION  |
|------------------------------------|--|--|--|--|
| Curry and Sinclair (2002)          | Assessed the quality of physiotherapy services in 3 NHS physiotherapy providers using the SERVQUAL questionnaire.      | Minor changes to SERVQUAL, 22 item questionnaire.  | Sampled three units that offered physiotherapy services. Sample 450. Respondents 134.  | Mean Service Quality Gap Scores.<br><br>Rankings and weightings.                           |
| Goldstein <i>et al.</i> , (2000)   | Assessed patient satisfaction and physiotherapy.   | A 20 item questionnaire on a 6 point Likert Scale. | Data was collected from 12 physiotherapy practices including a hospital outpatient clinic and a private practice. 289 completed questionnaires.  | Factor Analysis<br><br>Cronbach Alpha  |
| Potter, Gordon and Hammer (2003 a) | A qualitative study investigating the difficult patient in private practice physiotherapy.                             | Qualitative interviews over two phases.            | <i>Phase one:</i> The sample was 20 physiotherapists working in private practice in Perth, western Australian.<br><br><i>Phase two:</i> The sample was 17 physiotherapists working in private practice in Perth, western Australian with up to five years' experience. | Nominal Group Technique to identify the typology of the difficult patient over two phases. |
| Potter, Gordon and Hammer (2003 b) | Identified the qualities of a 'good' physiotherapist and to ascertain the characteristics of good and bad experiences. | Structured two hour interviews                     | A purposive sample of 26 former patients recruited from private practices in western Australia.  | Nominal group technique.   |

Table 7 describes the main physiotherapy studies. Only one study (Curry and Sinclair, 2002) has utilised the SERVQUAL instrument in the physiotherapy sector to measure service quality. The other studies are concerned with the satisfaction with the treatment or the behaviours of the patients or the therapists. Little has been previously written with regard to service quality and the physiotherapy sector. There is therefore a gap between what the legislation requires and what the physiotherapy sector have in place to meet the legislation requirements.

### **2.11.1 A Review of Studies in the Physiotherapy Industry**

The main comparison study is Curry and Sinclair (2002), referred to in table 8 overleaf. Curry and Sinclair (2002) looked specifically at *expectations* and *perceptions* of service quality in three physiotherapy units under the NHS umbrella: outpatient physiotherapy, a community rehabilitation team (CRT) and services offered at a GP's surgery. They adapted the SERVQUAL questionnaire with minor wording to fit the context of each of the three physiotherapy providers. They distributed 450 questionnaires and 134 were deemed useable. They found the following results in the table overleaf:

**Table 8: Findings of Physiotherapy Study (Curry and Sinclair, 2002)**

| Type of Provider                    | Expectations                             | Expectations         | Perceptions                              | Perceptions          |
|-------------------------------------|--|----------------------|--|----------------------|
|                                     | <i>Highest Mean</i>                      | <i>Lowest Mean</i>   | <i>Highest Mean</i>                      | <i>Lowest Mean</i>   |
| Community Rehabilitation Team (CRT) | Assurance<br>Empathy<br>Responsiveness   | Tangibles<br>Empathy | Assurance<br>Empathy<br>Reliability      | Tangibles<br>Empathy |
| Outpatient Physiotherapy Services   | Assurance                                | Tangibles            | Assurance<br>Tangibles<br>Responsiveness | Tangibles            |
| Services offered at GPs Services    | Empathy<br>Reliability<br>Responsiveness | Tangibles            | Empathy<br>Assurance<br>Responsiveness   | Tangibles<br>Empathy |

Table 8 shows the highest and lowest mean gap scores for all three physiotherapy providers.

Curry and Sinclair (2002) found patients had low expectations and low perceptions of the materials, equipment, physical environment and operating hours, this did not mean that they had negative perceived service quality, it meant that both *expectations* and *perceptions* were low and therefore the service quality gap was small between those variables but not negative. These findings were different to many other healthcare studies. It may have been due to the fact that much of the treatment was home based as opposed to hospital based and this factor therefore changed the respondents' views of *expectations* and *perceptions* of the physiotherapy services provided.

Curry and Sinclair (2002) found that the most positive service quality gap between *expectations* and *perceptions* was the empathy determinant followed by reliability, assurance, responsiveness and finally tangibles.

Curry and Sinclair (2002) found difficulties with the administration of the questionnaire; mainly older patients' understanding of the questionnaire and many



patients found the questionnaire too long. In their questionnaire, Curry and Sinclair (2002) considered both the services and the treatment in the study.

Goldstein *et al.* (2000) researched patient satisfaction and physical therapy with a specific 20 item questionnaire on a 6 point Likert scale. They found that satisfaction was always relative to the patients' expectations. They further stated that patients who are satisfied with the overall service remain loyal to their therapist. The dimensions described in the research were: **Access** ( physical location, operating hours, appointment times and waiting times); **Administrative Technical Management** (ambience of facility, parking payments/claims processing, quality assurance programmes); **Clinical Technical Management** (qualifications of staff including clinical skills of physiotherapists and technical skills of other staff); **Interpersonal Management** (responses to complaints or suggestions, warmth/friendliness of the therapists and other members of staff, appropriate amount of time spent with each patient and respect for patient privacy) and **Continuity of Care** (intent to continue to have condition managed by provider, knowledge of patients' history, patients' recommendations to others and general satisfaction with the intervention received. This study did include some service questions: *question 9*: all other staff members were courteous, *question 10*: the clinic scheduled appointments at convenient times, *question 13*: it was easy to schedule visits after my first appointment, *question 14*: I was seen promptly when I arrived for treatment, *question 16*: my bills were accurate and *question 18*: parking was available for me. Other questions were centred around the satisfaction with the therapist and the treatment and the cost of the service.

Potter, Gordon and Hamer (2003a) conducted a qualitative study into the 'difficult patient' in private physiotherapy practice in Australia but only patients' behaviours were considered. The study included **Physiotherapist communication, Behaviour Modification, Referral or Involvement of others**. In relation to patients' expectations they found that there were two problems raised by the study. They found that patients had unrealistic expectations of what a physiotherapist could do for them and secondly they wanted their 'injuries' fixed immediately.

The study conducted by Potter Gordon and Hamer (2003b) was to ascertain the characteristics of 'good' and 'bad' experiences in the private physiotherapy practice with a sample of 26 patients. Their qualitative data (nominal group technique) found

**communication ability, professional behaviour and organisation ability** were the main qualities of a ‘**good**’ physiotherapist compared to their ‘**bad**’ experiences that was related to dissatisfaction with the service followed by **poor physiotherapist communication**. Their main communication finding helped the therapist to see that involving patients in the management of their care was a benefit.

In an exploratory study into physiotherapy and patients’ satisfaction, May (2007) interviewed 34 patients who had back pain and had been treated at an outpatients centre. May identified five important factors: a **professional approach, communication** to patients regarding the problem and prognosis, **collaborative consultation**, the **appointment structure** and flexibility of appointments as **good treatment outcomes**.

The physiotherapy studies described have been concerned with satisfaction of the outcome of the treatment apart from Curry and Sinclair (2002) who were concerned with the patient’s *expectations* and *perceptions* of the service quality of the physiotherapy service providers. Other physiotherapy studies reported in the literature, were mainly of a qualitative nature but did not investigate *expectations* and *perceptions*, only behaviours, satisfaction and treatment outcomes. Lees (2011) indicated that patient stories that support survey research give an important insight into patients’ experiences of the services provided. Stories form a narrative account which offers an exciting opportunity to learn from patients and gain a deeper understanding of their experience (Launer, 2002). Lees (2011) added that nursing research needed to move away from a healthcare environment that is built on logic and statistical information to a more empathetic and interpretative approach.

## **2.12 Conclusion of the Literature Review**

The aim of the study was to assess the service quality of an independent private physiotherapy practice. The literature review was therefore concerned with a review of service quality in the healthcare sector. The literature revealed that there were two main models for service quality, the American model and the Nordic model. The review highlighted that the model that was most appropriate for this study was the American model known as the Gaps Model of Service Quality (Parasuraman *et al.*, 1985). This model was suitable more to measuring services and it measured the gap between two service quality variables (*expectations* and *perceptions*). There was a clear argument in the literature for measuring both expectations and perceptions as it was thought that this

provided management with a deeper understanding of service quality within an organisation. One of the benefits of the Gaps model is that the SERVQUAL Instrument was designed specifically to measure *expectations* and *perceptions* of service quality and this was to fulfil *gap 5* of the gaps model.

From the review of the healthcare studies, it was evident that many researchers had analysed the SERVQUAL data as a mean gap score. This was also relevant to this study as it was the service quality gap that the study was concerned with not the testing of the validity and reliability of the instrument. The review of the healthcare studies also highlighted that amendments had been made to the SERVQUAL instrument but the originators of the tool suggested that only minor changes should be made to the questionnaire to ensure validity and reliability. This study determined to investigate service quality with the SERVQUAL instrument including the five determinants as outlined by Parasuraman *et al.* (1985). In addition, the healthcare studies outlined the service quality as a positive or negative score but there was little justification as to the gap in particular when the perceived service quality gap was negative, in other words when the customers' perceptions of the service did not meet their expectations.

From the review of the physiotherapy studies, it was revealed that there was a limited amount of research in the field of service quality in the physiotherapy sector and no previous service quality research into the private independent physiotherapy practice. The literature review also highlighted that the quality assurance framework pertaining to the physiotherapy sector was not supported by research in the field of service quality and that this was also a gap in the physiotherapy service quality literature.

### 2.12.1 The Gaps from the Literature Review, Research Questions and Conceptual Model

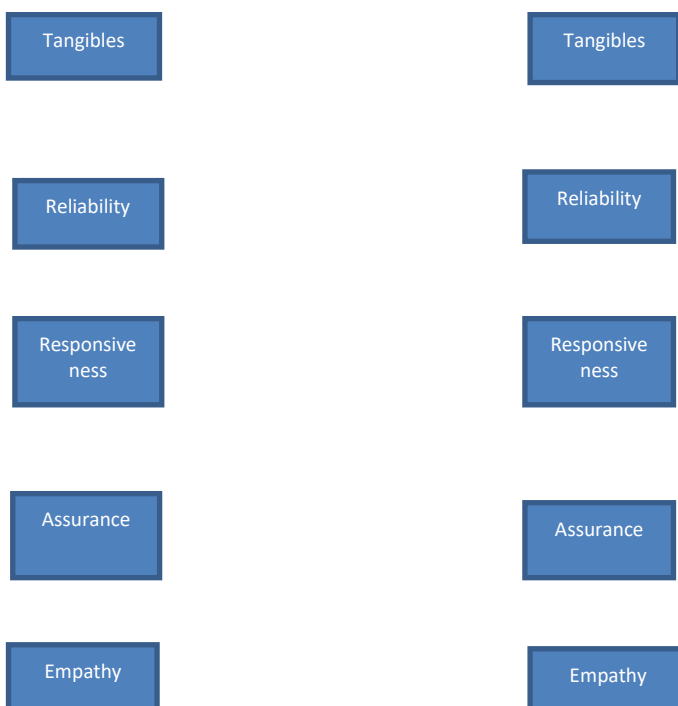
**Table 9: The Gaps from the Literature Review and Research Questions**

| Literature Gaps  | Research Questions  |
|--|---|
| 1. The identification of an appropriate conceptual framework for investigating service quality in an independent private physiotherapy practice which will extend the theory and contribute to practice. | 1. How will the conceptual framework add to the service quality theory and contribute to practice for the independent private physiotherapy practice? |
| 2. To undertake a more meaningful investigation of perceived service quality in an independent private physiotherapy practice.   | 2. Can the perceived service quality of an independent private physiotherapy be explored?   |

For research question one, the original SERVQUAL framework is first described in figure 3 followed by the amended SERVQUAL Instrument and the conceptual model for this study.

#### Figure 3: The Determinants of the Original SERVQUAL Instrument

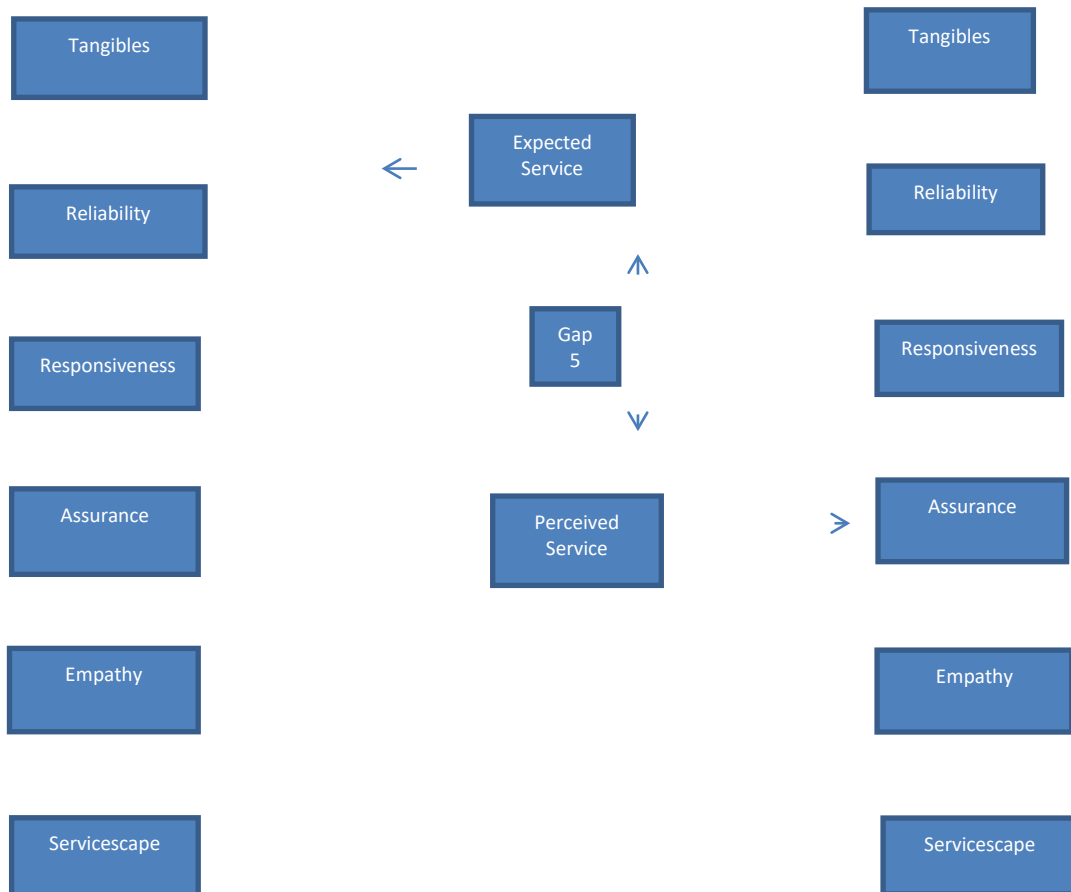
Figure 3 outlines the original five determinants of the SERVQUAL Instrument. This was adapted for the study as next described in figure 4.



### 2.12.2 The Conceptual Model for the Study

The conceptual model utilised for the study was the Gaps Model of Service Quality (Parasuraman *et al.*, 1985) and the gap for measurement was *gap 5*. The SERVQUAL Instrument was chosen as the Instrument to measure this gap. Questions regarding the interior and exterior of the practice building were added to the SERVQUAL Instrument. Sureshchandar *et al.* (2002) and Lovelock and Wirtz (2007) termed this aspect of services *servicescape*. The amended SERVQUAL determinants are shown in figure 4 below as part of the conceptual model for the study.

**Figure 4: The Conceptual Model for the Study and the amended SERVQUAL Instrument**



**Figure 4 shows expectations and perceptions** as two equal sections that form an adapted 25 paired item comparison questionnaire (SERVQUAL) that measured *gap 5* of the Gaps Model. Sureschandar *et al.* (2002) refer to servicescape as the physical man made aspects of the business environment. For this study, this was the outside décor of the buildings, the décor of the reception and the treatment rooms. Sureschandar *et al.*, (2002) argued that servicescape was missing from the original SERVQUAL questionnaire and that it was an area that was important to customers. The SERVQUAL questionnaire measured the service quality gap between the **expectations** of any physiotherapy service and the **perceptions** of *the practice*. The formula is Perceptions (P) – Expectations (E) = Service Quality Gap (SQG). Appendix 3 shows the amended questionnaire for the study.

## **Chapter Three – Methodology**

### **3 Introduction**

The purpose of this chapter was to outline the methodology and methods of this study which was a mixed method study in two sequential phases. The nature of the primary research was to resolve the research questions. The literature review was core to the research questions and two central questions arose from the literature review:

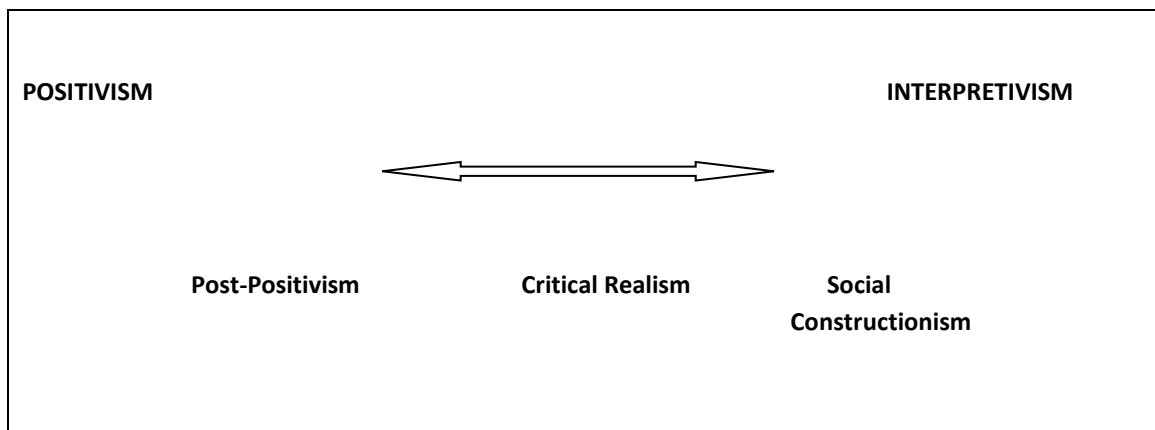
1. How will the conceptual framework add to the service quality theory and contribute to practice for the private independent physiotherapy practice?
2. Can the perceived service quality of an independent private physiotherapy practice be explored?

This chapter was concerned with applying the conceptual model to the research questions. The chapter first introduces the philosophical paradigms of the researcher and how the paradigms relate to the study. The research approach to the study and research design for phase one follows, including details on the pilot study, the sample and the distribution. The chapter then describes details of the main study in phase one. Phase two is explained next concerning the research design and the pilot interview. Lastly the chapter discusses the ethics and the impact on the study followed by reflection of the methodology of phase one and two.

The research questions provide a platform on which to build the research design and research design relies heavily on philosophical assumptions about knowledge (Collis and Hussey, 2009). Before decisions about which methods can generate the knowledge which best addresses the research questions, an understanding of philosophy is fundamental. The philosophical approaches that are available to the researcher follow a continuum of paradigms. In discussing the philosophical approaches the chapter first introduces two opposing paradigms, positivism and interpretivism as shown in figure 5 overleaf. Next the chapter explains the post-positivist philosophical approach and the critical realist framework that the study has adopted. The chapter next describes the methods employed to answer the research questions from a post-positivist ontological perspective and a critical realist epistemology.

### 3.1 Theoretical Perspective

The philosophical approach to social science can be embodied by a set of basic beliefs which the researcher brings to the study. Each research design has its own ontology (the reality), epistemology (the knowledge of that reality between the reality and the researcher). The methodology are the techniques used by the researcher to discover the reality indicating the important issues surrounding a discipline and assisting the researcher in developing a framework to answer the research questions (Easterby-Smith *et al.*, 2004). Figure 5 shows the continuum of positivism and interpretivism as two contrasting ends of a philosophical spectrum and where post-positivism and critical realism sit within that continuum.



**Figure 5: Continuum of Theoretical perspectives (Adapted from Collis and Hussey, 2009)**

The two contrasting paradigms (positivism and interpretivism). Table 10 below shows the characteristics of both of these two very different paradigms:



**Table 10: Positivism and Interpretivism Paradigms**

| <i>Element</i> | <i>Positivism</i>   | <i>Interpretivism</i>  |
|----------------|---|--|
| Ontology       | Reality is real and exists independently of the subjects being studied.                     | Reality is individually constructed, dynamic and changing. An output of social and cognitive processes.      |
| Epistemology   | Findings constitute observable material things i.e. experiments and validation of findings. | Knowledge is socially constructed and accessed only through social actors using language and shared meaning. |
| Methodology    | Deductive<br>Cause and Effect /Hypothesis   | Inductive<br>Patterns, theories develop  |
| Common Methods | Quantitative methods. Experiments verification of hypothesis.                               | Qualitative methods such as in-depth interviews, case studies, participant observations.                     |

**Source:** Easterby-Smith *et al.*, (2008)

The table shows the ontological and epistemological elements of both those paradigms, the methodology associated with them and the common methods utilised. Many of the previous service quality healthcare studies have been undertaken from a positive perspective using quantitative methods and very few healthcare studies have adopted a purely interpretivist approach. This study sought to investigate service quality through a mixed method approach that encompassed a post-positivist paradigm that included a quantitative method (a survey questionnaire) and a critical realist paradigm that provided a qualitative method and some depth (semi-structured interviews) but not the depth a pure interpretivist would possess.

### **3.2 Post Positivism**

Post-positivism was a movement following positivism. Positivism was a paradigm that was applied to many natural science experiments. The post-positivist ontology allowed the researcher to see the world from a paradigm that is both objective and subjective. Post-positivism represented a more subtle scientific form, one that is free from absolute truths and validity (Crotty, 1998). Further, Crotty (1998) subscribed to the thoughts that a post-positivist researcher would significantly temper the claims they make in their findings, making them sound less absolute and certain. Given that this study is

investigating service quality through a survey instrument and through a face to face interview, a post-positivism ontology is both subjective and objective. Zammito (2004: 12) described the distinction between positivism and post positivism as the difference between the context of discovery and the context of justification. The thrust of post-positivism would be to pursue the notion of discovery as well as the notion of justification, in other-words a mixed method approach would suit a post-positivist ontology.

This current study was not concerned with statistical relationships between the two variables (*expectations* and *perceptions*) but a more subtle form of measurement known as the mean gap score. The gap between the *expectation* variable and the *perception* variable that forms the calculation (P-E= Service Quality Gap Score) (Parasuraman *et al.*, 1985). The post-positivist ontology allowed the researcher to consider and justify the service quality gap through measurement but not as extreme as the measurement would be from a positivist paradigm. The study did not include a consideration of the validity and reliability of the SERVQUAL Instrument but focused on what the service quality gap meant for *the practice* in the study and the implications therein.

### **3.3 Critical Realism**

To meet the overall aim of the study, it required an in-depth insight into service quality. The knowledge that is within this world view is a view that looks at more than one level of reality (Collis and Hussey, 2009). Bhaskar (1998) explained that within the philosophical paradigm named realism lies the term critical realism as a natural approach to science. Critical realism is sometimes known as a ‘depth’ realism, it looks at more than one level of reality.

Critical realism is neither positivist nor interpretivist; it looks deeper than one level of reality and permits the researcher to take a critical realist epistemological approach. It allows the research to be layered or stratified and to consider more than one method to meet the research aim and objectives and therefore suits a mixed method approach where the overall aim is to consider a more meaningful analysis of the subject matter.

For the purposes of this study, the critical realist epistemological paradigm is based on an understanding that the world is not as simple as one level of reality but that it is indeed metaphorically based on layers or strata. It is through these different lenses that

the researcher sought to answer the research questions and the overall aim and objectives of the study.

### **3.4 Research Approach**

'Mixed methods' is viewed by some as "the third methodological movement" (Doyle *et al.*, 2009) and has become the preferred term to stand for research that integrates qualitative and quantitative research in a single study. Other terms which have been used to describe the approach are: integrating; synthesis; multi-method; mixed methodology and pluralism (Tashakkori and Teddlie, 2003; Bryman, 2006; Creswell, 2009). This research was undertaken with both quantitative and qualitative methods. The increased level of acceptance of the mixed method approach is reflected in the publication of recent texts (Creswell *et al.*, 2003; 2009; Teddlie and Tashakkori, 2003; Creswell and Clark, 2007).

Brewer and Hunter (2005) indicated that there was no best method but the combination of different methods allows the researcher to investigate a research problem with a range of methods that have overlapping weaknesses in addition to their complementary strengths. Abrahamson (1983) supported this by stating that the approach prevents the research becoming method bound. In other words the strength of every measure is flawed in some way and therefore research designs and strategies can be constructed to counterbalance the strengths and weaknesses of various methods. Creswell *et al.* (2003) described mixed method design in which the researcher would mix aspects of the two methods at several stages of the research process.

Table 11 below demonstrates how a sequential mixed method approach broadens understanding by using both qualitative and quantitative methods building on the results from one approach as well as using another. Creswell *et al.* (2003) and Brannen (2005) suggested that it was necessary to prioritise the qualitative and quantitative element of the research design. Methods that are carried out sequentially Creswell *et al.* (2003) termed a 'two phase study'.

**Table 11: Mixed Method Design**

| Design                         |  | Options   |
|--------------------------------|--|---|
| Equivalent Status Design       | In this form of research, the researcher conducts a study using both quantitative and qualitative approaches equally to understand the phenomena under the study.              | Sequential: QUAL →QUAN and<br>QUAN→QUAL<br>Parallel/Simultaneous:<br>QUAL + QUAN and QUAN +QUAL |
| Dominant-Less Dominant Designs | This form of research design is dominated by one paradigm and its methods, whilst a small component of the study is drawn from another paradigm.                               | Sequential: QUAL→quan and<br>QUAN→qual<br>Parallel/Simultaneous:<br>QUAL+ quan and QUAN + qual  |
| Multi-Level Designs            | These are studies in which the data from more than one level of the organisation or groups are used to reach more comprehensive inferences regarding behaviours and/or events. | Any   |

Note: QUAL: Dominant Qualitative methods: qual: Less Qualitative methods

QUAN: Dominant Quantitative Methods: quan: Less Quantitative Methods

**Source:** adapted from (Miller and Crabtree, 1994; Creswell *et al.*, 2003; Tashakkori and Teddlie, 2003; Brannen, 2005)

In sequential methods, the researcher constructs a quantitative phase then a separate qualitative phase or vice versa. The two stages are distinct and several phases of the process may be implemented. For this study the quantitative research was the more dominant stage and QUAN→qual was adopted.

Whilst a mixed method approach is widely supported it also has attracted some critics. Bryman and Bell (2007) emphasised a concern that the development of the mixed method paradigm has led to a belief that this paradigm is always superior to studies

based on a single method. Brannen (1995) concurred with this view and determined that the researcher should rely on the research problem to determine the optimum method. Table 12 describes the research questions with the methods for this study.

**Table 12: The Research Questions and the Methods for the Study**

| Research Questions  | Methods   |
|---|---|
| 1. How will the conceptual framework add to the service quality theory and contribute to practice for the independent practice? | 1 To apply the conceptual framework: The SERVQUAL Instrument – Phase One.       |
| 2. Can the perceived service quality of an independent private physiotherapy practice be explored?                              | 2 To Explore Perceived Service Quality: Semi-structured Interviews – Phase two. |

The table above shows the outline and rationale for the whole study, the methods employed and the research questions investigated. The table outlines a mixed method sequential approach over two phases.

### 3.5 Research Design, Phase One

Phase one was the dominant phase and was concerned with the quantitative aspect, specifically the application of the SERVQUAL questionnaire to a sample of customers at *the practice*. The instrument measured the service quality gap (SQG) between two variables, *expectations* of service quality of any physiotherapy practice and the *perceptions* of the service quality of *the practice*. The gap is referred to as the *service quality gap score* and is expressed as a positive gap score or a negative gap score. A positive gap score potentially indicates that the customers are positive about the service quality and a negative score potentially would indicate the reverse (Babakus and Mangold 1992).

A requirement of the first stage of the research was to consider the only other physiotherapy study into service quality utilising the SERVQUAL Instrument (Curry and Sinclair, 2002); this was the main comparison study for this research. Some difficulties in the questionnaire with signposting and rankings allocation were recorded by Curry and Sinclair (2002) from elderly patients in addition to comments about the length of the questionnaire. Other authors had commented on the length of the questionnaire (Franceschini and Cignetti, 1998; Dalrymple *et al.*, 1995). Given the

previous feedback as to the length of the questionnaire, it was decided that the rankings section would not be added to the questionnaire for this study.

The next step of the research design for phase one was to ask the directors of *the practice* and the research supervisors for input and feedback. Further work was required for the signage including clearer signposting on which part of the questionnaire referred to *expectations* and which part referred to *perceptions*, this was echoed by Curry and Sinclair (2002) and Franceschini and Cignetti (1998). In addition, the directors requested that the questionnaire only measure service quality of *the practice* and not service quality of the treatment. The rationale for this decision was that the researcher was not a physiotherapist and therefore not qualified to interpret any data that concerned the treatment. Both Hudak (2002) and Vandamme and Leunis (1993) felt that patients were unable to evaluate the quality of the treatment offered by doctors and therefore relied more on experience.

The instructions for the questionnaire clearly stipulated that the questionnaire was only concerned with the service quality, the term was adapted for the customers and service quality was referred to as customer service:

***The questionnaire is ONLY enquiring about customer service, it is NOT asking about the physiotherapy treatment you receive or have received.***

The directors of *the practice* were also interested to know what their customers thought of the internal and external décor of the building. The directors of the practice requested that the SERVQUAL questionnaire be amended to include questions around the décor of the outside and inside of the building; this is referred to in the literature as *servicescape* (Lovelock, 1981; Sureschandar *et al.*, 2002). The service quality model for the research thus became the amended service quality model with the addition of the *servicescape* determinant creating a 25 item paired questionnaire as previously described in chapter two.

### **3.5.1 The Sample and Pilot Study**

The focus centred on obtaining a sample from a customer population of 450 customers of *the practice*. For sampling, it is first necessary to understand the population that the research is aimed at “population is the set that contains all members of the social unit you want to study” Maylor and Blackmon (2005:195). A prerequisite of the questionnaire was that the perceptions part of the questionnaire was required to be completed after a visit to the service provider (Youseff *et al.*, 1996 and Robledo, 2001). As the questionnaire was in two parts; part one asked about the *expectations* of customer service for ANY physiotherapy service and part two asked about *perceptions* of *the practice*. It therefore became necessary to choose customers who had prior experience of the service who were not new customers to *the practice*. Establishing that new customers were not to be included in the sample led the researcher to choose a convenience sample for the pilot study and the main study. A convenience sample selects haphazardly those people that are easiest to obtain (Saunders, 2007). Saunders (2007) identified that convenience sampling is prone to bias with the ease to which the sample is reached, however for this study, a convenience sample appeared to be the most practical. New customers were identified by the receptionists as they were required to attend for a one hour appointment as opposed to existing customers who were only required to attend for a half hour appointment. The researcher attended *the practice* at varying times (the opening hours of the practice are Monday – Wednesday 9.00am – 5pm, Thursday 9.00am – 7pm, Friday 9.00am – 5pm and Saturday 9am-12 noon) to ensure that customers were chosen at random for the convenience sample.

### **3.5.2 The Distribution Process Tested in the Pilot Study**

It was agreed that the receptionists would hand out the questionnaires in the waiting area and ask the customers to place the completed questionnaire in the sealed box on the reception table where they would be collected by the researcher. Customers were assured in the questionnaire of their anonymity and confidentiality and their informed consent was gathered (see Appendix 7).

After two weeks, ten questionnaires were collected from the sealed box and after a further week three more questionnaires were collected. The rate for the completed questionnaires was slower than expected. Given that the questionnaires were being slowly returned the researcher decided to observe what was happening in *the practice* and was stationed at *the practice* reception at random times for three weeks.

The first day of observation in the practice was a realisation that this exercise had not been easy for the receptionists. They were simply too busy to hand out the questionnaires.

Other observations were noted; customers were anxious when they arrived for their appointment and were therefore not best placed to complete a questionnaire. A few people said that “*the questionnaire was too long*”. One customer wanted to take the questionnaire away and complete it at home (an envelope was provided).

On reflection of the observations, there was a realisation that this was going to be a long process of data collection, one that was not possible for the receptionists to perform who were already working in a busy environment. It was also established that it was more difficult to ask the customers to complete the questionnaire after their treatment; they were often in pain, wanted to pay and leave. This added another dimension to handing out the questionnaires. The customer had to arrive for their appointment at least ten minutes in advance. There were other issues too, one customer had arthritic hands and the questionnaire was completed for her, another said “*this questionnaire is complicated*”.

The pilot study demonstrated more about the distribution than issues with the questionnaire itself. The researcher felt more comfortable with the questionnaire instructions when handing it to the customers when further instructions could be verbally given. The researcher was also able to reiterate to the customers that the questionnaire was only concerned with customer service and not the treatment. It was therefore decided for the main study, that the researcher would hand out the questionnaires in the practice at random times of the day in what became a three month period.

### **3.6 Phase One of the Main Study**

The amended questionnaire measured responses to six determinants as previously described. In total, the 25 paired item questionnaire was adapted for use at *the practice*. This paired item questionnaire is consistent with past research (Parasuraman *et al.*, 1985, 1988). A seven point Likert scale was used from 1 (strongly disagree) to 7 (strongly agree). The questionnaire also included questions regarding respondents’ demographics and this is shown in table 13 below. Questionnaires were distributed to those customers who had previously attended *the practice*. The questionnaires were



handed to customers as they waited for their appointment and over a three month period, 65 questionnaires were collected, 62 were useable. The sample was therefore, n=62.

**Table 13: Demographics of the Main Study for the Total Sample**

**N= 62**

|        |               |               |               |               |                  |
|--------|---------------|---------------|---------------|---------------|------------------|
| GENDER | Male<br>23    | Female<br>39  |               |               |                  |
| AGE    | Under 21<br>2 | 21 - 35<br>13 | 36 – 50<br>22 | 51 – 64<br>16 | 65 and over<br>9 |

### **3.6.1 Validity and Reliability of the SERVQUAL Instrument for the Main Study**

The pioneers of the SERVQUAL Instrument, (Parasuraman *et al.*, 1985) were of the opinion that to retain validity and reliability, the questionnaire should be utilised in as close to its original format as possible. For this study minor wording to fit the context of *the practice* and the amended questions to the questionnaire were the only changes that the SERVQUAL questionnaire underwent. Butt and Cyril de Run (2010) stated that SERVQUAL was generally a robust scale in which to measure service quality across a variety of sectors. Previous healthcare studies have suggested that SERVQUAL is a valid and reliable instrument for the healthcare sector (Sewell, 1997; Youseff *et al.*, 1996 and Curry and Sinclair, 2002). This study did not intend to measure the reliability and validity of the instrument but to measure the service quality gap between two variables using the formula (Perceptions (P) – Expectations (E) = Service Quality Gap Score.

### **3.6.2 Data Analysis for the Main Study**

Data was analysed using an *Excel* spreadsheet. The 25 *expectation* questions were coded 1-25 as per the questionnaire as they were the first questions the customers were asked to complete. The second set of questions, the 25 *perception* questions, were coded 26-50 and the demographics were coded 1 = yes or 0 = no. The mean was first calculated for the *overall practice* for each of the six determinants between the two variables, *perceptions* and *expectations* (Appendix 14). This method of calculation was

similar to other healthcare studies (Curry and Sinclair, 2002 and Youseff *et al.*, 1996). The *mean* (also known as average), is obtained by dividing the sum of observed values by the number of observations, *n*. For this study, the sample was 62, *n*=62. Although data points fall above, below, or on the mean, it can be considered a good estimate for predicting subsequent data points. In addition, standard deviations were calculated for each of the six determinants, (Appendices 8-13). Standard deviations are a measure of variability of spread of the measurement of the mean. A correlation between those customers who had previous experience with other physiotherapy services and those who did not was calculated. This was to determine if previous experience of physiotherapy services was significant or not. The results and analysis for phase one and two are described in chapters four and five.

### **3.7 Phase Two of the Main Study**

#### **3.7.1 Research Design Phase Two**

Phase two was the less dominant qualitative stage and was concerned with the second research question: Can the perceived service quality of an independent private physiotherapy practice be explored? No previous studies regarding physiotherapy services have investigated the 'why' following the analysis of the SERVQUAL questionnaires. A positive service quality gap score occurs when the *perception* scores are higher than the *expectation* scores and a negative service quality gap occurs when *perception* scores are lower than the *expectation* scores, this has been termed *negative perceived service quality* for the purposes of this study. In addition to the findings in phase one, phase two was concerned with exploring a deeper meaning to service quality within *the practice*. The analysis from phase one showed areas within *the practice* where the *perception* scores were lower than *expectation scores*, in other words a negative service quality gap for the practice in some areas. Following the analyses of phase one, it was decided that those customers who had a negative service quality gap score in any of the six determinants were to be chosen as a convenience sample for a potential face to face interview. Semi-structured interviews allow the researcher to vary the sequence of the questions that are in general an interview guide (Bryman and Bell, 2007). According to Perry (1998) one of the most important and essential sources of research information is the interview.

### **3.7.2 The Interview Sample**

Respondents were asked in the questionnaire in phase one if they would be prepared to take part in a face to face interview. Twenty people indicated that they would take part in a face to face interview. Following the analysis in phase one, it was decided to contact those customers with negative perception scores to determine the ‘why’ of the negative perceived service quality. This narrowed the convenience sample to twelve customers. All twelve customers were contacted and nine replied answering that they would take part in a face to face interview. Table 14 below describes the demographic and socio economic factors of the study for the face to face interviews.

**Table 14: The Demographics of the Face to Face Interviews**

**N=9**

|               |                 |                |                |                |                    |
|---------------|-----------------|----------------|----------------|----------------|--------------------|
| <b>GENDER</b> | <b>Male</b>     | <b>Female</b>  |                |                |                    |
|               | 4               | 5              |                |                |                    |
| <b>AGE</b>    | <b>Under 21</b> | <b>21 – 35</b> | <b>36 – 50</b> | <b>51 – 64</b> | <b>65 and over</b> |
|               | 0               | 0              | 2              | 5              | 2                  |

### **3.7.3 The Interview Design**

Gullick and Shimadry (2008) suggested that we need to listen to patients' comments to appreciate the importance and experiences that patients attach to the healthcare sector. Interviews are a popular method favoured by qualitative researchers due to the variety of ways an interview may be conducted (Denzin and Lincoln, 1998). Semi structured interviews allow the interview to vary, with sensitivity, the path the customer takes and open ended questions maximise the potential for personal stories (Burgess, 1982).

Previous qualitative studies in the physiotherapy industry (Potter *et al.*, 2003(a) and (b); May, 2001; Goldstein, 2000) were in the main exploratory studies into patients' behaviours, good or bad experiences with the practice or satisfaction with the treatment. Following the analysis in phase one of this study, phase two was concerned with an exploration of service quality in a private practice, in particular aspects of service quality where the service quality gap was negative. The semi-structured interview was therefore developed with the focus on any negative service quality gaps. The interview was structured around the questions from the respondent's questionnaire that demonstrated negative perception scores but the pilot study demonstrated that opening questions were important before introducing the subject of the completed questionnaire that was necessary for the interview.

### **3.7.4 The Interview conducted in the Phase One Pilot Study**

One interview was conducted during the phase one pilot study. The interview highlighted that it was important to lead the respondent to the discussion around the negative perception scores. It was therefore necessary to have an opening question and this was in connection with the person's previous experience with physiotherapy services. The importance of taking account of customers' past experiences contributed overall to an investigation of service quality (Cadotte *et al.*, 1987; Robledo, 2001).

Further it was noted that past experiences with a service provider and competitors influenced the customers' expectations.

As a result of the interview in the pilot study, it was structured in two steps: (1) an opening question in relation to the customer's previous experience of physiotherapy services, and (2) a question on why the customer scored *the practice* on some questions with lower *perception* scores than *expectation* scores? The structure of the questions became as follows:

**Question One:** Have you any previous experience of physiotherapy services?

**Question Two:** Can you explain to me why you scored this question with a more negative score than this question (the candidate was shown their original completed questionnaire and they were referred to their questions where the *perception* score was lower than their *expectation* score). Appendix 6 outlines the interview guide for the face to face interview.

### **3.7.5 Data Analysis**

There are many qualitative research approaches with different strategies (Miles and Huberman, 1994; Coffey and Atkinson, 1996). The interviews were recorded verbatim and were approximately 25 minutes long. The information from the nine interviews was processed using the software package NVivo 10 to identify the themes. Yin (2003) stated that when devising a theoretical framework, there is a need to identify the main variables, components, themes and issues with the research objective and the predicted or presumed relationship between them. The interactive nature of the data allows important themes, patterns and relationships to be recognised as the data is collected (Strauss and Corbin, 1998).

The themes were first distilled into the six determinants of the SERVQUAL questionnaire (assurance, tangibles, reliability, responsiveness, empathy and servicescape). Commencing the analysis from a theoretical perspective has a number of advantages. It links the research to the existing body of knowledge and provides a good starting point towards data analysis (Saunders *et al.*, 2007). The themes that were identified from the interviews are discussed in the results chapter. The analysis initially adopted a deductive approach followed by an inductive approach to allow emerging themes. The nine candidates were alphabetically coded and the interviews transcripts

were written up directly after each interview. The data was collected over a three month period when time allowed for candidates to be contacted and appointments to be made.

### **3.8 Ethics of the Study**

This study followed the Edinburgh Napier Ethics and Governance Code of Practice and respondents completed an ethical consent form shown in Appendix 7. For this study there were concerns about the ethics between the customer and the therapist, in so much that the relationship between therapist and patient can be linked to the treatment outcomes (Gosselink, 2008). The directors of *the practice* were concerned that the relationship could be compromised if the customers were asked about the services that the therapists provided. Ethics refers to the appropriateness of behaviour in relation to the rights to those who become the subjects of your work, or are affected by it. It was also agreed that the study would only be concerned with the service quality of *the practice* and not the service quality of the treatment. Confidentiality was specified to the customers and to the therapists re-iterating that the study was only researching the service quality of *the practice* and not the treatment elements. This was also re-emphasised in the questionnaire and in the face to face semi-structured interviews.

Saunders (2007: 178) outlined some basic ethical principles:

- *Whether there is harm to the participants.* For *the practice*, the research had to be totally confidential so that the therapists could not identify the customer as this could change the patient/therapist relationship.
- *Whether there is a lack of informed consent.* For this study, it was stipulated in the consent form that the customer was under no obligation to take part in the study and could withdraw at any point (Appendix 7).
- *Whether there is an invasion of privacy.* When the questionnaire was handed to the customer in this study, it was made clear that no personal records had been discussed in relation to them or the study.

- Whether *deception* is involved. When the questionnaire was handed to the customers in this study, the customers were assured that the study was for the benefit of *the practice* in understanding their customer services and that the information would not be used for any other purpose other than the academic study.

In addition to retaining the sensitive relationship between the customer and the therapist there was also the relationship between the customer and *the practice*. This is known as reactivity – the reaction on the part of those being investigated to the investigator and his or her research instruments (Bryman, 1988: 112). Difficult or awkward questions could make the customer feel uncomfortable or even make them feel disloyal to *the practice*, this had to be avoided. All customers were assured of the confidentiality of the data which was stored and used in this research. Saunders (2007) stated that individuals have a right to privacy and they should not feel pressurised or coerced in participating in any study. Once promises of confidentiality and anonymity were given it was imperative that they were maintained. Anonymity was mentioned on the questionnaires and in addition in the consent form. No ethical issues arose from the customers in regard to this study.

### 3.9 Reflections on the Methodology of Phase One and Phase Two

With research design, a number of choices and decisions are made which place limitations on a study. It is inevitable for any study, that time restrictions, budget, the nature of the organisation or the sample will have issues pertaining to the research (Bryman and Bell, 2007). The reflections for the methodology for this study were mainly as follows:

- That the study was based on a single entity however some of the findings can be generalised to the healthcare sector.
- That the sample was  $n=62$  and this was a relatively small sample compared to other healthcare studies. Other healthcare studies were in the public sector with a larger population from which to draw from. The length of time the data collection took was a significant factor and all customers who completed a questionnaire had to attend *the practice* at least ten minutes prior to their appointment.
- That the sample was a convenience sample. The customers were chosen at random and at random times of the day. A specific category was chosen as the perception part of the questionnaire was required to be completed from customers who had attended the service and were not attending for the first time.
- The study only examined negative perceived service quality in the semi structured face to face interviews. Whilst this provided a valuable insight into why customers rated their perceptions lower than their expectations, it perhaps could have been counterbalanced with comments also on positive perceived service quality.
- That the Directors of *the practice* only wanted the questionnaire to cover service quality of *the practice* and not of the treatment and so the treatment was not part of the evaluation.
- That the statistical validity and reliability of the SERVQUAL Instrument was not tested. Many previous studies in the literature have tested the SERVQUAL Instrument; it was thought therefore that testing the instrument was not necessary to meet the aim and objectives of the study.



Despite the above limitations, this was a very beneficial study into service quality for the independent private physiotherapy practice. The study has researched service quality in a sector that has had very little previous research afforded to it. In addition the study has contributed to theory by investigating service quality as a mixed method approach; a first study of its kind in the private physiotherapy practice determined by the SERVQUAL questionnaire and semi-structured interviews. The mixed method approach allowed the researcher to look deeper into service quality at *the practice* by exploring negative perceived quality through semi-structured interviews which followed the analysis of the questionnaire.

## **Chapter Four – Phase One: The Results of the SERVQUAL Questionnaires**

### **4 Introduction**

This chapter reports the findings and analysis of phase one of the data collection. The chapter first considers the overall service quality gap of *the practice*. This is described as a total mean gap score for all the respondents. The next section outlines the mean score for the *expectation* and *perception* questions and the mean gap score for the fifty SERVQUAL questions. The chapter then describes the mean gap score for the six determinants *tangibles, reliability, responsiveness, assurance, empathy and servicescape* in descending order beginning with the factor that has the most positive service quality gap. The next section in the chapter describes each question that has the highest and lowest mean gap score for each of the six determinants. It then further describes the mean gap score for each question. Finally, the results are discussed for *the practice* and compared and contrasted to the literature. The chapter concludes with reflections on the analysis of phase one.

#### **4.1 Overview of the Responses for *The Practice***

The amended SERVQUAL questionnaire asked customers to rate service quality on a Likert scale of 1 (strongly disagree) to 7 (strongly agree) in regard to *expectations* of any physiotherapy services and their *perceptions* of the service quality of *the practice*. The questionnaires were analysed using an *Excel* spreadsheet. The mean scores for the *expectations* and *perceptions* questions for all six determinants for *the practice* are shown in table 15 below. The raw data is shown in Appendices 8-13 and the overall mean gap scores for *the practice* are shown in Appendix 8.

**Table 15: Mean Scores for the Total *Perceptions* and *Expectations* scores for the Sample ( $n=62$ ) and the Mean Gap Score.**

| <b>Determinant</b> | <b>Mean Perception Scores</b> | <b>Mean Expectation Scores</b> | <b>Mean Gap Score</b> |
|--------------------|-------------------------------|--------------------------------|-----------------------|
| Servicescape       | 401                           | 367                            | 34                    |
| Tangibles          | 371                           | 344                            | 27                    |
| Responsiveness     | 404                           | 384                            | 24                    |
| Assurance          | 415                           | 395                            | 20                    |
| Empathy            | 407                           | 392                            | 15                    |
| Reliability        | 397                           | 395                            | 2                     |

The table illustrates that customers perceived *Servicescape* to be the area that most exceeded their expectations and *Reliability* as the area that just met their expectations. This is further demonstrated in figure 6.

**Figure 6: The Mean Scores of the Expectations and the Perceptions of the Total Sample for *The Practice* for all six determinants.**

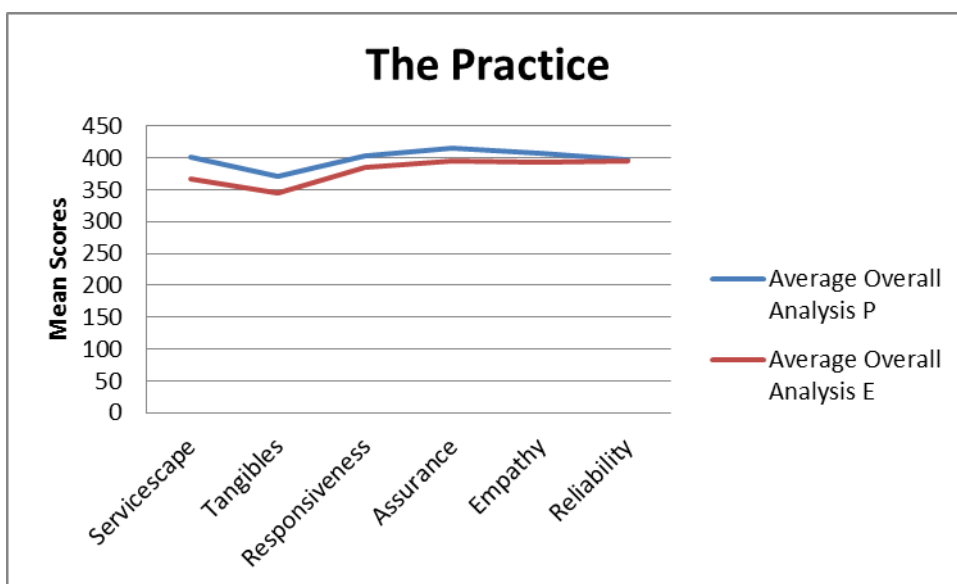


Figure 6 shows that customers' *perceptions* exceeded their *expectations* for *the practice*. The gap is a positive gap, that is, the customers rated *the practice* with a positive perception of service quality. Although the customers were positive overall about the service quality of *the practice*, their *perceptions* just exceeded their *expectations* for the reliability determinant with only a positive mean gap score of 2.

An overall positive perception of *the practice* is a desired outcome, this demonstrates that customers' expectations have been met. This analysis provides the directors with an understanding of what their customers expect followed by what their customers perceive the service quality to be. This signifies that it is important for the directors of *the practice* to have measured both the *expectations* and the *perceptions* of service quality so that the gap between the two variables can be measured and the service quality gap can be identified as positive or negative. The directors of the practice can understand what the customers expect in relation to their *perceptions* of *the practice*. Measuring both **expectations** and **perceptions** is supported by these findings. This is important management information when focussing on what service areas to improve upon. In this instance, the directors may want to investigate areas where the gap between the expectations and the perceptions was small, as it was for the reliability factor.

#### **4.2 Analysis of the SERVQUAL Questions (as amended)**

Many of the healthcare studies are compared by their mean gap scores for each determinant. For management information, the mean gap score can be used as a management tool to discover the gaps between each of the questions in each determinant to uncover problem areas. Table 16 sets out the mean gap scores for each of the twenty five paired questions for both *perceptions* and *expectations*. The initial analysis showed that reliability had the smallest service quality gap score. Further analysis revealed that three of the questions in the reliability determinant were negative. This indicated that customers rated those questions with a more negative perception, in other words, their expectations were not met for three of the reliability questions. Table 16 shows the mean gap scores for all 25 paired questions as a mean gap score, that is the gap between customers' *perceptions* and *expectations*.

**Table 16: Overall Analysis of the 50 SERVQUAL Questions (as amended)**

**SERVQUAL Questionnaire**

**TANGIBLES**

- 1. Excellent physiotherapy practices will have modern looking equipment
- 2. The physical facilities at excellent physiotherapy practices will be visually appealing
- 3. Employees at excellent physiotherapy practices will be neat-appearing
- 4. Materials associated with the services shall be visually appealing in excellent physiotherapy practices

**OVERALL MEAN**

**RELIABILITY**

- 5. When excellent physiotherapy practices promise to do something by a certain time, they do
- 6. When a customer has a problem, excellent physiotherapy practices will show a sincere interest in solving it
- 7. Excellent physiotherapy services perform the service right the first time
- 8. Excellent physiotherapy practices will provide their services at the time they promise to do so
- 9. Excellent physiotherapy services will insist on accurate records

**OVERALL MEAN**

**RESPONSIVENESS**

- 10. Employees in excellent physiotherapy practices will tell customers exactly when services are performed
- 11. Employees in excellent physiotherapy practices will give prompt service to customers
- 12. Employees in excellent physiotherapy practices will always be willing to help customers
- 13. Employees in excellent physiotherapy practices will never be too busy to respond to customers

**OVERALL MEAN**

| <b>Perception</b> | <b>Expectation</b> | <b>Gap</b>  |
|-------------------|--------------------|-------------|
| Mean Score        | Mean Score         | Mean Score  |
|                   |                    |             |
| 5.94              | 5.85               | 0.09        |
| 5.95              | 5.29               | 0.66        |
| 6.37              | 5.76               | 0.61        |
| 5.71              | 5.2                | 0.51        |
| <b>5.99</b>       | <b>5.55</b>        | <b>0.44</b> |
|                   |                    |             |
| 6.35              | 6.39               | -0.04       |
| 6.58              | 6.6                | -0.02       |
| 6.4               | 5.94               | 0.46        |
| 6.45              | 6.32               | 0.13        |
| 6.21              | 6.61               | -0.4        |
| <b>6.4</b>        | <b>6.37</b>        | <b>0.03</b> |
|                   |                    |             |
| 6.52              | 6.37               | 0.15        |
| 6.45              | 6.29               | 0.16        |
| 6.63              | 6.52               | 0.11        |
| 6.47              | 5.63               | 0.84        |
| <b>6.52</b>       | <b>6.2</b>         | <b>0.32</b> |

**ASSURANCE**

- 14. The behaviour of employees in excellent physiotherapy practices will instil confidence
- 15. Customers of excellent physiotherapy practices will feel safe in their transactions
- 16. Employees in excellent physiotherapy Practices will be consistently courteous
- 17. Employees in excellent physiotherapy practices will have the knowledge to answer questions

**OVERALL MEAN**

**EMPATHY**

- 18. Excellent physiotherapy practices will give customers individual attention
- 19. Excellent physiotherapy practices will have operating hours convenient for their customers
- 20. Excellent physiotherapy practices will have employees who give customers personal attention
- 21. Excellent physiotherapy practices will have the customers' best interests at heart
- 22. The employees of excellent physiotherapy practices will understand the specific needs of their customers

**OVERALL MEAN**

**SERVICESCPE**

- 23. The external décor of an excellent physiotherapy practice will be neat and tidy
- 24. The treatment rooms of an excellent physiotherapy practice will be clean and tidy
- 25. The reception area of an excellent physiotherapy practice will be clean and tidy

**OVERALL MEAN**

| <b>Perception</b> | <b>Expectation</b> | <b>Gap</b>  |
|-------------------|--------------------|-------------|
| Mean Score        | Mean Score         | Mean Score  |
| 6.68              | 6.45               | 0.23        |
| 6.63              | 6.48               | 0.15        |
| 6.77              | 6.31               | 0.46        |
| 6.68              | 6.26               | 0.42        |
| <b>6.69</b>       | <b>6.37</b>        | <b>0.32</b> |
| 6.68              | 6.37               | 0.31        |
| 6.24              | 6.18               | 0.06        |
| 6.69              | 6.19               | 0.5         |
| 6.52              | 6.45               | 0.07        |
| 6.71              | 6.4                | 0.31        |
| <b>6.57</b>       | <b>6.32</b>        | <b>0.25</b> |
| 6.4               | 5.56               | 0.84        |
| 6.55              | 6.27               | 0.28        |
| 6.45              | 5.92               | 0.53        |
| <b>6.47</b>       | <b>5.92</b>        | <b>0.55</b> |

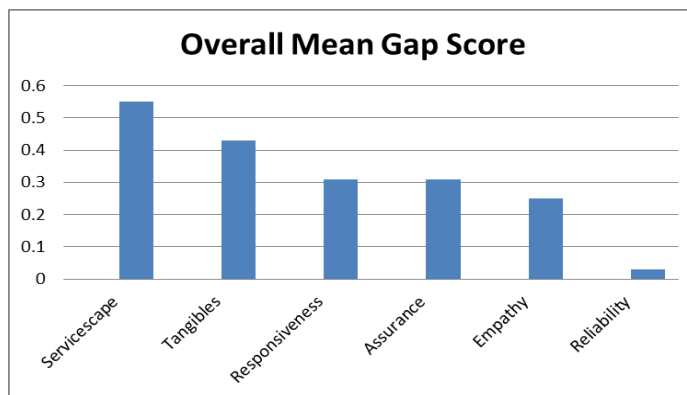
Table 16 reveals the mean gap scores between each paired question and the mean gap score for each separate determinant. This is expressed below in table 17 in descending order and as a bar chart in figure 7.

**Table 17: The Mean Gap Scores for all Six Determinants in order of Descent**

Table 17 illustrates the mean gap scores in descending order for each question in all six determinants. The mean gap score was calculated by subtracting the mean *perception* score from the mean *expectation* score. Servicescape has the most positive service quality gap score of 0.55 compared to reliability which has the least positive service quality gap score of 0.03. This analysis demonstrates that whilst the overall mean gap score for *the practice* is positive, the determinants have varying degrees of positive perceived service quality for *the practice*.

| Determinant    | Overall Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|----------------|------------------------|---------------------------|----------------------------|
| Servicescape   | 0.55                   | 6.47                      | 5.92                       |
| Tangibles      | 0.44                   | 5.99                      | 5.55                       |
| Responsiveness | 0.32                   | 6.45                      | 6.29                       |
| Assurance      | 0.32                   | 6.69                      | 6.37                       |
| Empathy        | 0.25                   | 6.57                      | 6.32                       |
| Reliability    | 0.03                   | 6.40                      | 6.37                       |

**Figure 7: Mean Gap Scores between Perceptions and Expectations for the Total Sample of *The Practice***



**Figure 7** represents the mean gap scores as a bar chart showing the varying service quality mean gaps scores in order of descent for *the practice*. The graph clearly identifies *servicescape* as having the most positive mean gap score and *reliability* as the least. It is also interesting to note that both *assurance* and *empathy* have the fourth and fifth smallest gap. Both the *assurance* and the *empathy* factors are cited in the literature as being important in a healthcare setting. The graph also indicates that if the *reliability*



factor is not given some attention, the reliability factor may become negative and this could affect the service quality of *the practice*.

### 4.3 Highest Mean Gap Score for Each Determinant

**Table 18: The Question with the Highest Mean Gap Scores in relation to each Determinant**

The table outlines the question with the highest mean gap score for each determinant

| Determinant    | Question  | Highest Mean Gap Score |
|----------------|---|------------------------|
| Servicescape   | Q48 & Q23 The external décor of <i>the practice</i> will be neat and tidy                           | 0.84                   |
| Responsiveness | Q38 & Q13 Employees in <i>the practice</i> will never be too busy to respond to customers' requests | 0.84                   |
| Tangibles      | Q27 & Q2 The facilities at <i>the practice</i> will be visually appealing                           | 0.66                   |
| Empathy        | Q45 & Q20 <i>The practice</i> will have employees who give customers personal attention             | 0.50                   |
| Assurance      | Q41 & Q16 Employees in <i>the practice</i> will be consistently courteous with customers            | 0.46                   |
| Reliability    | Q32 & Q7 <i>The practice</i> will perform the service right first time                              | 0.46                   |

Table 18 displays the paired item questions with the highest mean gap score. The highest mean gap score was for the gap between questions 48 and 23 in the servicescape determinant. The customers of *the practice* rated the external décor of *the practice* with the highest perception for service quality. The external window display of *the practice* is included in this question; the window display is always topical, i.e. if it is Christmas then there is a Santa and toys in the window.

The gap between questions 38 and 13 was the second highest gap and refers to the statement that *the practice* is never too busy to respond to the customers. It is a busy practice and when you enter the practice, the customer encounters the reception desk first, and is then warmly greeted by the receptionists. This could account for the high positive gap score.

The gap between the tangibles questions, 27 and 2 was 0.66 and refers to the facilities within the practice. The practice is fairly small but there is a large gym area, this is perhaps what the customers perceive as being a positive service offering. Questions 45

and 20 refer to the empathy factor and how customers receive personal attention from the employees of *the practice*. Many of the customers are repeat customers and the receptionists know them by their first name. This may give the perception of personal attention.

Questions 41 and 16 are in regard to *the practice* personnel being consistently courteous. The practice is run by two directors who are at *the practice* every day, this could encourage the courteous service. The customers perceive that *the practice* will perform the service right the first time, whether that is phoning for an appointment or ordering the customer a taxi, their perception is that it is right first time. This information is very valuable to the directors of *the practice*. These are the areas with the most positive perception and the directors should share this information with their employees so that they may continue with this positive element of service quality.

**Table 19: The Questions with the Lowest Mean Gap Scores in relation to each Determinant.**

The table outlines the question with the lowest mean gap score for each determinant

| <b>Determinant</b> | <b>Question</b>   | <b>Lowest Mean Gap Score</b> |
|--------------------|---|------------------------------|
| Reliability        | Q34 – Q9 <i>The Practice</i> will insist on accurate records.                             | -0.40                        |
| Empathy            | Q44 & Q19 <i>The practice</i> will have operating hours convenient to all their customers | 0.06                         |
| Tangibles          | Q26 & Q1 <i>The practice</i> will have modern equipment                                   | 0.09                         |
| Responsiveness     | Q37 & Q12 Employees in <i>the practice</i> will always be willing to help customers       | 0.11                         |
| Assurance          | Q40 & Q15 Customers of <i>the practice</i> will feel safe in their transactions           | 0.15                         |
| Servicescape       | Q49 & Q24 The treatment rooms of <i>the practice</i> will be clean and tidy               | 0.28                         |

**Table 19** displays the paired item questions with the lowest mean gap score. The

service quality gap with the lowest perception score was between questions 34 and 9 in the reliability determinant, *the practice* will insist on accurate records. The negative service quality gap may indicate that the administration in the practice is not as accurate as it should be and that it is affecting the customer perception of the service quality. This is an area that management require to give immediate attention to.

The second lowest gap was in the empathy determinant for questions 44 and 19 and was concerned with the operating hours of *the practice*. When the research was conducted the practice was open Monday – Wednesday 9.00am – 5pm, Thursday 9.00am – 7pm, Friday 9.00am – 5pm and Saturday 9am-12 noon. The fact that this is the second lowest question indicates that there is a problem with the opening hours of the practice in so much as they do not suit the customers' needs and is affecting the perception of the service quality.

The tangibles service quality gap was between questions 26 and 1 (0.09), the third lowest perception overall. The question was concerned with *the practice* having modern looking equipment. Whilst the gym looks neat and tidy with up to date equipment the treatment rooms look stark, perhaps the customers are relating the lack of modern looking equipment to the treatment rooms.

The gap between questions 40 and 15 in the assurance determinant was in relation to the customers feeling safe in their transactions. It is difficult to know why the customers rated this question with a low perception, it would have been useful to have had more information on the reasons why. The gap between questions 37 and 12 for responsiveness was in relation to the practice staff being always willing to help. This question was the lowest in the responsiveness category. It is also difficult to know why the customers rated this question with a low perception when compared to their expectations in this area.

Questions 49 and 24 were in relation to the treatment rooms being clean and tidy. There is a daily cleaner at *the practice* but the treatment rooms are bland, in need of paint and without any natural light. It is likely that this is where the low perceived service quality arises. This is another area that management have direct control over and could change.

### 4.3.1 Reliability

Further analysis of the determinants revealed that there were three negative gap scores in the reliability determinant. This indicated that the customers rated some of the perception questions of the reliability determinant for *the practice* lower than their expectations. Table 20 below outlines the mean gap scores for each question pertaining to reliability.

**Table 20: Mean Gap Scores for the Reliability Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E); P-E = gap score and this is displayed as a mean gap score. The raw data is shown in Appendix 8.

### RELIABILITY

| Question  | Mean Gap Score | Perceptions Mean Gap Score | Expectations Mean Gap Score |
|---|----------------|----------------------------|-----------------------------|
| Q34 - Q9 <i>The practice</i> will insist on accurate records  | -0.40          | 6.21                       | 6.61                        |
| Q30 - Q5 When <i>the practice</i> promises to do something by a certain time, they will do so         | -0.04          | 6.35                       | 6.39                        |
| Q31 - Q6 When a customer has a problem <i>the practice</i> will show a sincere interest in solving it | -0.02          | 6.58                       | 6.6                         |
| Q32 - Q7 <i>The practice</i> will perform the service right first time                                | 0.46           | 6.40                       | 5.94                        |
| Q33 - Q8 <i>The practice</i> will provide their services right first time                             | 0.13           | 6.45                       | 6.32                        |
| <b>Overall Mean</b>   | <b>0.03</b>    | <b>6.40</b>                | <b>6.37</b>                 |

The question with the most positive mean gap score was Question 32 and Question 7 “*The practice* will perform the service right the first time”. This could be related to any service that the practice offers. The positive score may have indicated that the customers’ perception of this element of *the practice* was higher than their expectations. The other positive score was questions 33 and 8, “The practice will provide their services right the first time” is perhaps linked to the overall services that *the practice*

provides.

The most negative perceived service quality gap is between questions 34 and 9 “The practice will insist on accurate records”. *The practice* deals with third party insurance providers such as BUPA and The Spire and this entails a heavy administrative load. Many of the customers are referred by their GPs, others refer themselves. There is therefore a greater risk of inaccuracy with such a volume of paperwork. It may be that a sample of customers experienced inaccurate records.

The second most negative perceived service quality gap was between questions 30 and 5 “When the practice promises to do something by a certain time, they will do so”. There is an intangible angle to this question and therefore it is difficult to understand without asking the customers why they scored this question lower than their expectations.

The third most negative perceived service quality gap is between questions 31 and 6 “When a customer has a problem, the practice will show a sincere interest in solving it”. Showing sincerity is individualised, that is, the level of sincerity for each customer will be different. Again this aspect of reliability is less tangible and it is more difficult to understand why the customers rated it lower than their expectations. It could be drawn from this analysis that customers value sincerity and this could be a training issue for the receptionists.

Three questions had a negative perception of service quality when compared to their expectations, (questions 30 & 5, questions 31 & 6 and questions 34 & 9). Youseff *et al.* (1996) found that reliability had the highest expectation and the lowest perception mean gap score. Resnick and Griffiths (2011); Butt and Cyril de Run (2010); Chakravarty (2010); Lee and Yom (2006) found their patients had a high expectation and lower perception for reliability. The findings in this study for reliability are therefore similar to other healthcare studies that found a negative perception with the reliability determinant. This was in contrast to Curry and Sinclair (2002) who in their study, found reliability to be one of the highest mean gap scores for the community physiotherapy rehabilitation team.

This information demonstrates to the directors of *the practice* that one of their most negative areas in the reliability factor is the administration of their records. The administration area is an area that they have direct control of, that is, they could strengthen the processes to ensure that the administration was more accurate, which will in turn raise the perception of a particular part of the reliability determinant and improve their service quality.

### 4.3.2 Empathy

**Table 21: Mean Gap Scores for the Empathy Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E); P-E = gap score and this is displayed as a mean gap score. The raw data is shown in Appendix 9.

#### Empathy

| Question   | Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|--|----------------|---------------------------|----------------------------|
| Q45 - Q20 <i>The practice</i> will have employees who give customers personal attention              | 0.50           | 6.69                      | 6.19                       |
| Q43 - Q18 <i>The practice</i> will give customers individual attention                               | 0.31           | 6.68                      | 6.37                       |
| Q47 - Q22 The employees of <i>the practice</i> will understand the specific needs of their customers | 0.31           | 6.71                      | 6.40                       |
| Q46 - Q21 <i>The practice</i> will have the customers' best interests at heart                       | 0.07           | 6.52                      | 6.45                       |
| Q44 - Q19 <i>The practice</i> will have operating hours convenient to all their customers            | 0.06           | 6.24                      | 6.18                       |
| <b>Mean</b>  | <b>0.25</b>    | <b>6.57</b>               | <b>6.32</b>                |

For *the practice* empathy had the second lowest mean gap score of all six determinants. The most positive mean gap scores were between questions 45 and 20 “The practice will have employees who give customers personal attention”, however one of the lowest gap scores is between questions 46 and 21 “ The practice will have the customers best interests at heart”. It is interesting to note that one is less positive than the other so the perception may be that *the practice* staff give personal attention to the customers but do not necessarily have their best interests at heart.

Questions 44 and 19 also had a small gap (0.06) “the practice will have operating hours convenient to their customers”. The sample of customers had high expectations of the operating hours and their perception just met their expectation by 0.25. This is valuable management information as *the practice* opening hours are in the direct control of the directors. The operating hours could potentially be changed and possibly lead to an improved customer perception of the service quality of *the practice*.



The mean gap score for empathy ranged from 0.06 to 0.50 with an overall gap of 0.25, the second lowest mean gap score. Previous research had shown that empathy was important to customers of healthcare services. Empathy is an area that the practice directors should focus on. The information in relation to the individual questions could act as a training session for the staff in demonstrating how the customers have scored *the practice* in relation to their expectations. Empathy is an area that does require attention from the directors.

Overall the mean gap score for empathy had a positive mean gap score of 0.25; it had the second least positive gap score between perceptions and expectations. Empathy in the healthcare sector is a determinant that patients value. Youseff *et al.* (1996), found empathy to be the second highest expectation and the second lowest perception of service quality of hospitals in the West Midlands. Curry and Sinclair (2002) found empathy to have the largest gap between expectations and perceptions. Resnick and Griffiths (2011); Butt and Cyril de Run (2010); Chakravarty (2010); Lee and Yom (2006) found empathy to have a negative perception for all questions in their studies. Although the empathy determinant was not negative in the current study, it was the second least positive determinant.

It is difficult to know where *the practice* are failing in relation to empathy; it would be beneficial for *the practice* management to specifically ask the customers why the customers perceived the empathy factor so negatively in relation to their expectations.

#### **4.4.4 Tangibles**

##### **Table 22: Mean Gap Scores for the Tangibles Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E);  $P-E = \text{gap score}$  and this is displayed as a mean gap score. The raw data is shown in Appendix 10.

## Tangibles

| Question  | Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|---|----------------|---------------------------|----------------------------|
| Q27 - Q2 The facilities at <i>the practice</i> will be visually appealing         | 0.66           | 5.95                      | 5.29                       |
| Q28 - Q3 Employees at <i>the practice</i> will be neat-appearing                  | 0.61           | 6.37                      | 5.76                       |
| Q29 - Q4 Materials associated with <i>the practice</i> will be visually appealing | 0.51           | 5.71                      | 5.20                       |
| Q26 - Q1 <i>The practice</i> will have modern equipment                           | 0.09           | 5.94                      | 5.85                       |
| <b>Overall Mean</b>   | <b>0.44</b>    | <b>5.99</b>               | <b>5.55</b>                |

For this study the tangibles determinant was the second most positive perceived determinant; it had an overall mean gap score of 0.44. Tangibles included the gym within the practice, the equipment that is stored within the reception area, the pamphlets, and the appearance of the staff. The most positive gap is between questions 27 and 2 “The facilities at the practice will be visually appealing”. This is most likely related to the gym in the practice. *The practice* is fairly small to medium in size and when you walk into *the practice* you would not be expecting to see a gym. The gym is the same size as the reception and it is very neat and tidy.

The second most positive mean gap score was between questions 28 and 3, “Employees at the practice will be neat-appearing”. The therapists all wear a uniform that is branded with the company colours. The receptionists can wear their own clothes but must look smart. The customers therefore perceive the staff to be of good appearance.

The third most positive question was between questions 29 and 4, “Materials associated with *the practice* will be visually appealing”. There are a series of pamphlets that sit on a desk in the waiting area. They describe some of the conditions that the therapists work with, for example back pain or pains associated with sports injuries. There are also relevant books and a daily paper on the same table. The materials are all very relevant and up to date but it would have been interesting to know what the customers actually think of the information on the pamphlets. These are the kind of facts that the directors may find useful if ever re-designing the leaflets. This information could be gleaned from a face to face interview.

The least positive mean gap score is between questions 26 and 1 “*The practice will have modern equipment*”. The reception area can seem a bit cluttered and this was echoed by some of the customers in the face to face interviews. There are skeleton drawings on the walls, dried flowers, rugby shirts in frames on the walls and other physiotherapy equipment literally lying on shelves. It may be that the reception area looks a bit dated with the mix of memorabilia. Again it would be useful to ask the customers why they rated this question with the lowest perception score for tangibles.

Curry and Sinclair (2002) found that tangibles had the lowest expectations and the lowest perceptions, this was in part, they thought, because the services were offsite and therefore tangibles such as equipment and materials did not feature heavily with the service offering. Chakravarty (2010) found in the study of an outpatient department that there was a negative perception of tangibles. No reasons were given other than the scores were lower than the expectations scores. Resnick and Griffiths, (2011) found in their study of alcohol services that tangibles had the lowest expectations. This demonstrates that what patients or customers expect and perceive for each study is different and specific to the context of the healthcare services. It is interesting to note that the *expectations* and *perceptions* for tangibles are lower for studies in the public sector. This could be due to lower customer expectations for equipment and materials in the public sector when funding and budgets are perceived to be lower than the private sector. This was found in studies by (Camilleri and O’Callaghan, 1998) in Maltese hospitals where *expectations* were higher in the private sector for all variables and in the study including the tangibles. Irfan and Ijaz (2011) found that the *perceptions* of tangibles in the private hospital in Lahore, Pakistan were almost double the *perceptions* for the public hospital. The current study had high *expectations* and *perceptions* for tangibles. This is a positive outcome for *the practice* but one that must be maintained for *the practice* to remain competitive.

#### 4.4.5 Responsiveness

##### **Table 23: Mean Gap Scores for the Responsiveness Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E);  $P-E = \text{gap score}$  and this is displayed as a mean gap score. The raw data is shown in Appendix 11.

## Responsiveness

| Questions  | Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|--|----------------|---------------------------|----------------------------|
| Q38 - Q13 <i>The practice</i> will never be too busy to respond to customers' requests | 0.84           | 6.47                      | 5.63                       |
| Q36 - Q11 <i>The practice</i> will give prompt service to customers                    | 0.16           | 6.45                      | 6.29                       |
| Q35 - Q10 <i>The practice</i> will tell customers when services will be performed      | 0.15           | 6.52                      | 6.37                       |
| Q37 - Q12 <i>The practice</i> will always be willing to help customers                 | 0.11           | 6.63                      | 6.52                       |
| <b>Mean</b>  | <b>0.32</b>    | <b>6.52</b>               | <b>6.20</b>                |

Responsiveness is concerned with responding to the customers' needs and requests. The most positive mean gap score is between questions 38 and 13 "*The practice* will never be too busy to respond to customers' requests". This is a very encouraging outcome for *the practice* as it is extremely busy. This customer perception should be celebrated and shared with all *the practice* staff, particularly the receptionists.

The other three questions were by comparison, not as positive as questions 38 and 13. Questions 36 and 11 also related to responding to the customer "The practice will give prompt service to customers", the customers perceived that the staff were never too busy to respond but they did not perceive that the service was as prompt as they expected. There was only a difference of 0.16 between what the customers expected and what they perceived. This is not a large gap in relation to the other determinants however it is an area that may need further investigation and could be information that could be of benefit in staff training.

The least positive gap for responsiveness was involved with helping customers: questions 37 and 12 "The practice will always be willing to help customers". The mean gap score remained positive (0.11), however it is the lowest positive mean gap score for responsiveness. Management need to ask why customers rated this question with the lowest perception scores. The customers may have thought that whilst the staff are never too busy to respond and give them prompt service the customers perceived that they didn't always get the help they desired. It would be advantageous for the directors

to have additional facts from the customers that would aid the service quality in responsiveness.

Finally questions 35 and 10 “*The practice* will tell customers when services will be performed” had a means gap score of 0.15, this was the second least positive gap between expectations and perceptions. It is difficult to fully understand what each customer perceived this question to be concerned with. It does relate to all services offered from the practice and this may have been interpreted as treatment appointments. This is useful information for the directors, the receptionists could be more specific with the customers’ requests when making an appointment and this could help improve the mean gap score between questions 35 and 10.

Resnick and Griffiths (2011) rated responsiveness as the second highest expectation for patients and the third lowest for perception. Chakravarty (2010) found negative perceptions in all five of the measured determinants with responsiveness as the most negative. For this study, from six determinants, responsiveness is the third most positive.

#### 4.4.6 Assurance

**Table 24: Mean Gap Scores for the Assurance Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E); P-E = gap score and this is displayed as a mean gap score. The raw data is shown in Appendix 12.

#### Assurance

| Questions   | Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|---|----------------|---------------------------|----------------------------|
| Q41 - Q16 Employees in <i>the practice</i> will be consistently courteous with customers          | 0.46           | 6.77                      | 6.31                       |
| Q42 - Q17 Employees in <i>the practice</i> will have the knowledge to answer customers’ questions | 0.42           | 6.68                      | 6.26                       |
| Q39 - Q14 The behaviour of employees in <i>the practice</i> will instil confidence in customers   | 0.23           | 6.68                      | 6.45                       |
| Q40 - Q15 Customers of the practice will feel safe in their transactions                          | 0.15           | 6.63                      | 6.48                       |
| <b>Mean</b>   | <b>0.32</b>    | <b>6.69</b>               | <b>6.37</b>                |

Assurance is another factor that is important in the healthcare sector and is the third lowest determinant for *the practice*. The gap between perceptions and expectations for assurance is relatively small, that is the customers' perception for assurance just met their expectation.

The most positive gap was between questions 41 and 16, "Employees in the practice will be consistently courteous with customers". The sample of customers felt that the staff were courteous with them, however the lowest gap is 0.15 between questions 40 and 15 "Customer of the practice will feel safe in their transactions". Safe in their transactions may be interpreted differently for individuals, the meaning behind the statement is that they should trust and feel assured by the staff at *the practice*. This may have demonstrated that the sample of customers perceived the staff to be polite but did not necessarily trust them or feel assured. Overall it is a positive gap score for assurance but as it is a small gap, this is an area that the directors should monitor.

The second most positive gap score was between questions 42 and 17 "Employees in the practice will have the knowledge to answer customers' questions". The sample of customers felt assured that the staff of *the practice* knew the answers to their questions. Their perceptions exceeded their expectations by 0.42.

Finally the third lowest mean gap score was between questions 39 and 14, "The behaviour of employees in the practice will instil confidence in customers", this question had a mean gap score of 0.23. The customers perceived that the knowledge of the staff was more positive than the confidence *the practice* staff instilled. Information gleaned from the assurance analysis is another area that could be incorporated into staff training to improve the service quality at *the practice*.

The assurance determinant encompasses feelings of being safe and being treated well. Youseff *et al.* (1996) found assurance to be the fourth highest expectation and the fourth lowest perception. Resnick and Griffiths (2011) found that four of the determinants had negative perceptions and assurance was the second most negative. Chakravarty (2010) also found assurance to have the third most negative perception whilst Curry and Sinclair (2002) found assurance to be amongst the highest perception scores. This does indicate there is a quite a difference in expectation and perception scores for every

research area for assurance.

#### 4.4.7 Servicescape

This was the amended determinant; it was concerned with the interior and exterior of the organisation, it is what Lovelock and Wirtz (2007) and Sureshchandar (2002) termed servicescape. Sureshchandar (2002) felt it was one of the constructs missing from the SERVQUAL Instrument.

**Table 25: Mean Gap Scores for the Servicescape Determinant**

The table represents the first question as the perception question (P) followed by the paired expectation question (E); P-E = gap score and this is displayed as a mean gap score. The raw data is shown in Appendix 13.

#### Servicescape

| Question  | Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|---|----------------|---------------------------|----------------------------|
| Q48 - Q23 The external décor of <i>the practice</i> will be neat and tidy   | 0.84           | 6.40                      | 5.56                       |
| Q50 - Q25 The reception area of <i>the practice</i> will be clean and tidy  | 0.53           | 6.45                      | 5.92                       |
| Q49 - Q24 The treatment rooms of <i>the practice</i> will be clean and tidy | 0.28           | 6.55                      | 6.27                       |
| <b>Overall Mean</b>   | <b>0.55</b>    | <b>6.47</b>               | <b>5.92</b>                |

The most positive mean gap score is between questions 48 and 23, “The external décor of the practice will be neat appearing”. The window display is one of the most talked about aspects of *the practice*. It has won awards and has been in the local newspapers for its displays. The window display changes regularly and has themes, such as Christmas, Skiing, Halloween (Appendix 14 displays pictures of *the practice*). It is unusual to see such grand displays in a physiotherapy window; the customers often comment about the window and it has featured in local newspapers. This positive gap score is excellent news for the directors of *the practice*.

The second largest gap was between questions 50 and 25, “The reception area of the practice will be clean and tidy”. As discussed previously, the reception area can be a bit

untidy. The reception area displays many physiotherapy artefacts and equipment that is visible to the customer. Cleaners are employed daily, it could therefore be presumed that the perception was intended for the untidiness rather than the cleanliness of the reception area. This is interesting information for the directors and is an area that could be easily transformed. Comments on the reception are further highlighted in phase two.

Finally, questions 49 and 24, “The treatment rooms of *the practice* will be clean and tidy”. The treatment rooms are small with no natural light. They contain a treatment table and a small equipment stand, they require painting. This is an area that the directors have direct control over. They could paint the treatment rooms and brighten them up. The lighting is also bad in the treatment rooms and this is something that the directors could also change. The means gap score (0.28) is positive but it only just meets the expectations of the customers and if this is not addressed then the perception may soon be less positive and possibly lower than the customer expectations. The décor of the treatment rooms is an important area. All customers attend the treatment rooms and if their perception is poor for this area then it may ultimately affect the service quality as a whole and this could be detrimental to the business.

There were only three questions in this determinant and they were at the request of the directors of *the practice*. It is the determinant with the most positive gap score and the mean gap scores range between 0.84 and 0.28, the widest range of mean gap scores among the determinants. There are no other studies to make a direct comparison for servicescape as this was an amendment specific to this study. Goldstein *et al.* (2000) in their qualitative study with the physiotherapy sector asked about *Access* (physical location, operating hours, appointment times and waiting times) and Petrovici and Philips (2009) in their study into Romanian hospitals asked about the *Ambience* of the reception area.

#### **4.5 Conclusion of Phase One**

Key findings from the phase one analysis suggested that there were many aspects and improvements of service quality that could contribute to management information and training within *the practice*. Improvements in the service quality areas may change the perception of *the practice* and help the organisation compete in a very competitive market. The analysis highlighted that every study depends on the context of the industry and that culture has a large part to play in *expectations* and *perceptions* of a service.



This is particularly relevant in the healthcare sector where there are expectations of both the public and the private sector. The literature review revealed that in a global setting the lack of Government funding affected the service quality of the public sector but it was country specific for the private sector depending on how that healthcare system was viewed. What is revealing for researchers is that whilst SERVQUAL provided a sound analysis of service quality it did not offer the overview required to fully understand the root of the customers' *expectations* or *perceptions* nor the 'why' from the customers and this was addressed in phase two of this study.

The analysis of the total scores for *the practice* demonstrated that all six determinants had higher *perception* scores than *expectation* scores. This is an unusual finding compared to other healthcare studies (Irfan and Ijaz, 2011; Karassavidou, 2009; Butt and Cyril De Run, 2010; Chakravarty, 2010; Lee and Yom, 2006; McGorry, 1999; Camilleri and O'Callaghan, 1998; Youseff *et al.*, 1996). Most of those studies were conducted in the public sector and the perception scores were almost lower or equal to the expectations scores. Butt and Cyril De Run (2010) conducted their study in private Malaysian hospitals and negative perceptions were found in all five areas (tangible, reliability, responsiveness, assurance and empathy). Irfan and Ijaz (2011) conducted their study in a private and public hospital in Pakistan and found lower perceptions for all five determinants for the public hospital. Youseff (1996) and Karassavidou (2009) found in their study of public hospitals in the UK and Greece respectively that the perceived service quality was also negative in all five determinants. In contrast, a study in the UK NHS and in the physiotherapy sector (Curry and Sinclair, 2002) found mixed *expectations* and *perceptions* gap scores for three physiotherapy services, in other words some had a low *expectation* score and a low *perception* score but not a negative service quality gap. It could be that customers/patients have different expectations and perceptions of hospital services compared to physiotherapy services and this could be a key finding for the physiotherapy sector. More specific research is therefore required in regard to what customers expect and perceive of specific physiotherapy services rather than comparisons with other healthcare studies.

In the current study customers had both high *expectations* and high *perceptions* for all six areas. The customers' *perceptions* of the service quality of *the practice* exceeded their *expectations*. This was a very positive result for service quality at *the practice* and

one that the directors should publicise both to their staff and to their customers. Below summarises the findings of phase one:

The perception of the service quality of *the practice* was positive overall.

- That the customers' *perceptions of the practice* exceeded their *expectations*.
- There were varying amounts of perceived service quality in relation to all six determinants, with reliability showing some **negative perceived service quality** in three of the questions.
- **Reliability** had the least positive perception of service quality with a gap between *expectations* and *perceptions* of 0.03. The reliability factor is an area that requires management attention as it had the lowest service quality gap.
- There were two service quality gaps that had equal (0.84) **highest** mean gap scores. Questions 38 and 13 in the **responsiveness** determinant which were in relation to *the practice* being never too busy to respond and between questions 48 and 23 for the **servicescape** determinant in relation to the décor (external and internal) of *the practice*. These are key findings for *the practice* and are areas that management need to maintain in order to keep the high standard. These findings need to be shared with *the practice* staff.
- The lowest service quality gap (-0.40) was in the reliability determinant between questions 34 and 9 and was concerned with *the practice* providing accurate records to the customers. This is an area where management need to take action to improve the service quality.
- The **empathy** determinant was the second least positive service quality gap in relation to the operating hours of the practice. This is another area where management have direct control and can change the opening hours to more suit the needs of the customers and improve the perception of the service quality.
- Having a positive perception score for all six determinants is an unusual finding when compared to other healthcare studies for both the private and the public sector.

Very useful management information arose from phase one of the analysis; it did pose the question 'why'. Why did the sample of customers rate some of the determinants higher than others and in particular why did customers rate the perceptions lower than

the expectations in three of the reliability questions? These questions were explored in phase two in the next chapter.

## **Chapter Five- Phase Two: The Results of the Face to Face Interviews**

### **5 Introduction**

This chapter reports the findings of phase two of the second stage of the analysis. Stage two was concerned with exploring customer insights into service quality of an independent private physiotherapy practice. Following the analysis in phase one, it was decided to investigate further the elements of negative perception in the customer questionnaire, that is, where the service quality gap was negative. Phase one had identified which customers had negative service quality gap scores of *the practice* and the areas therein (Appendix 15). There were nine face to face interviews conducted in phase two. The customers were alphabetically coded in phase one that remained throughout phase two. There were two questions in the semi-structured face to face interview. The first question was an opening question in regard to the customers past experiences of physiotherapy services. The second question was in relation to the negative perceived service quality that was analysed in phase one from their questionnaire. The information from the face to face interviews was analysed using the six determinants as the framework. In addition, there were two themes that emerged from the first question in relation to past experiences with the NHS and then comparisons of those experiences with *the practice*. The second theme that arose from the interviews were comments in relation to the treatment provided at *the practice*. Each section compares the findings of the analysis in phase two with the literature.

The chapter first considers the second question of the interview in relation to the negative perceived quality that was expressed in specific parts of the six determinants. Secondly, the chapter considers question one of the interview regarding general comments relating to previous experiences of physiotherapy services. The chapter then discusses the comments in relation to the treatment and finally, the chapter concludes with reflections on phase two.

## 5.1 Negative Perceived Service Quality

### 5.1.1 Reliability

Reliability is concerned with ability to perform the service dependably and reliably. For *the practice* the reliability determinant had the lowest mean service quality gap score of 0.03, signifying that there was only a 0.03 gap between the *expectation* scores and the *perception* scores. In other words, the customers' perceptions of the reliability determinant for *the practice* were just met. A deeper analysis in phase one did reveal three questions to have a negative score for reliability. Customer perception of the reliability determinant could have implications for the service quality for *the practice*, they may lose customers if the perception gap for reliability becomes negative overall.

The interviews sought to investigate why customers rated their perceptions of the reliability determinant less positively than their expectations. Respondent KK gave reliability a negative perception score of -1.0 in relation to the service quality gap between questions 31 and 6. Respondent KK's comments were in regard to the accurate records of the practice. This was the question with the lowest perception score in phase one. Respondent KK said:

“One thing I noticed was that they have a blank piece of paper that they write on (referring to what the therapists write on). My other physio that I go to has the same but it isn't blank, it has lines on it and it looks more professional.”

This is interesting as it was assumed in phase one that the inaccurate records were in relation to the administration of the billing of *the practice* however this respondent said her negative perception was in regard to the lack of professionalism with the note taking. This gave her the perception that the accuracy of the records was not as professional as it could have been. This answer has provided the management with deeper reasons as to why this aspect of *the practice* had the lowest service quality gap and was a key finding for phase two. Respondent KK also compared the service that she received from *the practice* with the service she received from her other physiotherapy provider, this is also an interesting finding. It is known in the literature that customers do compare services with other services and that *expectations* are formed through

experiences (Cadotte *et al.*, 1983; Grönroos, 1984, Camilleri and O’Callaghan, 1998; Robledo, 2001), however little has been written about how *perceptions* are formed. This finding demonstrates that perceptions are also formed through experiences when comparing like for like services.

Another respondent, respondent D gave a negative service quality gap score for the gap between questions 30 and 5, in relation to *the practice* promising to do something by a certain time. This question had the second lowest service quality gap in phase one. Respondent D explained that her negative perception was with the lack of quick appointments with the therapists and said:

“My only time issue with *the practice* is failure to get an appointment quickly and that’s not because they promised, they are actually saying no, we can’t do it.”

Respondent D’s perception is negative because she could not receive an appointment when she wanted it. This area did have a negative perception score in phase one (-0.04) and the comments confirm that this is a problem area for *the practice*.

Reliability is a determinant that patients have cited in other healthcare studies as being very important to them (Resnick and Griffiths, 2011; Alrubaiee, 2011; Ahmed and Samreen, 2011). Curry and Sinclair (2002) cited reliability as of critical importance in a healthcare setting. Reliability is concerned with expectations around service providers carrying out their promises, showing a sincere interest in the customer and in any problem they have, performing the service right the first time and having error free records.

The overall perception of the reliability factor in phase one highlighted that reliability had a positive service quality score of 0.03. However, on deeper analysis in phase one, three of the five reliability questions had a negative service quality gap score and the comments in the interviews have confirmed some of the reasons why. Reliability is an area that requires attention from management before all five areas for reliability become negative. A negative perception of the reliability factors could impact on the business if customers perceive it to be unreliable and unprofessional.

### 5.1.2 Empathy

Empathy is concerned with caring and individualised attention, empathy ensures that the service provider will have the customers' best interests at heart and provide operating hours that suit the individual's needs, they will also understand the specific needs of the customer.

For *the practice*, empathy had the second lowest service quality gap score with a gap score of 0.25 between the customers' *expectations* and their *perceptions*. Considering that empathy is such an important determinant in a healthcare setting, it is interesting to note that for *the practice* it was the second lowest determinant.

The interview sought to ask the reasons why this was the case. Of the nine people interviewed, only one person had a negative comment in regard to empathy. Respondent PP scored the perception of the operating hours of the practice two points lower than their expectations. The interview revealed that it wasn't precisely the operating hours that the candidate was scoring *the practice* lower on but the fact that the therapist that he attends only works part time and was not always available, he said the following:

“The physiotherapist that I see only works two days a week at *the practice* and that is not perfect.”

Respondent PP had a negative perception of the service quality in relation to empathy because of the lack of availability of the therapists. Some of the therapists work part time elsewhere and are not available to work at *the practice* for all the operating hours. This may also be a problem for other customers who were not interviewed but did score this question lower in phase one. The question specifically related to the operating hours and had the second lowest mean gap score (0.06), the service quality gap for this question just meets the customers' expectations. This is a key finding for the practice as the operating hours are clearly an issue for the customers and one where the management require to take action.

Similarly to reliability, empathy has been shown in previous healthcare studies to be important to patients. Curry and Sinclair (2002) found that empathy had one of the most positive gap scores in their study. Ahmed and Samreen (2011) found in their study of Karachi hospitals that the empathy factor was statistically significant in patient

satisfaction. Conversely, Youseff *et al.* (1996); Resnick and Griffiths (2011) found that empathy had a negative service quality gap score in their studies. Resnick and Griffiths who undertook their study into alcohol services found that if they improved empathy between staff and patients it would benefit the overall perception of the service quality of their services. The service quality of *the practice* in this study would also improve if the operating hours were changed to meet the needs of the customers.

### 5.1.3 Responsiveness

Responsiveness is concerned with willingness to help customers and provide prompt service. For this study responsiveness had an equal service quality gap score alongside assurance (0.32). Of the nine interviews, there were two relevant comments from respondents QQ and C who had negative perceptions of the responsiveness factor. Responsiveness is concerned with telling customers exactly when services are likely to be performed, giving prompt service to customers, always being willing to help customers and never too busy to respond to customers' requests. Respondent QQ marked the practice lower on their prompt service and commented:

“It depends on who is on at the reception. It is the same with the therapists, if you get two different ones you get two different types of service and that is not always good.”

This is what the services literature refers to as *inseparability* (Kotler *et al.*, 2008), when the services are different depending on who performs them. Respondent QQ was not only comparing the service of the receptionists but also the service they received from the therapists. This is a training area for *the practice*, where consistency of service wherever possible contributes to the overall service offering. Respondent C also made a similar link about the service provided by the therapist when commenting on question 12, *the practice* is always willing to help you. Respondent C gave question 12 a negative perception score of -1.0 and commented:

“They didn't ask you anything other than how are you this week and that was it. I would have liked them (referring to the therapist) to ask “what does your work consist of this week?” as I was trying to explain to her what had happened originally when I had my accident at work.”



The comments from respondent QQ and C are interesting findings in relation to comments on the responsiveness of the service quality of *the practice* and the service quality of the therapists. The findings would suggest that comparisons are constantly being made by the customers. These comparisons are a result of experiences with the personnel within *the practice*.

Responsiveness is recorded in some other healthcare studies as having a negative service quality gap (Chakravarty, 2010; Resnick and Griffiths, 2011; Butt and Cyril de Run, 2010; Youseff *et al.*, 1996). Chakravarty (2010) found that responsiveness had the lowest service quality gap score (-0.65) compared to the other five determinants in their study. Resnick and Griffiths (2011) found responsiveness to have the third lowest negative service quality gap score for their clinical staff group. Butt and Cyril de Run (2010) and Youseff *et al.* (1996) also found responsiveness to be the third most negative determinant in their healthcare studies. In contrast Curry and Sinclair (2002) had found both high expectations and perceptions of responsiveness in their study of three physiotherapy services. They found that responsiveness had one of the highest mean gap scores for expectations and perceptions in two of the physiotherapy services. Curry and Stark (2000) indicated a very positive score for the responsiveness determinant in their study of nursing homes. Previous healthcare studies do show different results for different studies, however the information from the face to face interviews does give an explanation of where the negative perception may be stemming from and this is valuable management information. It should be regularly communicated to all staff that customers are judging and making comparisons on the service quality of all the personnel of *the practice* and that consistent and excellent customer service should be strived for.

#### **5.1.4 Assurance**

Assurance is concerned with knowledge and courtesy of employees and their ability to convey trust and confidence. For this study assurance had an equal service quality gap score alongside responsiveness (0.32). This signifies a 0.32 gap between customers' expectations and perceptions of the assurance factor. Of the nine interviews, two respondents (E and RR) gave assurance a negative perception score. When asked, candidate RR did not understand the question. One question was around feeling safe in

the transactions with the practice and the other concerned the behaviour of the employees and the fact that they instil confidence. Respondent E did answer the question about feeling safe in the transactions with a negative perception and said:

“I feel perfectly safe from the physical perspective but I came though BUPA and the paperwork sometimes goes awry but if the environment was unsafe I would score it a four or a five (out of seven).”

In other words Candidate E marked *the practice* lower on the perception score because of the paperwork transaction but commented that if he had felt physically unsafe he would have given the practice an even lower score. The customer was prioritising his scoring against his personal safety versus his non-physical safety. This is also an interesting finding as through the interviews it can be recognised that customers prioritise their scoring as was in this case in relation to personal safety.

Patients (customers) require to be assured in a healthcare setting. Assurance had a negative perception in studies by Youseff *et al.* (1996), Resnick and Griffiths (2011); Chakravarty (2010). Youseff *et al.* (1996) reported a negative perceived service quality gap of -0.75. Resnick and Griffiths (2011) reported a negative service quality gap of -0.5 whilst Chakravarty, (2010) noted -0.28. In contrast Curry and Stark (2000) found in their study of nursing homes that the residents rated assurance more highly than the relatives in the study. Curry and Sinclair (2002) recorded high mean expectations and perceptions for the assurance factor for all three of the physiotherapy service areas, this could in part be due to the nature of the outsourced physiotherapy services and the positive relationship between the patient and the therapist where more assurance occurs face to face. Irfan and Ijaz (2011) found that patients' perception of assurance was higher in a public training hospital where patients were given assurance more than they would have normally been given in a public hospital.

### 5.1.5 Tangibles

Tangibles are concerned with the appearance of physical facilities, equipment and appearance of personnel and materials. For this study, tangibles generated the second highest gap, of 0.43, this signified that the customers had an overall very positive perception of the tangibles of *the practice*. The tangibles at the practice include the equipment on display i.e. skeletons and includes the gym and the gym area, the appearance of the staff and materials associated with the practice i.e. leaflets and pamphlets.

Of the nine face to face interviews, two candidates (QQ and KKK) had negative gap scores for tangibles where they scored the perceptions lower than their expectations. The questions were in regard to *the practice* having modern looking equipment and the pamphlets situated in *the practice*. Respondent QQ gave the practice a negative perception score of the modern looking equipment, in other words her perception of the modern looking equipment was not what she was expecting, she said

“Well I have only ever been to a Doctor’s surgery and it wasn’t quite what I was expecting (referring to *the practice*). I thought it was going to be different looking to what I thought, it was nice and clean but the toilets! All you see is skeletons on the wall and what was a hockey ball to do with the practice, do they sponsor a hockey team?”

*The practice* is clean but there is only one toilet and it is very small; customers also have to walk through the gym to get to the toilet. The skeletons are on the wall in the reception area as is the hockey ball (in a glass case). This customer did not like the designs on the wall or the toilet hence the reason why she marked *the practice* with lower perceptions for this question. Perhaps other customers were thinking the same but tangibles had the second most positive service quality gap and is one of the most positive areas of service quality for *the practice*.

The second respondent (KKK) scored the pamphlets that sit in the reception area of *the practice* with a lower perception score than her expectation score and said:

“I thought the pamphlets were not produced particularly well. I think that they are quite busy. I don’t know how useful pamphlets are nowadays. I think someone needs to come in here and take something away. You would need a phone number or something like that but you don’t need all that blurb that’s on the pamphlets. I think you have to think through very carefully your marketing strategy and your communication plans. You need easy to follow messages like “are you in pain?” “Contact us ...”

Despite tangibles being the second most positive gap, both candidates KKK and QQ had quite strong views as to why they scored *the practice* with a negative perception score and candidate KKK went a step further describing how *the practice* should change their pamphlets. These insights are very valuable. The directors should take account of the comments if re-designing the pamphlets or the reception area.

In previous healthcare studies, tangibles had a mixed response. Curry and Sinclair (2002) found that tangibles had low expectation and low perception scores in all three of their physiotherapy service areas. Curry and Sinclair (2002) indicated that this could be due to the nature of the outsourced services for physiotherapy. Curry and Stark (2000) found that tangibles carried the lowest priority for both sets of customers (residents and relatives) in their care home study. Youseff *et al.* (1996) stated that tangibles had the highest expectation but the lowest perception, giving an overall negative perception score for tangibles of -0.44. They also found that when customers were asked to rate the following statement: “*excellent NHS hospitals would have up to date-facilities*”, the mean gap score was -1.039, the most negative perceived gap for tangibles. This is an important aspect to comment on because this study was for West Midlands NHS public hospitals and perhaps the wording of *excellent* in the expectation questions induced too great an expectation for the UK NHS public sector. This was also a comment in the study of Curry and Sinclair (2002) who commented that the wording of the questionnaire has to be more carefully considered to the environment if the gap between the two variables (*perceptions* and *expectations*) is to be realistically compared.

Camilleri and O’Callaghan (1998) compared the Maltese private healthcare sector with

the Maltese public healthcare sector and the ‘environment’ was rated higher in the private sector than the public sector. Two UK public healthcare studies in the NHS (Resnick and Griffiths, 2011; Youseff *et al.*, 1996) had negative *expectations* and *perceptions* of the tangibles determinant, in other-words, they were not expecting much and that is what they perceived. For the current study, it is very interesting to note the strength of the comments in relation to the equipment and materials and it is an indicator that the directors of *the practice* should ask their customers regularly what they think of the materials and equipment in *the practice*.

### 5.1.6 Servicescape

Sureschandar (2002) and Lovelock and Wirtz (2007) termed servicescape as the outside environment and décor of the internal building. Servicescape was the amended sixth determinant and covered the external appearance of the building, the internal décor of the treatment rooms and the cleanliness and tidiness of the reception area. Servicescape had the most positive service quality gap (0.63) signifying that customers’ perceptions of the servicescape were (0.55) greater than their expectations.

Of the nine people interviewed only one person had a negative perception score in regard to all three servicescape questions. Respondent D scored the reception area and the treatment rooms with a service quality gap of -0.3. Respondent DD commented:

“Bit of a muddled look about the reception area, not as professional as other physiotherapy practices that I attend. There was a mixture of sports relics and dried flowers.”

This was another comparison with another practice that she attends, she was comparing the reception area of *the practice* with the reception area of another unrelated practice that she clearly felt was more professional. This comment reinforces the fact that customers do compare the décor with other service providers. Respondent DD also created a comparison with the treatment rooms with a service quality gap of -1.0. Respondent DD said:

“They again are not as good as others I have attended – the rooms (referring to *the practice*) appear to have been cobbled out of a large Victorian building piece meal. Ramps have been added at a later date but give an unfinished look and the treatment rooms are quite small.”

The comments from candidate DD are very interesting findings as not only are past experiences with other physiotherapy providers relevant and form *expectations*, their *perceptions* are also formed through comparisons with other service providers.

Goldstein *et al.* (2000) considered *access* as an element to measure and that included the physical location, operating times, appointment times and waiting times, whilst Petrovici and Philips (2009) in their research of the SERVHOSP tool included **ambience** (the reception area) as a determinant in their study of service in Romanian hospitals.

It has been documented in the literature that experiences help form expectations (Grönroos, 1990; Robledo, 2001). This was evident from the information gathered during the interviews. Customers compared all the detail including the toilets of other service providers. Little has been documented as to how perceptions are formed other than they are formed after a visit to a service provider (Parasuraman *et al.*, 1990). The interviews have revealed however that perceptions are formed in one sense through comparisons of other service providers too. This is one of the main general findings from the interviews. For the directors, this is an important finding as they may want to visit other service providers themselves and assess the décor and treatment rooms to keep abreast of what the competition is offering.

## **5.2 General Comments in Relation to Previous Experiences of Physiotherapy Services**

The opening question of the face to face interview asked “*if they had previous experience of any physiotherapy services?*” This question provoked statements of physiotherapy experiences within the NHS and the private sector and comparisons with *the practice*. The experiences were categorised into the public sector (The NHS) and the (Private Sector) and further distilled into comparisons with *the practice*. Robeldo (2001) and Cadotte *et al.* (1983) stated that customers not only compared expectations with past experiences, they also compared companies of other sectors, in this instance the public sector. Camilleri and O’Callaghan (1998) defined expectations as being a phenomenon influenced by personal experiences. The following are general comments from the face to face interviews in regard to previous experiences and comparisons with other physiotherapy providers.

### **5.2.1 Comments in Relation to Previous Experience of the NHS**

Six of the nine customers interviewed had previous experiences with physiotherapy services in the NHS. There were three customers who recalled negative customer care experiences with the NHS. One customer recounted his wife’s experience with the NHS physiotherapy services and what she had been through and said:

“My perception of the NHS is based not on my personal experience but of my wife’s experience, that I think a lot of the customer care and the quality that is on offer at the NHS has gone downhill particularly in relation to sports injury.”

It was interesting to note that this customer’s perception was formed not through his own experience but his wife’s, this adds another dimension to perception, in that they can be formed through other people’s experiences and this is another worthy finding from the interviews. Healthcare customers/patients are concerned with the level of care they receive but also the level of care that others close to them receive. Healthcare is different in this respect to an airline or a restaurant where the care is perhaps not so intimate or personal. Understanding that customers perceive a service through someone close to them is also an interesting finding for healthcare practitioners/owners of private practices. Curry and Stark (2000) found differences between relatives and residents in their study of care homes but also some similarities of priorities.

Expectations of healthcare services very much depend on how the public and private sector are set up within each particular country and culture. In the UK, many people have attended the NHS not only for physiotherapy services but for other services, hospital treatment or other ancillary services and have therefore formed an opinion of the service quality of the NHS based on their previous experience. The UK private sector is readily available to individuals who are prepared to pay for the service or through a third party (BUPA or the SPIRE) and *expectations* and *perceptions* are different as a result of the price for the service. Teboul (1991) stated that the price a customer has to pay for a service determines the level of quality to be demanded.

For the current study the expectations were high in all six determinants, this was in contrast to the study of Curry and Sinclair (2002) who conducted their physiotherapy study in the public sector and had low expectations of the facilities and equipment used by the therapists. McGorry (1999) in her public healthcare study with a Latino population found unusually that 13 expectations were lower than perceptions which may have been due to socio economic factors, i.e. low income and therefore lower expectations. It could be argued therefore that expectations are not only formed through experiences but are also culture, country and socio economic dependent. The current study has shown that for the private physiotherapy sector expectations were high for all factors and this may be a result of comparisons largely to the NHS or because of price.

### **5.2.2 Previous Experience and Comparisons to *The Practice***

Previous experience is a factor that determines expectations and this is demonstrated in table 26 below. There was a strong correlation between expectations scores and those customers who had previous experience of physiotherapy services and no correlation between expectation scores and those customers with no previous experience of physiotherapy services. This is an extremely interesting finding and does re-iterate the findings of Robledo (2001) who along with other factors linked experiences and expectations. This study has highlighted the importance of previous experiences as potential indicators of expectations.



**Table 26: Correlation between *Expectations* and the Gap Score with Experience of Physiotherapy Services and without Experience of Physiotherapy Services**

|  |                |
|--|----------------|
| Correlation between expectation scores and the Gap Score   | <b>0.3</b>     |
| Correlation between expectation scores and the difference for those with previous experience of physiotherapy services           | <b>0.37 *</b>  |
| Correlation between expectations scores and the difference for those with no previous experience of other physiotherapy services | <b>-0.06**</b> |

**\*45 customers had previous experience of physiotherapy services**

**\*\* 17 customers had no previous experience of physiotherapy services**

**Table 26** shows that there is significant correlation (0.37) between those people who have previous experience of physiotherapy services and their overall expectation, however there is no relation (-0.06) to those people who have had no previous experience of physiotherapy services and their expectation. Their expectation is not linked to their comparison of their experiences. Previous experience of physiotherapy services is a significant factor in determining expectations and this can be both from the public and private sector.

The interviews have also highlighted how customers compared physiotherapy services with other services as one respondent commented

“The only comparison is a silly one really, the Chiropractors had the latest equipment and were clean and efficient, almost Germanic but there wasn’t this feeling of we are in this together (referring to *the practice*).”

The respondent initially compared the equipment of the Chiropractor with the equipment at *the practice* but quickly said that despite the better equipment she prefers the ‘feel good factor’ at *the practice*. This is also an interesting finding where the customer is weighing up the importance of one factor against another and the emotional factor was preferred over the tangible factor. This does re-iterate the importance of the emotional factors, assurance and empathy in a healthcare setting. This is also constructive management information for practitioners particularly for this study where those factors were not the top two service quality gaps, therefore improvements in assurance and empathy should be considered.

### 5.3 Comments in Relation to the Treatment

The questionnaire in phase one outlined and highlighted in bold that the survey questions were in relation to customer service of *the practice* only and not the treatment. The researcher re-iterated this to the customer when handing out the questionnaire and the researcher explained this again at the start of the face to face interviews. What became very evident throughout the interviews was the inseparability for the customer between the treatment they had received at *the practice* and the customer service. Vandame and Leunis (1993) commented that often patients were unable to judge the care that they receive however, of the nine interviews, five customers commented on the treatment. One pertinent comment by respondent KKK was in relation to the service quality of the treatment:

“The reason I have come to this practice I suppose are two keys things. I think the quality of the diagnosis and the quality of the treatment.”

Respondent KKK directly linked the service quality of *the practice* with the diagnosis and treatment they had received. Another candidate candidly said:

“To be honest, I am not fussed about the building, it is the treatment that I am concerned with.”

In other words they were not interested in the décor or the facilities but whether the treatment was going to ‘cure’ them. Authors will testify that it is difficult for patients to assess the treatment in relation to their illness. This study deliberately sought to have the treatment aspect separate from the service quality of *the practice*, however, whilst this was in the main possible, it was still very evident that the customers linked the service quality of *the practice* with the treatment they had received.

Despite the on-going debate in the literature of whether to measure both the treatment and the services together or separately, it is an important finding to note that it is difficult for customers to separate the service quality with the treatment they receive. Hassanien *et al.* (2010) called this combination of services (the physiotherapy services and the customer service) the core service. It should be remembered that clinical treatment is a separate construct to other core services such as cleaning as it entails an

emotional element that cannot be measured by one questionnaire (Vinagre and Neaves, 2008).

#### 5.4 Reflections of Phase Two

Phase two was specifically concerned with investigating negative perceived service quality for all six determinants. Negative perception occurs when the *perceptions* of a service provider are lower than the *expectations* of the services. The nine customers who were interviewed all had some aspect of perceived negative service quality in the analysis of their questionnaire. They were specifically asked why they rated the perception question lower than their expectation question. The key findings in phase two were different to phase one. The main findings for phase two were:

- When the customers were interviewed in regard to the negative perception of the servicescape and tangibles questions, they were the areas where customers had the most negative comments. This was contrary to the findings in phase one where the analysis found that those two determinants had the most positive service quality gaps. It may be that it is verbally easier to criticise tangible aspects of service quality. Despite empathy being the second lowest service quality gap, only one customer commented on empathy and the negative comment was in relation to the customer not being able to receive an appointment with the desired therapist.
- Empathy is also cited in the literature as being an important factor in a healthcare setting and little was said despite empathy being the second lowest. It is perhaps harder to talk about feelings of empathy to a researcher and this is where the questionnaire is perhaps more valuable. Customers can honestly express through scoring how they feel about the empathy in *the practice*.
- There were several disparaging comments about the reception and the waiting area of *the practice* and these areas fall under servicescape which was the most positive determinant. This is also a tangible aspect of customer service that can be perhaps more easily discussed than scored.
- Assurance and responsiveness were both equal third lowest mean gap score. For assurance, comments related to the fact that some of the paperwork of *the practice* went temporarily missing. For responsiveness, comments related to the

interaction between the reception staff, the therapist and the customer. The customer desired a more responsive interaction but perceived the reaction to be negative compared to their expectations. Again these are areas that are sensitive and perhaps a more true picture is depicted from the analysis in phase one rather than the comments from the interviews.

- Reliability had the least positive gap (0.03). When two customers were asked why their reliability scores were negative, they translated the lack of availability of the therapists and the ‘unprofessional’ note taking as why they had given a negative perception of *the practice*.
- That key management information was gleaned from the interviews and could be presented as a customer service training session to all staff at *the practice*.
- That there is a strong correlation between previous physiotherapy experiences and expectations. That the customers gather experiences from other services, both from the public and private healthcare services. The customers then compare those experiences with the services of *the practice*.
- That perceptions are also formed through experiences including the experiences of others i.e. relatives.

The sample was much smaller for phase two, but despite this, much more information was provided by the customers that could benefit the staff and *the practice*. In addition, there were factors that the customers mentioned that the questionnaire could not provide but equally there appeared to be evidence that the intangible aspects of the services (empathy and assurance) were criticised more in phase one. It appears that the comments from the interviews would be much more advantageous to the directors of *the practice* when considering why customers had perceived some of their service quality in a negative light. For any small independent practice, it is extremely important that they know what their customers expect and think of their service in order to remain competitive. The physiotherapy industry is a competitive industry and any information that can help the management can only be a benefit.

## Chapter Six: Conclusion, Future Research and Recommendations

### 6. Introduction

The aim of the study was to assess the service quality of an independent private physiotherapy practice. Further, for the study to assist *the practice* in maintaining and improving their service quality in order to remain competitive.

#### 6.1 The Objectives

1. To establish and apply an appropriate conceptual framework to assess service quality within a private independent physiotherapy practice.
2. To explore customers' insights of service quality of a private independent physiotherapy practice.
3. To provide recommendations to *the practice* in relation to service quality.
4. To contribute to the development of service quality debates through the example of the practice.

The aim and objectives led to a thorough review of the healthcare and marketing literature in regard to service quality. The literature revealed that many of the service quality healthcare studies were one method studies. It was noted that there was a gap in the literature for a mixed method approach to service quality in the independent private physiotherapy sector. There were substantive discussions in the literature in relation to service quality conceptual models. The final conceptual model for *the practice* measured the gap between *perceptions* and *expectations* of service quality. The research design was a two phased approach. Sixty two questionnaires were distributed in phase one to *the practice* customers and phase two conducted nine semi-structured face to face interviews. The analysis revealed that the service quality for *the practice* was positive however, on deeper investigation, a negative perception of service quality was established in some of the six determinants. The face to face interviews sought to answer the reasons why the customers perceived aspects of the service quality of *the practice* negatively. In addition, there were two emergent themes from the semi-structured interviews. The first theme involved experiences of physiotherapy services with other providers and comparisons to *the practice* and the second theme linked the service quality with the treatment at *the practice*. This chapter explores if the aim and

objectives of the study were met, the key findings of phase one and two, the theoretical and managerial implications, recommendations and concludes with recommendations for future research.

### **6.1.2 To What Extent were the Aim and Objectives of the Thesis met?**

The chosen conceptual model (The Gaps Model of Service Quality) and instrument (The SERVQUAL Instrument) reflected the aim of the study and objective 1. The gap for service quality was identified through two variables: customer *expectations* and customer *perceptions*. The model and instrument provided an overall and individual analysis of the service quality of *the practice*. In addition to the findings for the physiotherapy sector, findings were also found for the general healthcare industry and these are discussed below in the findings of phase one and two respectively.

The methodology of the study allowed the researcher to explore the service quality in phase two and this met objective 2. No previous service quality study in the private physiotherapy sector had conducted a mixed method approach. This added depth and meaning to service quality as a whole for *the practice*. The information from the face to face interviews provided valuable information for input into staff training for *the practice* staff. It also provided strategic guidance for *the practice* directors so that they can remain competitive. The study also helped the directors understand how to improve the perception of their customers therefore ensuring the service quality gap remains positive. Recommendations for *the practice* and for future research are discussed below and both satisfied objectives 3 and 4 of the study.

### **6.2 Key Findings of Phase one**

Measuring both *expectations* and *perceptions* provides valuable management information. For this study, despite the *perceptions* being positive for all six factors, the service quality gap for three determinants was small identifying that the customers' expectations were just met and in one area (reliability) there were three questions that had a negative perception of service quality. If the *perceptions* only had just been measured, as partially advised in the literature (Cronin and Taylor 1992, 1994), the findings for *the practice* may have been different. The analysis would have shown a positive performance of service quality for all six areas. Measuring the *expectations* allowed the analysis to demonstrate the differences in the determinants and therefore the differences in the customers' *expectations* and *perceptions* of the service. Youseff *et al.*

(1996) found that patients had high expectations of the service quality of West Midlands hospitals but had a negative perception of the services in all five areas for the hospitals. This analysis indicated to the hospital management that there was a serious problem with the perception of their hospital services when compared to the patients' expectations. Curry and Sinclair (2002) in their study of NHS physiotherapy services found low expectations in some areas and low perceptions, therefore despite the low perceptions, the patients were not as unhappy with the services as it met their expectations. Measuring both variables is therefore an important element to any service quality study to fully understand the aspects of service quality. This was a **key finding** for the physiotherapy sector and for the healthcare sector in phase one.

The customers of *the practice* had high expectations of the service quality. *The practice* is a private independent practice and many of the customers were paying for the services themselves. Camilleri and O'Callaghan (1998) found that patients had higher expectations of private hospitals in Malta than the public hospitals and that price was the main differentiator between the two types of hospitals. Imran and Ijaz (2011) identified that patients had a more negative perception of a public hospital in Pakistan than the private hospital in their study. Both those studies demonstrated that patients had higher expectations and perceptions of the service quality of the private healthcare sector. It would suggest that customers expect and perceive the service quality in the private sector to be of a higher standard. This was demonstrated in the study by Butt and Cyril de Run (2010) who found negative perception of all five determinants for private Malaysian hospitals. In contrast, Resnick and Griffiths (2011); Chakravarty (2010); Lee and Yom (2006); Karassavidou *et al.* (2009); Youseff *et al.* (1996) found negative perceptions of service quality in all five of the determinants in their healthcare studies in public hospitals. The current study found both high expectations and high perceptions of the service quality for *the practice*. Identifying high perceptions for all six determinants is an unusual finding for the healthcare sector. However, in the physiotherapy study Curry and Sinclair (2002) found that despite the variance of high and low expectations, the service quality was positive. The analysis of the physiotherapy studies are therefore in contrast to the other healthcare studies and this was another **key finding**. The relevance of this to *the practice* is that it may be harder to remain competitive if other private practices are also experiencing positive service quality. It is therefore vital that

any negative perceptions or small service quality gaps that have resulted from the study are managed.

### 6.3 Key Findings of Phase Two

Supplementing the analysis in phase one with semi-structured face to face interviews added depth and meaning to the overall understanding of service quality in *the practice*. The interviews focussed on areas where the customers perceived the service quality with a lower *perception* than *expectation*, providing a negative service quality gap score. The information from the interviews gave insights into the reasons why the customers scored the practice with a lower perception. This mixed method approach added depth and meaning and this was *a key finding* for the healthcare and physiotherapy sector. It was also a recommendation in the study by Karassavidou *et al.* (2009). Very few healthcare studies are mixed method studies. Curry *et al.*, (1999) combined the SERVQUAL questionnaire with a nominal interview technique in their study of care homes and this also provided more meaningful information to their study.

The customers of *the practice* were asked in their interview if they had previous experience of physiotherapy services. Many had previous experience of the NHS and compared their past experience with *the practice*. This was an interesting finding in that customers were comparing the public sector with the private sector. The sample of customers that had previous experience of physiotherapy services possessed significantly higher expectations of the service than those that did not and this was a *key finding* of the study. Grönroos (1984), Parasuraman *et al.* (1985) and Robledo (2001) stated that past experience amongst other factors, word of mouth, media and public relations formed the customers' expectations. The finding of the face to face interviews confirmed this but another *key finding* was that perceptions were also developed through experiences and not only through the eyes of the customer but also through those people that are close to the customer i.e. relatives. For the general healthcare sector, this was a *key finding* and one of which management and healthcare personnel should be made aware

Another *key finding* was the inseparability of the comments on the service quality of *the practice* and the treatment received. Vinagre and Neaves (2008) and Vandame and Leunis (1993) were of the opinion that customers/patients were unable to judge the treatment they receive, however this study has demonstrated that the customers were



unable to separate the two services. This is what Hassanien *et al.* (2010) described as the core service. This was another *key finding* for the healthcare sector and for the physiotherapy sector. Researchers should be aware of this finding when designing their research approach to service quality in the healthcare sector.

#### **6.4 Summary of Key Findings**

The findings refine and extend the literature in several areas:

- The SERVQUAL Instrument is suitable for an independent private physiotherapy practice. It can be amended slightly for the context of the study. The distribution and the time taken to complete the questionnaire requires to be taken into consideration when undertaking a study with the SERVQUAL questionnaire as was found in previous studies (Curry and Sinclair, 2002; Franceschini and Cignetti, 1998)
- It is of benefit to measure both the *expectations* and *perceptions* of the customer. It benchmarks the customers' perceptions against their expectations of the service quality of an organisation. Management are therefore able to identify the determinants that require attention in order to maintain their service quality with a positive gap or to improve the gap if a negative gap exists or could potentially exist.
- That a face to face interview sequentially following the analysis of the SERVQUAL questionnaire provides deeper and perhaps more meaningful information. This was also found in the study of Curry *et al.*, (1999). That customer stories are an important facet of any healthcare study (Lees, 2010).
- That customers' previous experience of healthcare providers (public or private) is a significant factor in forming expectations (Grönroos, 1984; Robledo, 2001) as are customers' comparisons with other healthcare providers whether in the public or private UK healthcare sector.
- That customers of private healthcare providers have high expectations (Camilleri and O'Callaghan, 1998; Irfan and Ijaz, 2011) and this was found in the current study.

- That customers also form perceptions through experiences, not only from their own experiences but also from those close to them i.e. relatives.

## 6.5 Managerial Implications

The findings provide management information that can guide practice owners how to offer excellent service quality that may differentiate them in a competitive market:

- Data and information was provided from phase one and two for all six determinants. There are recommendations in the next section for each one. In order for *the practice* to remain competitive in service quality the directors of *the practice* need to ensure that training on all determinants is communicated regularly to the staff.
- Other healthcare studies have demonstrated that assurance and empathy are key factors for customers of healthcare services. For this study, these two determinants had a less positive service quality gap than tangibles or servicescape. For *the practice* both empathy and assurance require attention before they become negative service quality gaps. The next section offers management recommendations in these areas.
- That service quality should be a key strategic objective. That service quality should be measured regularly which can then be monitored internally for improvements, areas that are working well or problems. This should be applied to any healthcare setting.
- That the measurement of service quality in the healthcare sector should be complemented with an interview in order to add depth and meaning to service quality. This will provide information for training to improve the service quality of an organisation whether in the private or the public sector.
- Since sharing the research results with the directors, they have given both the reception area and the treatment rooms a makeover; this was a direct result of the analysis and feedback provided in phase one and two respectively. In addition, the staff at *the practice* have been informed that the paperwork requires attention and that processes need to be more tightly adhered to in order to improve the service quality of *the practice* to further improve the service quality.

**6.5.1 Areas for Celebration, Areas for Concern and Areas for Training  
for *The Practice***

**Table 27: Areas to Share and Celebrate for The Practice**

The table commences with the areas with the highest gap score.

| Area           | Share and Celebrate   |
|----------------|---|
| Servicescape   | Phase one and two confirmed that the window display is excellent and to be celebrated with the team. This area has the highest gap score of <i>the practice</i> .   |
| Responsiveness | In phase one, the customers indicated that the staff are never too busy to respond to them, continue with this excellent service.   |
| Tangibles      | In phase one the customers rated the facilities as visually appealing. This is likely to be the gym area (see Appendix 14 for a picture).The gym is always neat and tidy and well equipped. Keep the gym, it may be a unique selling point. |
| Empathy        | In phase one, the customers felt that the staff gave them personal attention. This is to be encouraged.   |
| Assurance      | In phase one, the customers noted that the staff are consistently courteous with them. This is excellent service.   |
| Reliability    | In phase one, the practice was noted for always performing the service right the first time. Continue meeting the customer needs in this manner.  |

Table 27 indicates the areas with the highest mean gap score for each determinant.

These are highlights in *the practice* for service quality. The highlights should be shared with all the staff and encouraged to continue with these aspects of excellent customer service.

**Table 28: Areas for Concern for *The Practice***

The table commences with the lowest gap score for *the practice*.

| Area           | Areas of Concern  |
|----------------|---|
| Reliability    | In phase one, the customers said that the record keeping at the practice is less than what they expected. This is the lowest service quality gap for <i>the practice</i> and changes should be instigated. In phase two, it was noted that the lack of professionalism with the note taking made <i>the practice</i> look unreliable. |
| Empathy        | In phase one, the customers rated <i>the practice</i> with the second lowest mean gap score in relation to its opening hours. The Directors should investigate changing the operating hours. This was also confirmed in phase two.  |
| Tangibles      | In phase two, the customers compared the equipment in <i>the practice</i> to the equipment in other practices. The customers noted that the equipment was a bit muddled in the reception area. (see photographs in Appendix 14). The reception area requires attention.   |
| Responsiveness | In phase one, the customers rated the practice low in their perceptions where the staff were always willing to help. This was in contrast to the highest score that noted that the staff were never too busy to respond. It may mean that staff are responding quickly but not meeting the customers' needs.                          |
| Assurance      | In phase one the customers perceived that they did not always feel safe in the transactions of the practice. This was explained in phase two by one customer as the paperwork going awry. This comment links to the comments above in reliability factor. The paperwork requires attention.   |
| Servicescape   | The customers in phase one rated the cleanliness and tidiness of the treatment rooms as the lowest of the servicescape scores. This was echoed in phase two where comments were made in relation to the treatment rooms saying they were unfinished and quite small. The treatment rooms could do with a 'makeover'.                  |

Table 28 highlights the areas with the lowest mean gap scores and are therefore areas of concern. Management should be aware that these are the areas that could quickly become negative, that is, the customers may have a negative perception of the service quality in these areas.

**Table 29: Areas of Training for *The Practice***

| Area           | Staff Training Required  |
|----------------|--|
| Servicescape   | Continue to regularly change the window display.   |
| Tangibles      | Comments mentioned that the reception area could be a bit untidy. Staff should remember to regularly store away boxes and equipment in addition to tidying the reception desk of newspapers and pamphlets.                                       |
| Responsiveness | Customers mentioned that the appointment system was not meeting their needs. Staff need to enquire more as to the needs of the customer in relation to appointment times and availability of the therapists.                                     |
| Assurance      | The assurance determinant was scored as the third lowest service quality gap. The Directors should discuss with the staff what this could potentially mean. The customers want to feel assured by the staff.                                     |
| Empathy        | The empathy determinant was scored as the second lowest determinant but little was said in the interviews. The Directors should discuss with the staff about having the best interests of the customers at heart and what that means in reality. |
| Reliability    | Reliability had the lowest service quality gap score. The analysis in phase one and two suggested that customers' records require to be more accurate. All staff should undertake training in the paperwork processes.                           |

The above table should form the basis of a staff training workshop on service quality. It should also feed into the strategy for service quality for *the practice*.

## 6.6 Contribution to Theory

The amended SERVQUAL model added a sixth determinant (*servicescape*) that included the internal and external décor of *the practice*. Adding a sixth determinant did lengthen the questionnaire by a further three paired item questions, however it provided valuable information about the décor of the exterior and interior of *the practice*. It was the determinant with the most positive service quality gap that reinforced the importance of the window display. Adding to the SERVQUAL instrument provided a conceptual framework that suited the requirement of *the practice*, it was also an area that Sureshchandar *et al.* (2002) felt was missing from the SERVQUAL instrument. Adding the *servicescape* determinant added to the overall depth of the study and to the overall understanding of the service quality of *the practice*. It provided even more specific information that was validated by the richness of the information.

The face to face interviews focussed on negative perceived quality, customers' past experiences and expectations of *the practice*. The interviews did not take account of positive perceptions and this may have been an interesting comparison to the negative ones. However, the interviews provided another layer of information that contributed extremely well to the overall understanding of the service quality in *the practice*. It allowed for specific comments to complement the analysis, in particular, comments in relation to the reception area that the directors of *the practice* have direct control of and therefore direct control of improving the service quality and perception of that area.

## **6.7 Future Research**

- Adapt the SERVQUAL Instrument to the context and culture of the study.
- To sequentially follow up the SERVQUAL analysis with face to face interviews including probing questions that include all determinants to establish customers' stories and themes. The information from the face to face interviews will complement the analysis and provide valuable management information.
- If surveying the service quality and the treatment in a healthcare setting, careful thought should be given to what aspects of the treatment the researcher is questioning? This study has shown that despite separating the two constructs the customers naturally linked both the service quality of the business and the treatment provided as part of the core service.
- Particular attention should be given to empathy and assurance as both are determinants that patients value in a healthcare setting and one that is perhaps easier for them to associate with the treatment given? This could be in relation to both the questionnaire and the face to face interview. It may be that those two determinants focus on the treatment aspects of the care rather than the service quality of the organisation.
- To focus the interviews on both the negative and the positive perceptions of service quality in order to give even more cause for celebration.



## Appendix 1: Ten Dimensions of Service Quality

Source: Zeithaml *et al.*, (1990)

| Dimension and Definition  | Examples of Specific Questions raised by Customers   |
|---|--|
| <p><b>Tangibles:</b> Appearance of physical facilities, equipment, personnel and communication materials.</p> | <ul style="list-style-type: none"> <li>• Are the bank's facilities attractive?</li> <li>• Is my stockbroker dressed appropriately?</li> <li>• Is my credit card statement easy to understand?</li> <li>• Do the tools used by the repair person look modern?</li> </ul>  |
| <p><b>Reliability:</b> Ability to perform the promised service dependably and accurately.</p>                 | <ul style="list-style-type: none"> <li>• When a loan officer says she will call me back in 15 minutes, does she do so?</li> <li>• Does my stockbroker follow my exact instructions to buy or sell?</li> <li>• Is my credit card statement free of errors?</li> <li>• Is my washing machine repaired right the first time?</li> </ul>   |
| <p><b>Responsiveness:</b> Willingness to help customers and provide prompt service.</p>                       | <ul style="list-style-type: none"> <li>• When there is a problem with my bank statement, does the bank resolve the problem quickly?</li> <li>• Is my stockbroker willing to answer my questions?</li> <li>• Are charges for returned merchandise credited to my account promptly?</li> <li>• Is the repair firm willing to give me a specific time when the repair person will show up?</li> </ul>                     |
| <p><b>Competence:</b> Possession of the required skills and knowledge to perform the service.</p>             | <ul style="list-style-type: none"> <li>• Is the bank teller able to process my transactions without fumbling around?</li> <li>• Does my brokerage firm have the research capabilities to accurately track market developments?</li> <li>• When I call my credit card company, is the person at the other end able to answer my question?</li> <li>• Does the repair person appear to know what he is doing?</li> </ul> |
| <p><b>Courtesy:</b> Politeness, respect, consideration and friendliness of contact personnel.</p>             | <ul style="list-style-type: none"> <li>• Does the bank teller have a pleasant demeanour?</li> <li>• Does my broker refrain acting busy or being rude when I ask a question?</li> <li>• Are the telephone operators in the credit card company consistently polite when answering my calls?</li> <li>• Does the repair person take off his muddy shoes before stepping on my carpet?</li> </ul>                         |

|  |  |
|--|--|
| <p><b>Credibility:</b> Trustworthiness, believability, honesty of the service provider.</p>                    | <ul style="list-style-type: none"> <li>• Does the bank have a good reputation?</li> <li>• Does my broker refrain from pressurising me to buy?</li> <li>• Are the interest rates/fees charged by my credit card company consistent with the services provided?</li> <li>• Does the repair firm guarantee its services?</li> </ul>   |
| <p><b>Security:</b> Freedom from the danger, risk or doubt.</p>  | <ul style="list-style-type: none"> <li>• Is it safe to use the bank's automatic teller machines?</li> <li>• Does my brokerage firm know where my stock certificate is?</li> <li>• Is my credit card safe from unauthorised use?</li> </ul>   |
| <p><b>Access:</b> Approachability and ease of contact.</p>   | <ul style="list-style-type: none"> <li>• How easy is it for me to talk to senior bank officials when I have a problem?</li> <li>• Is it easy to get through to my broker over the telephone?</li> <li>• Does the credit card company have a 24-hour, toll-free telephone number?</li> <li>• Is the repair service facility conveniently located?</li> </ul>  |
| <p><b>Communication:</b> Keeping customers informed in language they can understand and listening to them.</p> | <ul style="list-style-type: none"> <li>• Can the loan officer explain clearly the various charges related to the mortgage loan?</li> <li>• Does my broker avoid using technical jargon?</li> <li>• When I call my credit card company, are they willing to listen to me?</li> <li>• Does the repair firm call when they are unable to keep a scheduled repair appointment?</li> </ul>  |
| <p><b>Understanding the Customer:</b> Making the effort to know the customers and their needs.</p>             | <ul style="list-style-type: none"> <li>• Does someone in my bank recognise me as a regular customer?</li> <li>• Does my broker try to determine what my specific financial objectives are?</li> <li>• Is my credit limit set by my credit card company consistent with what I can afford (i.e. neither too high nor too low)?</li> <li>• Is the repair firm willing to be flexible enough to accommodate my schedule?</li> </ul> |

## Appendix 2: SERVQUAL and its Application

| AUTHOR                           | TYPE OF INDUSTRY  | ADAPTIONS TO SERVQUAL  | SAMPLE SIZE   | VALIDITY ANALYSIS  |
|----------------------------------|---|--|---|--|
| Carman (1990)                    | Retail Industry Services (Dental, Business School Placement Centre and an Acute Care Hospital). | Minor adaptations to 22 item SERVQUAL questionnaire (adaptions, wording to suit the industry). | Sample 800 over the four industries   | Cronbach Alpha. The mean alpha was 0.75.                                       |
| Chou <i>et al.</i> , (2010)      | Airlines  | Added flight Pattern to the SERVQUAL determinants, a 28 item questionnaire.                    | Not available   | Fuzzy weighted SERVQUAL method and mean scores.                                |
| Curry and Herbert (1998)         | Public Sector- Public services  | SERVQUAL 22 item questionnaire, minor changes. Merged with another tool.                       | 40% response rate from external customers, 31% from staff and 71% from management (no record of total sample numbers) | Mean Gap Scores  |
| Donnelly <i>et al.</i> (2006)    | Public Sector – Police  | SERVQUAL 22 item questionnaire, minor wording adaptations to fit the context.                  | The Customers Viewpoint: 471 (142 respondents).<br><br>The Police Force Viewpoint: 200 (79 respondents).              | Cronbach Alpha.<br><br>Mean Gap Scores<br><br>Weightings and Ranking.          |
| Franceschini and Cignetti (1998) | Services (libraries, supermarkets and telephones)   | Importance weights given to each dimension the SERVQUAL questionnaire, 22 items.               | Sample 290-487 spread over several companies.   | Factor Analysis followed by oblique rotation.<br><br>Cronbach Alpha (0.8-0.93) |
| Gagliano (1994)                  | Retail Apparel Stores   | SERVQUAL : Adapted to: (1) Personal Attention (2) Reliability (3) and (4) Convenience          | Not available   | Factor Analysis  |

|                                      |                               |   |  |  |
|--------------------------------------|-------------------------------|---|--|--|
| Hokey and Hyesung (1997)             | Retail – Luxury Korean Hotels | 14 item questionnaire and included: Tangibles Reliability and Responsiveness.   | 180 employees of 6 luxury Korean Hotels (144 respondents). | Paired t-test<br>Wilcoxon-Mann-Whitney test  |
| Kumar <i>et al.</i> , (2009)         | Banks                         | Adapted SERVQUAL to four determinants. Called two determinants (convenience and competence). 26 item questionnaire.                                     | Sample 308 Malaysian bank customers. 289 respondents       | Mean Scores<br>Cronbach Alpha  |
| Lassar <i>et al.</i> (2000)          | Banking                       | SERVQUAL 22 item questionnaire and Technical/ Functional Quality Framework  | Sample 300. Respondents 80.                                | Cronbach Alpha (range 0.96-0.92)<br>Factor Analysis<br>Pearson correlation                           |
| Smith <i>et al.</i> (2007)           | Public Sector – Education     | SERVQUAL 22 item questionnaire with minor changes.  | 314 Student responses<br>152 Staff responses               | Factor Analysis<br>Mann-Whitney Test   |
| Pakdil and Aydin (2007)              | Airlines                      | 35 item questionnaire including SERVQUAL determinants and additional sections on Employees, Flight Patterns, Availability and Image of airline company. | 1000 (response rate 32%)                                   | Mean Scores<br>Cronbach Alpha (0.89 Percetion related items) and 0.93 for Expectation related items) |
| Sureshchandar <i>et al.</i> , (2002) | Banking                       | Added Core Service, Systemisation of Service Delivery and Social Responsibility.<br><br>Deleted two questions   | Sample 452 from 51 different banks. Respondents 277.       | Comparative Fit Index (0.929)<br>Cronbach Alpha<br>Bentler Bonett Coefficient (0.915)                |

## Appendix 3: The SERVQUAL Questionnaire (as amended)

### Customer Service Questionnaire for the Practice Customers

In recognition of the importance that *The Practice* place on Customer Service, they have agreed to take part in a research project, into their customers' expectations and perceptions of customer service, by Edinburgh Napier University. The researcher is studying for a Doctorate in Customer Service and your replies will form part of that research. No names or companies will feature in the study; it will be totally anonymous and confidential.

The questionnaire is in **two parts**. The **first section** of the questionnaire is looking at customers' expectations of **ANY physiotherapy practice** and the **second part** of the questionnaire is looking **ONLY** at customer perceptions of **THE PRACTICE**. **The questionnaire is ONLY enquiring about customer service, it is NOT asking about the physiotherapy treatment you receive or have received.**

Thank you for taking the time to complete this Customer Services Questionnaire as part of *The Practice's* ongoing commitment to Customer Service – it should take no longer than 10 minutes. Once you have completed the questionnaire, please put it in the sealed box at reception where it will be collected and analysed **ONLY** by the independent researcher.

#### **Directions:**

#### First Part of the Questionnaire – Customer Expectations on ANY Physiotherapy Practice

- Based on your experiences as a consumer of Physiotherapy services, please think about the kind of physiotherapy practice that would deliver excellent customer service.
- Think about the kind of practice with which you would be pleased to do business. Please show the extent to which you think such a physiotherapy practice would possess the feature described by each statement.
- If you feel a feature is **not at all** essential for excellent physiotherapy practices such as the one you have in mind, **circle 1 for strongly disagree**.
- If you feel a feature is **absolutely essential** for excellent physiotherapy practices **circle 7 for strongly agree**.
- If your feelings are **less strong**, **circle one of the numbers in the middle**.
- There are no right or wrong answers; all we are interested in is a number that truly reflects your feelings regarding physiotherapy practices that would deliver excellent customer service.

**First Part of the Questionnaire – Customer Expectations on ANY Physiotherapy Practice Q’s 1 - 25**

**Disagree**     $\longleftrightarrow$     **Agree**

|  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1. Excellent physiotherapy practices will have modern equipment.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. The physical facilities at excellent physiotherapy practices will be visually appealing.                                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Employees at excellent physiotherapy practices will be neat-appearing.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Materials associated with the services (such as pamphlets) will be visually appealing in an excellent physiotherapy practice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. When excellent physiotherapy practices promise to do something by a certain time, they will do so.                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. When a customer has a problem, excellent physiotherapy practices will show a sincere interest in solving it.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. Excellent physiotherapy practices will perform the service right the first time.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Excellent physiotherapy practices will provide their services at the time they promise to do so.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. Excellent physiotherapy practices will insist on accurate records.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. Employees in excellent physiotherapy practices will tell customers exactly when services will be performed.                  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. Employees in excellent physiotherapy practices will give prompt service to customers.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Employees in excellent physiotherapy practices will always be willing to help customers.                                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

The following set of statements relate to your feelings about ANY physiotherapy practice.

Disagree ←→

Agree

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 13. Employees in excellent physiotherapy practices will never be too busy to respond to customers' requests.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. The behaviour of employees in excellent physiotherapy practices will instil confidence in customers.      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. Customers of excellent physiotherapy practices will feel safe in their transactions (financial or other). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Employees in excellent physiotherapy practices will be consistently courteous with customers.             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. Employees in excellent physiotherapy practices will have the knowledge to answer customers' questions.    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. Excellent physiotherapy practices will give customers individual attention.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. Excellent physiotherapy customers will have operating hours convenient to all their customers.            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. Excellent physiotherapy practices will have employees who give customers personal attention.              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Excellent physiotherapy practices will have the customers' best interests at heart.                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. The employees of excellent physiotherapy practices will understand the specific needs of their customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. The external décor of an excellent physiotherapy practice will be neat and tidy.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. The treatment rooms of an excellent physiotherapy practice will be clean and tidy.                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. The reception area of an excellent physiotherapy practice will be clean and tidy.                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Directions:**

**Second part of the questionnaire – Customer Perceptions of THE PRACTICE**

- The following set of statements relate to your perceptions of **THE PRACTICE**.
- For each statement below, please show the extent to which you believe **THE PRACTICE** would possess the feature described by each statement.
- **By circling 1**, you are indicating that you **strongly disagree** that **THE PRACTICE** has that feature.
- **By circling 7**, you are indicating that you **strongly agree** that **THE PRACTICE** has that feature.
- If your feelings are **less strong**, **circle one of the numbers in the middle**.
- There are no right or wrong answers; all we are interested in is a number that truly reflects your perceptions regarding **THE PRACTICE**.

**Second Part of the Questionnaire – Customer Perceptions of THE PRACTICE Q’s 1-25**

The following set of statements relate to your perceptions of **THE PRACTICE**.

|  | Disagree |   | ↔ |   |   | Agree |   |
|--|----------|---|---|---|---|-------|---|
| 1. <i>The Practice</i> has modern looking equipment.   | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 2. <i>The Practice</i> physical facilities are visually appealing.                           | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 3. <i>The Practice</i> employees are neat-appearing.   | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 4. Materials associated with <i>The Practice</i> (such as pamphlets) are visually appealing. | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 5. When <i>The Practice</i> promises to do something by a certain time, it does so.          | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 6. When you have a problem, <i>The Practice</i> shows a sincere interest in solving it.      | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 7. <i>The Practice</i> performs the service right the first time.                            | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 8. <i>The Practice</i> provides its services at the time it promises to do so.               | 1        | 2 | 3 | 4 | 5 | 6     | 7 |
| 9. <i>The Practice</i> insists on accurate records.  | 1        | 2 | 3 | 4 | 5 | 6     | 7 |



The following set of statements relate to your feelings about *The Practice*.

Disagree



Agree

|  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 10. Employees in <i>The Practice</i> tell you exactly when services will be performed. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. Employees in <i>The Practice</i> give you prompt service.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Employees in <i>The Practice</i> are always willing to help you.                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. Employees in <i>The Practice</i> are never too busy to respond to your requests.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. The behaviour of employees in <i>The Practice</i> instils confidence in you.       | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. You feel safe in your transactions (financial or other) with <i>The Practice</i> . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Employees in <i>The Practice</i> are consistently courteous with you.              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. Employees in <i>The practice</i> have the knowledge to answer your questions.      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. <i>The Practice</i> gives you individual attention.                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. <i>The Practice</i> has operating hours convenient to all its customers.           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. <i>The Practice</i> has employees who give you personal attention.                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. <i>The Practice</i> has your best interests at heart.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. Employees of <i>The Practice</i> understand your specific needs.                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. <i>The Practice</i> has a neat and tidy external décor.                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. <i>The Practice</i> has clean and tidy treatment rooms.                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. <i>The Practice</i> has a clean and tidy reception area.                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

ANY OTHER COMMENTS – PLEASE WRITE IN THE BOX BELOW

ARE YOU? (please tick box):

Male  Female

AGE:

Under 21  21 -35  36- 50  51-64  65 & Over

ARE YOU?

Paying for treatment yourself  By a third party  Using Medical Insurance

DO YOU HAVE EXPERIENCE OF ANY OTHER PHYSIOTHERAPY CLINICS?

Yes  No

If Yes:

NHS  Private Hospital  Privately Owned Practice

Would you be willing to take part in further research (face to face 20 minute interview) at a location and time convenient to you?

*Those who take part in the face to face interview will be entered into a draw for a £50 Marks and Spencer's Voucher.*

Yes  No

If Yes, please provide a contact email address \_\_\_\_\_ or telephone number \_\_\_\_\_

All details will remain confidential and you will be contacted by an independent researcher who will not identify you in any survey results.

Thank you for your participation in this survey.

#### **Appendix 4: Memo to The Therapists of *The Practice***

Dear All

I am emailing to let you know that we have agreed to take part in some research into our customer service at *The Practice* in conjunction with Edinburgh Napier University.

Audrey Gow is the researcher (and some of you already know her). Audrey is studying for a Doctorate in Customer Services and has our permission to conduct her study on *The Practice*.

A pilot study of 30 existing customers will first be undertaken after which, the full study will take place on all existing customers (not customers who are coming to *The Practice* for the first time) over the summer months.

Attached is a copy of the questionnaire. The questionnaire is being handed out at reception and collated and analysed by Audrey only. The results will be totally anonymous and confidential.

We are confident that the results will be excellent!

Kind regards

Directors

***THE PRACTICE***

## Appendix 5: Memo Regarding the Pilot Questionnaire

### Customer Service Pilot Questionnaire

To: Reception

From: Audrey

Dear Reception,

I hope that you are both well?

The Directors of *The Practice* have agreed to take part in some research into their customer service.

The first part of the study is the Pilot Study and I am looking for 30 questionnaires to be completed by customers at *The Practice*.

The customers should **NOT** be customers who are coming into *the practice* for the very **first time** but **customers** who have been to *the practice* **more than once**.

Please ask the customer if they could take part in a customer services questionnaire. You might like to say something like below:

*“Excuse me, I wonder whilst you are waiting for your appointment might we take 10 minutes of your time by asking you to complete our customer services questionnaire. [then hand the customer the questionnaire with a pen and then say]. Once you have completed the questionnaire, please can you put it in the sealed box on the table where it will be collected by the researcher”*

If you have any questions or queries that you need to ask me, please do not hesitate to contact me and I will get straight back to you. THANK YOU both.

Best wishes

Audrey

## **Appendix 6: Outline of the Semi-Structured Face to Face Interview**

### **Note for researcher:**

- **Ask candidates to complete read ethics guidelines and sign the agreement form.**
- **Tell candidates that the interview will be recorded and gain their agreement**
- **Tell candidates how long the interview will take**
- **Remind candidates that the research is only concerned with the service quality of the practice and not the service quality of the treatment**
- **Remind candidates of confidentiality and anonymity**

*Question One:* Have you any previous experience of physiotherapy services?

*Question Two:* Can you explain to me why you scored this question with a more negative score than this question (the candidate was shown their original completed questionnaire and they were referred to their questions where the perception score was lower than their expectation score).

- **Thank the candidate for coming to the interview and for their time.**
- **Ask them if they have any further questions.**

## Appendix 7: The Ethical Guidelines



My name is Audrey Gow and I am a research student from the School of Edinburgh Napier University. As part of my programme research, I am undertaking a research project for my dissertation. The title of my project is: An Investigation into customer service in the private physiotherapy sector.

All data will be anonymised as much as possible, but you may be identifiable from tape recordings of your voice. Your name will be replaced with a participant number or a pseudonym, and it will not be possible for you to be identified in any reporting of the data gathered. All findings will be reported in a generalised form. All data collected will be kept in a secure place to which I only have access. These will be kept until the end of the examination process, following which all data that could identify you could be destroyed. The researcher is not aware of any risks associated with this research.

The results may be published in a journal or presented at a conference.

If you would like to contact an independent person, who knows about this project but is not involved in it, you are welcome to contact Professor Anne Munro at Edinburgh University at [A.Munro@napier.ac.uk](mailto:A.Munro@napier.ac.uk).

If you have read and understood this information sheet, and you would like to be a participant in the study, please now read and sign the consent form below.

-----

I have read and understood the information sheet and this consent form. I have had an opportunity to ask questions about my participation. I understand that I am under no obligation to take part and that I have the right to withdraw at any stage without giving any reason.

Name of  
Participant.....  
.....

Signature of  
Participant.....  
.....

Signature of  
Researcher.....Date.....  
.....

### Appendix 8: Reliability Data and Overall Mean Gap Scores

| Determinant    | Overall Mean Gap Score | Perception Mean Gap Score | Expectation Mean Gap Score |
|----------------|------------------------|---------------------------|----------------------------|
| Servicescape   | 0.55                   | 6.47                      | 5.92                       |
| Tangibles      | 0.44                   | 5.99                      | 5.55                       |
| Responsiveness | 0.32                   | 6.45                      | 6.29                       |
| Assurance      | 0.32                   | 6.69                      | 6.37                       |
| Empathy        | 0.25                   | 6.57                      | 6.32                       |
| Reliability    | 0.03                   | 6.40                      | 6.37                       |

#### Reliability – N = 62

The table below outlines the actual difference between each paired question for the sample for the Reliability determinant. It also shows the mean Gap Score for each question.

| Q31- Q 5 Difference | Q32- Q6 Difference | Q33- Q7 Difference | Q34- Q8 Difference | Q35- Q9 Difference | Mean Gap Score |
|---------------------|--------------------|--------------------|--------------------|--------------------|----------------|
| 0                   | 0                  | 1                  | 0                  | 0                  | 0.25           |
| 1                   | 1                  | 2                  | 1                  | 1                  | 1.25           |
| 1                   | -1                 | 2                  | 3                  | 0                  | 1.25           |
| 0                   | 1                  | 0                  | 0                  | 0                  | 0.25           |
| -1                  | 0                  | 0                  | 0                  | 0                  | -0.25          |
| 1                   | 0                  | 0                  | 1                  | 0                  | 0.5            |
| 2                   | 1                  | 1                  | 1                  | 0                  | 1.25           |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 0                   | 1                  | 1                  | 1                  | 0                  | 0.75           |
| 0                   | 0                  | 1                  | 0                  | -1                 | 0.25           |
| 0                   | 0                  | 1                  | 2                  | -1                 | 0.75           |
| 2                   | -1                 | 0                  | 2                  | 0                  | 0.75           |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 0                   | 1                  | -1                 | -1                 | 0                  | -0.25          |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| 1                   | 1                  | 0                  | 1                  | 1                  | 0.75           |
| -1                  | -1                 | 0                  | 0                  | 0                  | -0.5           |
| -1                  | 0                  | 0                  | 0                  | 0                  | -0.25          |
| 0                   | 0                  | 2                  | 0                  | 0                  | 0.5            |
| 0                   | 0                  | 0                  | 0                  | 0                  | 0              |
| -2                  | 0                  | 1                  | 1                  | -1                 | 0              |
| 1                   | 0                  | 1                  | 1                  | 0                  | 0.75           |

|    |    |    |    |    |       |
|----|----|----|----|----|-------|
| 1  | 1  | 0  | 0  | -1 | 0.5   |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 0  | -1 | -1 | -1 | -1 | -0.75 |
| -1 | -1 | 3  | -1 | -2 | 0     |
| 0  | 0  | 2  | 0  | -2 | 0.5   |
| -1 | 0  | 0  | 0  | 0  | -0.25 |
| 0  | 0  | 0  | 0  | -1 | 0     |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 2  | 0  | 0  | 0.5   |
| 0  | 0  | 0  | 0  | 0  | 0     |
| -1 | 0  | 1  | 1  | -2 | 0.25  |
| -1 | 0  | 0  | 0  | 0  | -0.25 |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 1  | -1 | -3 | 0     |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 1  | 1  | 1  | 0.5   |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 1  | 0  | 0  | 0  | -2 | 0.25  |
| 0  | -1 | 3  | 0  | 0  | 0.5   |
| 0  | -1 | 1  | -1 | -1 | -0.25 |
| 0  | 0  | 1  | 0  | 0  | 0.25  |
| 0  | 0  | -1 | 0  | 0  | -0.25 |
| 1  | 1  | 1  | 0  | 0  | 0.75  |
| 0  | 0  | 0  | 1  | 0  | 0.25  |
| 0  | 0  | 0  | 0  | -2 | 0     |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 1  | 1  | 1  | 1  | 0  | 1     |
| -1 | -1 | 1  | 1  | -1 | 0     |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 1  | 1  | 1  | 0  | 1  | 0.75  |
| 0  | 0  | 1  | 0  | 0  | 0.25  |
| -2 | 0  | 1  | -2 | -2 | -0.75 |
| -2 | -1 | 0  | -4 | -2 | -1.75 |
| -1 | -1 | -1 | 0  | -1 | -0.75 |
| -2 | -1 | -1 | -1 | -2 | -1.25 |
| 0  | 0  | 0  | 0  | 0  | 0     |
| 1  | 0  | 0  | 1  | -1 | 0.5   |

|       | P        | P        | P        | P        | P        | E        | E        | E        | E        | E        |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Total | 394      | 408      | 397      | 400      | 385      | 396      | 409      | 368      | 393      | 410      |
| Mean  | 6.35     | 6.58     | 6.4      | 6.45     | 6.21     | 6.39     | 6.6      | 5.94     | 6.32     | 6.61     |
| STDev | 0.748699 | 0.559519 | 0.756603 | 0.761306 | 0.870973 | 0.836755 | 0.664305 | 1.171673 | 0.901259 | 0.661713 |



**Appendix 9: Empathy Data**  
**Empathy – N = 62**

The table below outlines the actual difference between each paired question for the sample for the Empathy determinant. It also shows the mean difference for each question.

**EMPATHY N=62**

| <b>Q43-<br/>Q18<br/>Difference</b> | <b>Q44-<br/>Q19<br/>Difference</b> | <b>Q45-<br/>Q20<br/>Difference</b> | <b>Q46-<br/>Q21<br/>Difference</b> | <b>Q47-<br/>Q22<br/>Difference</b> | <b>Mean<br/>Difference</b> |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------|
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 1                                  | 1                                  | 1                                  | 1                                  | 1                                  | 1                          |
| 1                                  | 0                                  | 1                                  | 1                                  | 1                                  | 0.8                        |
| 0                                  | 0                                  | 0                                  | 1                                  | 2                                  | 0.6                        |
| 1                                  | 1                                  | 1                                  | 1                                  | 0                                  | 0.8                        |
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 0                                  | 0                                  | 0                                  | -1                                 | 1                                  | 0                          |
| 0                                  | -1                                 | 0                                  | 0                                  | 0                                  | -0.2                       |
| 0                                  | 0                                  | 1                                  | 0                                  | 0                                  | 0.2                        |
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 0                                  | -1                                 | 1                                  | 0                                  | 2                                  | 0.4                        |
| 1                                  | 1                                  | 1                                  | 0                                  | 1                                  | 0.8                        |
| 0                                  | 0                                  | 1                                  | 0                                  | 0                                  | 0.2                        |
| 0                                  | -1                                 | 0                                  | 0                                  | 1                                  | 0                          |
| 2                                  | 5                                  | 2                                  | 0                                  | 0                                  | 1.8                        |
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 0                                  | 0                                  | 0                                  | -1                                 | -1                                 | -0.4                       |
| 0                                  | 0                                  | 1                                  | 1                                  | 0                                  | 0.4                        |
| 1                                  | 1                                  | 1                                  | 1                                  | 1                                  | 1                          |
| 1                                  | 1                                  | 1                                  | 1                                  | 1                                  | 1                          |
| 0                                  | 0                                  | 1                                  | 1                                  | -1                                 | 0.2                        |
| 1                                  | 1                                  | 2                                  | 1                                  | 1                                  | 1.2                        |
| 0                                  | 2                                  | 0                                  | 0                                  | 0                                  | 0.4                        |
| 0                                  | 1                                  | 1                                  | 1                                  | 1                                  | 0.8                        |
| 1                                  | 0                                  | 1                                  | 0                                  | 0                                  | 0.4                        |
| 0                                  | 1                                  | 0                                  | 0                                  | 0                                  | 0.2                        |
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 0                                  | 0                                  | 1                                  | 1                                  | 1                                  | 0.6                        |
| -1                                 | -1                                 | -1                                 | -2                                 | -1                                 | -1.2                       |
| 0                                  | 0                                  | 0                                  | 0                                  | 0                                  | 0                          |
| 1                                  | 0                                  | 1                                  | 0                                  | 0                                  | 0.4                        |

|    |    |    |    |    |      |
|----|----|----|----|----|------|
| 0  | 0  | 0  | -1 | -1 | -0.4 |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 1  | 2  | 1  | 2  | 1  | 1.4  |
| 1  | 0  | 0  | 1  | 1  | 0.6  |
| 0  | -2 | 1  | -1 | 1  | -0.2 |
| 1  | 0  | 3  | -3 | 3  | 0.8  |
| 0  | 2  | 0  | 0  | 0  | 0.4  |
| 0  | -2 | 0  | 0  | 1  | -0.2 |
| 0  | 0  | 1  | 1  | 1  | 0.6  |
| 0  | 1  | 0  | 0  | 0  | 0.2  |
| 1  | -3 | 0  | 0  | 0  | -0.4 |
| 2  | 2  | 2  | 0  | 1  | 1.4  |
| 0  | -1 | 0  | 0  | 0  | -0.2 |
| 0  | 0  | 1  | 0  | 0  | 0.2  |
| 2  | 0  | 1  | 0  | 1  | 0.8  |
| 1  | -1 | 1  | 0  | 0  | 0.2  |
| 0  | 0  | 1  | 1  | 0  | 0.4  |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 0  | 0  | 1  | 0  | -1 | 0    |
| 0  | 1  | 0  | 0  | 0  | 0.2  |
| 2  | 3  | 2  | 2  | 2  | 2.2  |
| 0  | 1  | 0  | 0  | 1  | 0.4  |
| 0  | -2 | 0  | -1 | 0  | -0.6 |
| 0  | -5 | 0  | 0  | 0  | -1   |
| 0  | 0  | 0  | -1 | -1 | -0.4 |
| -2 | -3 | -2 | -3 | -2 | -2.4 |
| 0  | 0  | 0  | 0  | 0  | 0    |
| 0  | 0  | 0  | 0  | 0  | 0    |

|       |          | P        | P        | P        | P        |
|-------|----------|----------|----------|----------|----------|
| Total | 414      | 387      | 415      | 404      | 416      |
| Mean  | 6.68     | 6.24     | 6.69     | 6.52     | 6.71     |
| STDev | 0.566097 | 1.050924 | 0.560699 | 0.783894 | 0.554774 |

|       | E        | E       | E        | E        | E           |
|-------|----------|---------|----------|----------|-------------|
| Total | 395      | 383     | 384      | 400      | 397         |
| Mean  | 6.37     | 6.18    | 6.19     | 6.45     | 6.4         |
| STDev | 0.706733 | 1.03265 | 0.806504 | 0.716948 | 0.777968717 |

**Appendix 10: Tangibles Data**  
**Tangibles – N = 62**

The table below outlines the actual difference between each paired question for the sample for the Tangibles determinant. It also shows the mean Gap Score for each question.

| <b>Q26-Q1<br/>Difference</b> | <b>Q27- Q2<br/>Difference</b> | <b>Q28- Q3<br/>Difference</b> | <b>Q29- Q4<br/>Difference</b> | <b>Mean<br/>Gap<br/>Score</b> |
|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 0                            | 0                             | 0                             | 0                             | 0                             |
| 2                            | 2                             | 2                             | 1                             | 1.75                          |
| 0                            | 0                             | 0                             | 0                             | 0                             |
| 0                            | 0                             | 0                             | 0                             | 0                             |
| 1                            | 1                             | 1                             | 1                             | 1                             |
| 0                            | 1                             | 1                             | 1                             | 0.75                          |
| -2                           | 1                             | 1                             | 0                             | 0                             |
| 0                            | 1                             | 1                             | 0                             | 0.5                           |
| 1                            | 2                             | 1                             | 0                             | 1                             |
| 2                            | 2                             | 2                             | 2                             | 2                             |
| -2                           | -2                            | 0                             | 0                             | -1                            |
| -1                           | 2                             | 1                             | 2                             | 1                             |
| 0                            | 0                             | -1                            | -1                            | -0.5                          |
| 1                            | 2                             | 1                             | 1                             | 1.25                          |
| -1                           | -1                            | 2                             | -1                            | -0.25                         |
| 0                            | 0                             | 0                             | -3                            | -0.75                         |
| 1                            | 1                             | 1                             | 2                             | 1.25                          |
| 1                            | 1                             | 0                             | 0                             | 0.5                           |
| 0                            | 0                             | -1                            | 0                             | -0.25                         |
| -1                           | 0                             | 0                             | -2                            | -0.75                         |
| -1                           | -1                            | 0                             | 0                             | -0.5                          |
| 0                            | 0                             | 0                             | 0                             | 0                             |
| 0                            | 3                             | 2                             | 1                             | 1.5                           |
| 1                            | 0                             | 1                             | 0                             | 0.5                           |
| 0                            | 0                             | 1                             | -2                            | -0.25                         |
| 1                            | 0                             | 1                             | 2                             | 1                             |
| -2                           | 0                             | 0                             | 0                             | -0.5                          |
| 1                            | 1                             | 0                             | 1                             | 0.75                          |
| 2                            | 1                             | -1                            | 4                             | 1.5                           |
| 0                            | 0                             | 0                             | 1                             | 0.25                          |
| -2                           | 1                             | 1                             | 1                             | 0.25                          |
| -1                           | -1                            | 0                             | -1                            | -0.75                         |
| 0                            | 0                             | 0                             | 0                             | 0                             |

|    |    |    |    |       |
|----|----|----|----|-------|
| 3  | 3  | 1  | 3  | 2.5   |
| 2  | 1  | 1  | 0  | 1     |
| 1  | 1  | 1  | -1 | 0.5   |
| 1  | 1  | 0  | 2  | 1     |
| 1  | 1  | 0  | -1 | 0.25  |
| -1 | 1  | 0  | 1  | 0.25  |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 1  | 0  | 0.25  |
| -1 | 0  | 1  | 0  | 0     |
| 0  | 3  | 1  | 1  | 1.25  |
| 3  | 4  | 1  | 2  | 2.5   |
| 1  | 2  | 3  | 1  | 1.75  |
| 0  | 0  | 1  | 0  | 0.25  |
| 1  | 1  | 0  | 0  | 0.5   |
| 1  | 0  | 2  | 1  | 1     |
| -1 | 0  | -2 | -1 | -1    |
| -2 | 0  | 1  | 0  | -0.25 |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 3  | 2  | 1.25  |
| -2 | 2  | 1  | 3  | 1     |
| 0  | 3  | 2  | -1 | 1     |
| 1  | 1  | 2  | 1  | 1.25  |
| 1  | 2  | 2  | 2  | 1.75  |
| 1  | 1  | 0  | 1  | 0.75  |
| -3 | -2 | 1  | -1 | -1.25 |
| -1 | 0  | -1 | 0  | -0.5  |
| -2 | -3 | -2 | 0  | -1.75 |
| 0  | 0  | 0  | -2 | -0.5  |
| 0  | 1  | 1  | 1  | 0.75  |

|       |          |          |          |         |          |          |          |          |
|-------|----------|----------|----------|---------|----------|----------|----------|----------|
|       | P        | P        | P        | P       | E        | E        | E        | E        |
| Total | 368      | 368      | 395      | 354     | 363      | 328      | 357      | 330      |
| Mean  | 5.94     | 5.95     | 6.37     | 5.71    | 5.85     | 5.29     | 5.76     | 5.32     |
| STDev | 0.884678 | 0.920993 | 0.751695 | 0.85674 | 1.239338 | 1.246465 | 0.917686 | 1.211613 |

**Appendix 11: The Responsiveness Data**  
**Responsiveness – N = 62**

The table below outlines the actual difference between each paired question for the sample for the Responsiveness determinant. It also shows the mean Gap Score for each question.

| <b>Q35- Q10<br/>Difference</b> | <b>Q36- Q11<br/>Difference</b> | <b>Q37- Q12<br/>Difference</b> | <b>Q38- Q13<br/>Difference</b> | <b>Mean<br/>Gap<br/>Score</b> |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 1                              | 1                              | 1                              | 1                              | 1                             |
| 0                              | 0                              | -1                             | 0                              | -0.25                         |
| 0                              | 0                              | 0                              | 3                              | 0.75                          |
| 0                              | 0                              | 1                              | 0                              | 0.25                          |
| 1                              | 0                              | 0                              | 0                              | 0.25                          |
| 1                              | 0                              | 0                              | 1                              | 0.5                           |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 0                              | 0                              | 0                              | 2                              | 0.5                           |
| 0                              | 0                              | 0                              | 1                              | 0.25                          |
| 2                              | 1                              | 0                              | 1                              | 1                             |
| 0                              | 0                              | 0                              | 1                              | 0.25                          |
| -1                             | 0                              | 1                              | 1                              | 0.25                          |
| 1                              | 0                              | 0                              | 3                              | 1                             |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 0                              | 0                              | 0                              | 1                              | 0.25                          |
| 1                              | 1                              | 0                              | 2                              | 1                             |
| 0                              | -1                             | 0                              | 0                              | -0.25                         |
| 0                              | 0                              | 0                              | 1                              | 0.25                          |
| 0                              | 0                              | 0                              | 1                              | 0.25                          |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 1                              | 0                              | 0                              | 1                              | 0.5                           |
| 0                              | 1                              | 1                              | 2                              | 1                             |
| 2                              | 2                              | 2                              | 3                              | 2.25                          |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| -1                             | 0                              | -1                             | 0                              | -0.5                          |
| 0                              | 0                              | 0                              | 0                              | 0                             |
| -1                             | 0                              | 0                              | 0                              | -0.25                         |
| -1                             | 0                              | 0                              | 0                              | -0.25                         |

|    |    |    |    |       |
|----|----|----|----|-------|
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 0  | 0     |
| 2  | 1  | 0  | 4  | 1.75  |
| 1  | 0  | 0  | 0  | 0.25  |
| 0  | 0  | 0  | 1  | 0.25  |
| 2  | 1  | 1  | 3  | 1.75  |
| 0  | 0  | 0  | 0  | 0     |
| 1  | 1  | 0  | 0  | 0.5   |
| 0  | -1 | -1 | 0  | -0.5  |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 1  | 2  | 3  | 1.5   |
| 0  | 0  | 0  | 1  | 0.25  |
| 0  | 0  | 0  | 1  | 0.25  |
| 0  | 0  | 0  | 1  | 0.25  |
| 0  | 1  | 1  | 1  | 0.75  |
| 0  | 0  | 0  | 1  | 0.25  |
| -1 | 1  | 1  | 2  | 0.75  |
| 0  | 0  | 0  | 0  | 0     |
| 1  | 1  | 0  | 0  | 0.5   |
| 0  | 2  | -1 | 2  | 0.75  |
| 0  | 0  | 0  | 2  | 0.5   |
| 0  | 1  | 1  | 3  | 1.25  |
| 1  | 1  | 0  | 1  | 0.75  |
| -1 | -2 | -1 | 1  | -0.75 |
| -1 | -2 | 0  | 0  | -0.75 |
| 0  | 0  | 0  | 0  | 0     |
| -2 | -2 | -1 | -1 | -1.5  |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 1  | 1  | 1  | 0.75  |

|       | P        | P        | P        | P        | E        | E       | E        | E        |
|-------|----------|----------|----------|----------|----------|---------|----------|----------|
| Total | 404      | 400      | 411      | 401      | 395      | 390     | 404      | 349      |
| Mean  | 6.52     | 6.45     | 6.63     | 6.47     | 6.37     | 6.29    | 6.52     | 5.63     |
| STDev | 0.671234 | 0.823376 | 0.606897 | 0.740353 | 0.834382 | 0.85674 | 0.718421 | 1.345714 |

**Appendix 12: Assurance Data**

**Assurance – N = 62**

The table below outlines the actual difference between each paired question for the sample for the Assurance determinant. It also shows the mean Gap Score for each question.

| <b>Q39-<br/>Q14<br/>Difference</b> | <b>Q40-Q15<br/>Difference</b> | <b>Q41-<br/>Q16<br/>Difference</b> | <b>Q42-<br/>Q17<br/>Difference</b> | <b>Mean<br/>Gap<br/>Score</b> |
|------------------------------------|-------------------------------|------------------------------------|------------------------------------|-------------------------------|
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 1                                  | 1                             | 1                                  | 1                                  | 1                             |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 2                                  | 0                             | 2                                  | 1                                  | 1.25                          |
| 0                                  | -1                            | 1                                  | 2                                  | 0.5                           |
| 0                                  | 0                             | 1                                  | 0                                  | 0.25                          |
| 1                                  | 0                             | 0                                  | 0                                  | 0.25                          |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 1                             | 0                                  | 0                                  | 0.25                          |
| 1                                  | 0                             | 0                                  | 1                                  | 0.5                           |
| 0                                  | 0                             | 0                                  | 1                                  | 0.25                          |
| 0                                  | -1                            | -1                                 | 1                                  | -0.25                         |
| 1                                  | 1                             | 0                                  | 1                                  | 0.75                          |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 1                                  | 0                             | 0                                  | 0                                  | 0.25                          |
| 1                                  | 1                             | 0                                  | 1                                  | 0.75                          |
| 1                                  | 2                             | 1                                  | 1                                  | 1.25                          |
| 0                                  | 0                             | 0                                  | 1                                  | 0.25                          |
| 0                                  | 0                             | 1                                  | 0                                  | 0.25                          |
| 1                                  | 2                             | 1                                  | 1                                  | 1.25                          |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 0                             | 1                                  | 1                                  | 0.5                           |
| 0                                  | 0                             | 1                                  | 1                                  | 0.5                           |
| 2                                  | 0                             | 1                                  | 1                                  | 1                             |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| -1                                 | -1                            | 1                                  | 1                                  | 0                             |
| -1                                 | -1                            | -1                                 | -1                                 | -1                            |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 0                             | 1                                  | 0                                  | 0.25                          |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |
| 0                                  | 0                             | 0                                  | 0                                  | 0                             |

|    |    |    |    |       |
|----|----|----|----|-------|
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 0  | 0     |
| 1  | 0  | 0  | 2  | 0.75  |
| 1  | 1  | 1  | 1  | 1     |
| 0  | 1  | 0  | 1  | 0.5   |
| 3  | 1  | 2  | 1  | 1.75  |
| 0  | 0  | 0  | 0  | 0     |
| 1  | 1  | 1  | 0  | 0.75  |
| 0  | 1  | 0  | 0  | 0.25  |
| -1 | -1 | 0  | 0  | -0.5  |
| 1  | 2  | 2  | 2  | 1.75  |
| 0  | 0  | 1  | 1  | 0.5   |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 1  | 2  | 1  | 1     |
| 0  | 0  | -1 | 0  | -0.25 |
| 0  | 1  | 2  | -1 | 0.5   |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 2  | 0  | 0.5   |
| 0  | 0  | 0  | 0  | 0     |
| 1  | 2  | 3  | 1  | 1.75  |
| 0  | 0  | 1  | 1  | 0.5   |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 1  | 0.25  |
| -1 | -1 | 1  | 1  | 0     |
| -2 | -4 | 1  | -2 | -1.75 |
| 0  | 0  | 0  | 0  | 0     |
| 0  | 0  | 0  | 1  | 0.25  |

|       | P       | P        | P        | P        | E        | E        | E        | E       |
|-------|---------|----------|----------|----------|----------|----------|----------|---------|
| Total | 414     | 411      | 420      | 414      | 400      | 402      | 391      | 388     |
| Mean  | 6.68    | 6.63     | 6.77     | 6.68     | 6.45     | 6.48     | 6.31     | 6.26    |
| STDev | 0.59435 | 0.706733 | 0.493211 | 0.719157 | 0.782544 | 0.718421 | 0.841324 | 0.86717 |



**Appendix 13: Servicescape Data**

**Servicescape N=62**

The table below outlines the actual difference between each paired question for the sample for the Servicescape determinant. It also shows the mean Gap Score for each question.

| <b>Q48-Q23<br/>Difference</b> | <b>Q49-Q24<br/>Difference</b> | <b>Q50-Q25<br/>Difference</b> | <b>Mean<br/>Gap<br/>Score</b> |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 0                             | 0                             | 0                             | 0.00                          |
| 1                             | 0                             | 0                             | 0.33                          |
| 1                             | 1                             | 1                             | 1.00                          |
| 1                             | 0                             | 0                             | 0.33                          |
| 1                             | 1                             | 2                             | 1.33                          |
| 1                             | 0                             | -1                            | 0.00                          |
| 1                             | 1                             | 3                             | 1.67                          |
| 1                             | 0                             | 1                             | 0.67                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 2                             | 0                             | 2                             | 1.33                          |
| -1                            | -1                            | -1                            | -1.00                         |
| -1                            | 0                             | -1                            | -0.67                         |
| 0                             | 1                             | 0                             | 0.33                          |
| -1                            | 0                             | 0                             | -0.33                         |
| 3                             | 2                             | 2                             | 2.33                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 1                             | 1                             | 1                             | 1.00                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 0                             | 0                             | 0                             | 0.00                          |
| 2                             | 0                             | 2                             | 1.33                          |
| 3                             | 0                             | 1                             | 1.33                          |
| 1                             | 0                             | 1                             | 0.67                          |
| 1                             | 0                             | 0                             | 0.33                          |
| 1                             | 1                             | -1                            | 0.33                          |
| 0                             | -1                            | 0                             | -0.33                         |
| 0                             | 0                             | 1                             | 0.33                          |
| 2                             | -1                            | 0                             | 0.33                          |
| -3                            | -1                            | -2                            | -2.00                         |
| 2                             | 2                             | 2                             | 2.00                          |
| 2                             | 0                             | 0                             | 0.67                          |

|    |    |    |       |
|----|----|----|-------|
| 0  | 0  | 0  | 0.00  |
| 2  | 0  | 0  | 0.67  |
| 0  | 0  | 0  | 0.00  |
| 3  | 1  | 2  | 2.00  |
| 2  | 1  | 1  | 1.33  |
| 1  | 0  | 1  | 0.67  |
| 3  | 2  | 2  | 2.33  |
| 2  | 0  | 1  | 1.00  |
| 1  | 1  | 1  | 1.00  |
| 1  | 0  | 1  | 0.67  |
| 2  | 2  | 2  | 2.00  |
| 1  | 0  | 3  | 1.33  |
| 1  | 1  | 1  | 1.00  |
| 1  | 0  | 0  | 0.33  |
| 1  | 1  | 1  | 1.00  |
| 0  | 1  | 1  | 0.67  |
| 0  | 0  | 0  | 0.00  |
| 2  | 1  | 2  | 1.67  |
| 0  | 0  | 0  | 0.00  |
| 1  | 1  | 1  | 1.00  |
| 0  | -1 | 0  | -0.33 |
| 2  | 0  | 0  | 0.67  |
| 3  | 3  | 3  | 3.00  |
| 2  | 1  | 1  | 1.33  |
| 0  | -2 | -2 | -1.33 |
| 0  | 0  | 0  | 0.00  |
| 0  | 0  | 0  | 0.00  |
| -1 | -2 | -2 | -1.67 |
| 0  | 0  | 0  | 0.00  |
| 1  | 0  | 0  | 0.33  |

|       | P       | P        | P        | E        | E        | E        |
|-------|---------|----------|----------|----------|----------|----------|
| Total | 397     | 406      | 400      | 345      | 389      | 367      |
| Mean  | 6.4     | 6.55     | 6.45     | 5.56     | 6.27     | 5.92     |
| STDev | 0.68854 | 0.618762 | 0.782544 | 0.951633 | 0.771827 | 0.874003 |

**Appendix 14: Pictures of *The Practice***

Pictures of the Window Display





Pictures of the Gym and the Reception Area



## Appendix 15: Phase Two-Negative Gap Scores

### Reliability

#### Customer Respondent - Candidate D

| Perception Question  | (P) Score | Expectation Question  | (E) Score | Gap Score |
|--|-----------|---|-----------|-----------|
| Q5. When <i>the practice</i> promises to do something by a certain time it does. | 6         | Q5. When excellent physiotherapy practices promise to do something they will do so. | 7         | 6-7=-1    |

#### Customer Respondent - Candidate KK

| Perception Question  | Score | Expectation Question  | Score | Gap Score |
|--|-------|---|-------|-----------|
| Q5. When <i>the practice</i> promises to do something by a certain time it does. | 6     | Q5. When excellent physiotherapy practices promise to do something they will do so. | 7     | 5-7 -1    |

#### Customer Respondent – Candidate C

| Perception Question  | Score | Expectation Question  | Score | Gap Score |
|--|-------|---|-------|-----------|
| Q6. When you have a problem, <i>the practice</i> shows a sincere interest in solving it. | 6     | Q6. Excellent physiotherapy practices show a sincere interest in solving your problems. | 7     | 6-7= -1   |

#### Customer Respondent- Candidate SS

| Perception Question  | Score | Expectation Question  | Score | Gap Score |
|--|-------|---|-------|-----------|
| Q6. When you have a problem, <i>the practice</i> shows a sincere interest in solving it. | 6     | Q6. Excellent physiotherapy practices show a sincere interest in solving your problems. | 7     | 6-7= -1   |

**Appendix 15 Continued**

**Customer Respondent- Candidate DD**

| <b>Perception Question</b>                           | <b>Score</b> | <b>Expectation Question</b>                                       | <b>Score</b> | <b>Gap Score</b> |
|--|--------------|---|--------------|------------------|
| Q9. <i>The practice</i> insists on accurate records. | 5            | Q9. Excellent physiotherapy practices insist on accurate records. | 7            | 5-7=-2           |

**Customer Respondent- Candidate RR**

| <b>Perception Question</b>                           | <b>Score</b> | <b>Expectation Question</b>                                       | <b>Score</b> | <b>Gap Score</b> |
|--|--------------|---|--------------|------------------|
| Q9. <i>The practice</i> insists on accurate records. | 5            | Q9. Excellent physiotherapy practices insist on accurate records. | 7            | 5-7 = -2         |

**Customer Respondent- Candidate KK**

| <b>Perception Question</b>                           | <b>Score</b> | <b>Expectation Question</b>                                       | <b>Score</b> | <b>Gap Score</b> |
|--|--------------|---|--------------|------------------|
| Q9. <i>The practice</i> insists on accurate records. | 5            | Q9. Excellent physiotherapy practices insist on accurate records. | 7            | 5-7 = -2         |

**EMPATHY**

**Customer Respondent - Candidate PP**

| <b>Perception Question</b>   | <b>Score</b> | <b>Expectation Question</b>  | <b>Score</b> | <b>Gap Score</b> |
|--|--------------|--|--------------|------------------|
| Q19. <i>The practice</i> has operating hours that are convenient to its customers? | 5            | Q19. Excellent physiotherapy practices have operating hours convenient to its customers? | 7            | 7-5 = -2         |

## Appendix 15 Continued

### Responsiveness

#### Customer Respondent – Candidate QQ

| Perception Question  | Score | Expectation Question   | Score | Gap Score |
|--|-------|--|-------|-----------|
| Q11. Employees in <i>the practice</i> give you prompt service. | 6     | Q11. Employees in excellent physiotherapy practices give you prompt service. | 7     | 6-7 = -1  |

#### Customer Respondent - Candidate C

| Perception Question   | Score | Expectation Question  | Score | Gap Score |
|---|-------|---|-------|-----------|
| Q12. Employees in <i>the practice</i> are always willing to help you. | 6     | Q12. Employees in excellent physiotherapy practices are always willing to help you. | 7     | 6-7 = -1  |

#### Customer respondent - Candidate QQ

| Perception Question   | Score | Expectation Question  | Score | Gap Score |
|---|-------|---|-------|-----------|
| Q12. Employees in <i>the practice</i> are always willing to help you. | 6     | Q12. Employees in excellent physiotherapy practices are always willing to help you. | 7     | 6-7 = -1  |



## Appendix 15 Continued

### ASSURANCE

#### Customer Respondent - Candidate RR

| Perception Question   | Score | Expectation Question  | Score | Gap Score |
|---|-------|---|-------|-----------|
| Q14. The behaviour of employees at <i>the practice</i> instils confidence in you. | 6     | Q14. The behaviour of employees at excellent physiotherapy practices instils confidence in you. | 7     | 6-7=-1    |

#### Customer Respondent - Candidate E

| Perception Question  | Score | Expectation Question  | Score | Gap Score |
|--|-------|---|-------|-----------|
| Q15. You feel safe in your transactions at <i>the practice</i> . | 6     | Q15. You feel safe in your transactions at excellent physiotherapy practices. | 7     | 6-7 = -1  |

#### Customer Respondent - Candidate RR

| Perception Question  | Score | Expectation Question  | Score | Gap Score |
|--|-------|---|-------|-----------|
| Q15. You feel safe in your transactions at <i>the practice</i> . | 6     | Q15. You feel safe in your transactions at excellent physiotherapy practices. | 7     | 6-7=-1    |

## Appendix 15 Continued

### TANGIBLES

#### Customer Respondent - Candidate QQ

| Perception Question                                   | Score | Expectation Question   | Score | Gap Score |
|---|-------|--|-------|-----------|
| Q1. <i>The practice</i> has modern looking equipment. | 6     | Q1. Excellent physiotherapy practices have modern looking equipment. | 7     | 6-7= -1   |

#### Customer Respondent - Candidate KKK

| Perception Question   | Score | Expectation Question   | Score | Gap Score |
|---|-------|--|-------|-----------|
| Q4. Materials associated with <i>the practice</i> are visually appealing. | 5     | Q4. Materials of excellent physiotherapy practices are visually appealing. | 7     | 5-7= -2   |

#### Customer Respondent- Candidate KK

| Perception Question   | Score | Expectation Question   | Score | Gap Score |
|---|-------|--|-------|-----------|
| Q4. Materials associated with <i>the practice</i> are visually appealing. | 4     | Q4. Materials of excellent physiotherapy practices are visually appealing. | 5     | 4-5=-1    |

Appendix 15 Continued

**SERVICESCAPE**

**Customer Respondent - Candidate DD**

| <b>Perception Question</b>                             | <b>Score</b> | <b>Expectation Question</b>  | <b>Score</b> | <b>Gap Score</b> |
|--|--------------|--|--------------|------------------|
| Q23. <i>The Practice</i> has a neat and tidy exterior. | 4            | Q23. Excellent physiotherapy practices have a neat and tidy exterior.      | 7            | 4-7= -3          |
| Q24. The practice has clean and tidy treatment rooms.  | 6            | Q24. Excellent physiotherapy practices have neat and tidy treatment rooms. | 7            | 6-7=-1           |

## References

- Abrahamson, M. (1983) *Social research methods*. Englewood Cliffs, NJ: Prentice-Hall.
- Ahmed, R. and Samreen, H. (2011) 'Assessing the service quality of some selected hospitals in Karachi based on the SERVQUAL model', *Pakistani Business Review*, Vol. 7, pp. 266- 314.
- Alrubaiee, L., (2011) 'The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality – patient trust relationship', *International Journal of Marketing Studies*, Vol. 3, (1), pp. 1-38.
- Andaleed, S.S. (1998) 'Determinants of customer satisfaction with hospital: a managerial model', *International Journal of Health Care Quality Assurance*, Vol. 11 (6), pp. 181-7.
- Babakus, E., & Boller, G. W. (1992) 'An empirical assessment of the SERVQUAL scale' *Journal of Business Research*, Vol. 24 (3), pp. 253-268.
- Babakus, E. And Mangold, W.G. (1992) 'Adapting the SERVQUAL scale to hospital services: an empirical investigation', *Journal of Health Services Research*, Vol. 26 (6), pp. 767-786.
- Baker, T.L., and Taylor, S.A. (1994) 'An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions', *Journal of Retailing*, Vol, 70 (2), pp. 163-178.
- Bansal, H. S., & Taylor, S. (1997) 'Investigating the Relationship Between Service Quality, Satisfaction, and Switching Intentions', *Developments in Marketing Science*, Vol, 20, pp.304-313.
- Benton, T. and Craib, I. (2001) *Philosophy of Social Science*. Palgrave Macmillan
- Berry, L.L., Parasuraman, A., Zeithaml, V.A. (1988) 'The Service Quality Puzzle', *Business Horizons*, Vol. 31 (5). pp 35-43.
- Bhaskar, R. (1979, 1998) *The possibility of Naturalism*. Hemel Hempstead: Harvester Wheatsheaf

- Bitner, M.J. (1990) 'Evaluating service encounters: the effects of physical surroundings and employee responses', *The Journal of Marketing*, Vol. 54 (2), pp. 69-82.
- Bitner, M.J. (1992) 'Servicescapes: the impact of physical surroundings on customers and employees', *Journal of Marketing*, Vol. 56 (2) pp. 57-71.
- Bolton, R.N. and Drew, J.H. (1991) 'A longitudinal analysis of the impact of service changes on customer attitudes', *Journal of Marketing*, Vol. 55 (1) pp 1-9.
- Bopp, K. D. (1990) 'How patients evaluate the quality of ambulatory medical encounters: a marketing perspective', *Journal of Health Care Marketing*, Vol. 10 (1), pp.6-15.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993) 'A dynamic process model of service quality: from expectations to behavioral intentions', *Journal of Marketing Research*, Vol. 30 (1), pp.7-27.
- Bowers, M.R., Swan, J.E. and Koehler, W.F. (1994) 'What attributes determine quality and satisfaction of healthcare delivery?', *Healthcare Management Review*, Vol. 19, (4), pp. 49-55.
- Brady, M.K. and Cronin, J.J. (2001) 'Some new thoughts on conceptualising perceived service quality: a hierarchical approach', *Journal of Marketing*, Vol, 65. PP 34-49.
- Brannen, J. (2005) 'Mixing methods: The entry of qualitative and quantitative approaches into the research process', *International Journal of Social Research Methodology*, Vol. 8 (3), pp.173-184.
- Brewer, J., & Hunter, A. (2005) *Foundations of multi-method research*. Thousand Oaks, CA: Sage.
- Broetzmann, S.M., Kemp, J., Rossano, M. And Marwaha, J., (1995) 'Customer Satisfaction – lip service or management tool?', *Managing Service quality*, Vol. 5, (2), pp. 13-18.
- Brown, T.J., Churchill, G.A. Jr and Peter, J.P. (1993) 'Research note: improving the measurement of service quality', *Journal of Retailing*, Vol. 69 (1) pp.127-39.
- Bryman, A. (1988) *Quantity and quality in social research*, London, Unwin Hyman

- Bryman, A. (2006) 'Paradigm peace and the implications for quality', *International Journal of Social Research Methodology*, Vol., 9 (2), pp.111-126.
- Bryman, A., & Bell, E. (2007) *Business research methods*, Oxford University press.
- Burgess, R. G., (1982) 'The unstructured interview as a conversation', *Field Research: A sourcebook and Field Manual*, pp. 107-10.
- Butt, M. M., and Cyril de Run, E., (2010) 'Private Healthcare quality: applying a SERVQUAL model', *International Journal of Health Care*, Vol. 23 (7), pp 658-673.
- Buttle, F. (1996), 'SERVQUAL: review, critique, research agenda'. *European Journal of Marketing*, Vol. 30 (1), pp. 28-32.
- Buzzel, R.D. (1963) 'Is Marketing a science?', *The Harvard Business School*, Vol. 14, pp. 32-40:166-170.
- Cadote, E.R. Woodruff, R.B. and Jenkins, R.L. (1983) 'Modelling consumer satisfaction processes using experienced based norms', *Journal of Marketing*, October p.59
- Campbell, S, M., Roland, M. O. and Buetow, S. A., (2000) 'Defining quality of care', *Social Science & Medicine* Vol. 51, (11), pp. 1611-1625.
- Carman, J. (1990) 'Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions', *Journal of Retailing*, Vol. 66, (1), pp. 33-55
- Camilleri, D. and O'Callaghan, M. (1998) 'Comparing public and private hospital care service', *International Journal of Health Care Quality Assurance*, Vol. 11 (4), pp. 127-133.
- Caro, M. L., & García, M.J. A. (2007) 'Measuring perceived service quality in urgent transport service', *Journal of Retailing and Consumer Services*, Vol. 14 (1), pp.60-72.
- Chakravarty, C. A., (2010) Evaluation of service quality of hospital outpatient department services, *Medical Journal Armed Forces India*, Vol. 67 (3), pp. 221-224.

- Chand, M. (2010) 'Measuring the service quality of Indian tourism destinations: an application of SERVQUAL model' *International Journal of Services Technology and Management*, Vol. 13 (3), pp.218-233.
- Chaniotakis, I. and Lymeropoulos, C., (2009) 'Service quality effect on satisfaction and word of mouth in the health care industry', *Managing Service Quality*, Vol.19 (2), pp. 229-242.
- Choi, K. S., Lee, H., Kim, C., & Lee, S. (2005) 'The service quality dimensions and patient satisfaction relationships in South Korea: comparisons across gender, age and types of service', *Journal of Services Marketing*, Vol. 19 (3), pp.140-149.
- Chou, C-C., Liu, L-J., Huang, S-F., Yih, J-M., Han, T-C, (2011) 'An evaluations of airline service quality using the fuzzy weighted SERVQUAL method', *Journal of Applied Soft Computing*, Vol. 11, pp. 2117-2118.
- Chowdhary, N., & Prakash, M. (2005) 'Service quality: revisiting the two factors theory', *Journal of Services Research*, Vol. 5 (1), pp.61-75.
- Coffey, A. A., and Atkinson, P. (1996) *Making sense of qualitative data: Complementary research strategies*. Sage
- Collis, J., & Hussey, R. (2009) *Business research: A practical guide for undergraduate and postgraduate students*. Palgrave Macmillan.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003) 'Advanced mixed methods research designs', *Handbook of Mixed Methods in Social and Behavioural Research*, pp.209-240.
- Creswell, J. W., & Clark, V. L. P. (2007) *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage publications.
- Creswell, J. W., (2009) *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.
- Cronin, J.J., and Taylor, Jr. S., (1992) 'Measuring service quality: a re-examination and extension', *Journal of Marketing*, Vol. 56 (3), pp. 55-68.

Cronin, J.J., and Taylor, Jr. S., (1994) 'SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions- minus-expectations measurement of service quality', *The Journal of Marketing*, Vol. 58, (1), pp. 125-131.

Crotty, M., (1998) *The foundations of Social Research*, Sage Publications

<http://www.csp.org.uk/professional-union/professionalism/what-professionalism>, accessed 14/5/2013

<http://www.csp.org.uk/standards>, accessed 14/5/2013

Curry and Pagouni, E. (1997) 'Measuring the service quality of an out-patients department at Astley Ainslie Hospital: using the SERVQUAL model', *Royal National Hospital*, Larbert, Seminar Paper

Curry, A. and Herbert, D. (1998) 'Continuous improvement in public services – a way forward', *Managing Service Quality*, Vol. 8 (5) pp. 339-349.

Curry, A. (1999) 'Innovation in public sector management', *Managing Service Quality*, Vol. 9 (3) pp. 180-190.

Curry, A., Stark, S., and Summerhill, L., (1999) 'Patient and stakeholder consultation in healthcare', *Managing Service Quality*, Vol. 9, (5), pp. 327-336.

Curry, A., Stark, S., (2000) 'Quality of nursing homes' *Health Service Management Research*, Vol. 13 (4), pp.205-215

Curry, A. and Sinclair, E., (2002) 'Assessing the quality of physiotherapy services using SERVQUAL', *The International Journal of Health Care Quality Assurance*, Vol. 15, (5), pp. 197-205.

Dabholkar, P.A. (1995) 'Contingency framework for predicting casuality between customer satisfaction and prices in the life insurance industry, in Sujan, M. and Kardes, F. (Eds)', *Advances in Consumer Research*, Vol. 22, pp. 101-8.

Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. (2000) 'A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study', *Journal of Retailing*, Vol. 76 (2), pp. 139-173.



- Dabolkar, P.A., Thorpe, D.I. and Rentz, J.O. (1996) 'A measure of service quality for retail stores: scale development and validation', *Journal of the Academy of Marketing Science*, Vol. 24 pp. 3-16.
- Dalrymple, J.F., Donnelly, M., Curry, A.C. and Wisniewski, M. (1995a) 'Assessing the quality of local government service provision – using the SERVQUAL scale', *Teare, R. and Armistead, C. (Eds) Services Management: New Directions, New Perspectives*, Cassell, London
- Davies, H. T., Nutley, S.M., and Mannion, R., (2000) 'Organisational culture and quality of health care', *Quality in Health Care* 9, No. 2, pp. 111-119.
- Denzin, N., and Lincoln, Y., (Eds), (1998) *The Landscape of Qualitative Research: Theories and Issues*, Sage
- Department of Health (1989) Working for patients, *HMSO*, London
- Department of Health (1991) Framework for action, *HMSO*, London
- Department of Health (1991) The patient's charter, *HMSO*, London
- Department of Health (1994) The new NHS: Modern dependable, *HMSO*, London
- Department for Health (1997) Designed to care, *HMSO*, London
- Department of Health (1998) A first class service: Quality in the new NHS, *HMSO*, London
- Department of Health (1999) The clinical governance: Quality in the NHS, *HMSO*, London
- Department of Health (2012) Caring for our future, *HMSO*, London
- Diamantopoulos, A., Reynolds, N. L., & Simintiras, A. C. (2006) 'The impact of response styles on the stability of cross-national comparisons', *Journal of Business Research*, Vol. 59 (8), pp. 925-935.
- Donabedian, A. (1980) *Explorations in Quality Assessment and Monitoring: III.*, *Health Administration Press*

- Donnelly, M., Kerr, N., Rimmer, R. and Shiu (2006) 'Assessing the quality of police services using SERVQUAL', *International Journal of Police Strategies and Management*, Vol. 29, No.1, pp. 92-105.
- Doyle, L., Brady, A. M., & Byrne, G. (2009) 'An overview of mixed methods research', *Journal of Research in Nursing*, Vol. 14, (2), pp.175-185.
- Easterby-Smith, M., Thorpe, R., Jackson, P., & Lowe, A. (2008) *Management research: Theory and Practice*
- Easterby-Smith, M., Thorpe, R., & Lowe, A. (2004), *Management research (ed.)*
- Easton. G. (2002) 'Marketing, A Critical Realist Approach', *The Journal of Business Research*, Vol. 55, pp103-109
- Edvardsson, B., Larsson, G. (1997) 'Internal service quality and the psychological work environment: an empirical analysis of conceptual interrelatedness', *The Service Industry Journal*, Vol. 17 (2), pp. 252-263
- Edvardsson, B., Gustafsson, A. and Roos, I., (2005) 'Service portraits in service research: A critical review', *International Journal of Service Industry Management*, Vol. 16 (1), pp.107- 121.
- Franceschini, F, and Cignetti, M, (1998) 'Comparing tools for service quality evaluation', *International Journal of Quality*, Vol. 3 (4), pp. 356-367.
- Gagliano, K. and Hathcote, J. (1994), 'Customer expectations and perceptions of service quality in retail apparel stores', *Journal of Services Marketing*, Vol. 8, pp. 60-69.
- Goldstein, M. S., Elliott, S.D. and Guccione, A. A. (2000) 'The development of an instrument to measure satisfaction with physical therapy', *Journal of the American Physical Therapy Association*, Vol. 8 (9), pp. 853-863.
- Gosselink, R. Bott,J., Johnson, M., Dean, E. Nava, S., Norrenberg, M., Schönhofer, B., Stiller, K., Van de Leur, H. and Vincent, JL., (2008) 'Physiotherapy for adult patients with critical illness: recommendations of the European Respiratory Society and European Society of Intensive Care medicine task force on physiotherapy for critically ill patients', *Intensive Care Medicine* Vol.34 (7) pp. 1188-1199.

- Gotlieb, J B., Grewal, D, Brown, S.W. (1994) 'Consumer satisfaction and perceived quality: Complementary or divergent constructs?', *Journal of Applied Psychology*, Vol. 79 (6), pp.875-885.
- Grix, J., (2004) *The Foundations of Research*. Hampshire: Palgrave MacMillan
- Grönroos, C., (1984) 'A Service Quality Model and its marketing Implications', *European Journal of Marketing*, Vol. 18 (4), pp. 36-44.
- Grönroos, C., (1990) *Service Management and Marketing theory, Managing the moments of truth in service competition*, Lexington Books, Lexington, MA.
- Grönroos, C., (2000) *Service management and marketing: A customer relationship management approach*, Wiley, New York, NY
- Grönroos, C. (2001) 'The perceived service quality concept—a mistake?', *Managing Service Quality*, Vol. 11 (3), pp.150-152.
- Gullick, J., and Shimadry, B. (2008) Using patient stories to improve quality of care, *Nursing Times* Vol. 104 (10), pp. 33-34.
- Gummersson, E. (1991) 'Truths and myths in service quality', *International Journal of Service Industry Management*, Vol. 2 (3), pp7-16.
- Gustafson, D. H., Sainfort, F. C., Van Koningsveld, R., & Zimmerman, D. R. (1990) 'The Quality Assessment Index (QAI) for measuring nursing home quality', *Health Services Research*, Vol. 25, p.97.
- Hart, M. (1996) 'Improving the quality of NHS out-patient clinics: the application and misapplications of TQM', *International Journal of Health Care Quality Assurance*, Vol. 9 (2), pp. 20-27.
- Hassanien, A., Dale, C. and Clarke, A. (2010) *Hospitality Business Development*, Butterworth-Heinemann
- Hoffman, K.D., Bateson, J.E.G., Wood, E.H. and Kenyon, A.J. (2009) *Services Marketing Concepts, Strategies and Cases*, Cengage Learning EMEA

Holmlund, M., & Kock, S. (1996) 'Relationship marketing: the importance of customer-perceived service quality in retail banking', *Service Industries Journal*, Vol. 16 (3), pp. 287-304.

Hopkins, Anthony, John Gabbay, and Julia Neuberger (1994) 'Role of users of health care in achieving a quality service' *Quality in Health Care* Vol.3, (4), pp. 112-117.

Howe, K. R. (1998) 'The interpretive turn and the new debate in education', *Educational Researcher*, Vol. 27 (8), pp.13-20.

Hudak, P., McKeever, P. and Wright, J.G. (2002) 'The Metaphor of Patients as Customers:

Implications for measuring Satisfaction', *Journal of Clinical Epidemiology*, pp. 103-108.

Hung, Y. H., Huang, M. L., & Chen, K. S. (2003) 'Service quality evaluation by service quality performance matrix', *Total Quality Management and Business Excellence*, Vol. 14 (1), pp.79-89.

Irfan, S. M., and A. Ijaz, (2011) 'Comparison of Service Quality between Private and Public Hospitals: Empirical Evidences from Pakistan', *Journal of Quality and Technology Management* Vol.7, pp. 11-22.

Jabnoun, N., and AL Rasasi, AJ., (2005) 'Transformational leadership and service quality in UAE hospitals', *Managing Service Quality* Vol. 15 (1) pp. 70-81.

Jungki, L., (2007) 'SERVQUAL v's SERVPERF: round 2 in a multi-cultural setting: quality management', *The Journal of Academy of Business and Economics*, Vol. 7 (3), pp. 77-88.

Karassavidou, E., Glaveli, N. and Papadopoulos, C. (2009) 'Health care quality in Greek NHS hospitals: No one knows better than patients', *International QMOD Conference*, August, pp. 20-22.

Kim, W. G., Ng, C. Y. N., & Kim, Y. S. (2009) 'Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth', *International Journal of Hospitality Management*, Vol. 28 (1), pp.10-17.

- Kim, J. and Han, W. (2012) 'Improving service quality in long term care hospitals: National evaluation on long-term care hospitals and employees perception of quality dimensions', *Osong Public Health Perspect*, Vol. 3, (2) pp.94-99.
- Khan, M. (2003) 'ECOSERV: ecotourists' quality expectations', *Annals of Tourism Research*, Vol. 18 (6/7), pp. 524-33.
- Kotler, P., Armstrong., G, Wong. V, and Saunders., J. (2008) *Principles of Marketing*, Prentice Hall, Financial Tome, 5<sup>th</sup> edition pp. 598-603.
- Kuhn, T.S. (1977) *The Essential Tension*, University of Chicago Press, Chicago
- Kumar, M., Kee, F. T. And Charles, V. (2009) 'Comparative evaluation of critical factors in delivering service quality of banks: an application of dominance analysis in modified SERVQUAL model', *International Journal of Quality and Reliability Management*, Vol. 27 (3), pp. 351-377.
- Ladhari, R. (2008) 'Alternative measures of service quality: a review', *Managing Service Quality*, Vol. 18 (1), pp. 65-86.
- Ladhari, R (2009) 'A review of twenty years of SERVQUAL research', *International Journal of Quality and Services Sciences*, Vol. 1 (2), pp. 172-198.
- Lafond, A.K. (1995) 'Improving the quality of investment in health: lessons on sustainability', *Health Policy and Planning*, Vol. 10, pp. 63-76.
- Lassar, W., Manolis, C. and Winsor, R. (2000) 'Service quality perspectives and satisfaction in private banking', *Journal of Services Marketing*, Vol. 14 (3) pp. 244-271.
- Launer, J. (2002) *Narrative based primary care: A practical guide*, Radcliffe Medical Press, Abingdon
- Lee, M.A. and Yom, Y.H., (2007) 'A comparative study of patients' and nurses' perceptions of the quality of nursing services, satisfaction and intent to revisit the hospital: A questionnaire survey', *International Journal of Nursing Studies*, Vol. 44, pp. 545-555.

- Lee, Y. L. and Hing, N., (1995) 'Measuring quality in restaurant operations: an application of the SERVQUAL instrument', *International Journal of Hospitality Management*, Vol. 14 (3/4), pp. 293-310.
- Lees, C. (2011) 'Measuring the patient experience: Narrative method', *Nurse Researcher*, Vol. 19 (1), pp.24-29.
- 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* 13, no. 7, 290-299.
- Lovelock, CH. (1981) Why marketing management needs to be different for service, in Donnelly, J. and George, W. (Eds)', *Marketing of Services*, American Marketing Association, Chicago, IL, pp 5-9.
- Lovelock, C. and Wirtz, J. (2007) *Services marketing: People technology and strategy*, Pearson, Prentice Hall 6<sup>th</sup> ed
- Manaf, N.H.A., and Nooi, P.S., (2009) 'Patient satisfaction as an indicator of service quality in Malaysian public hospitals', *Asian Journal on Quality* Vol. 10, (1), pp. 77-87.
- Markovic, S. (2006) 'Expected service quality measurement in tourism higher education', *Nase Gospodarstvo*, Vol. 52, (1/2) pp.86-95.
- Martinez, J. and Martinez, L. (2010) 'Some insights on conceptualizing and measuring service quality', *Journal of Retailing and Consumer Services*, Vol. 17, pp. 29-42.
- May, S. (2007) 'Patients' attitudes and beliefs about back pain and its management after physiotherapy for low back pain', *Physiotherapy Research International*, Vol. 12, (3), pp. 126-135.
- Maylor, H. and Blackmon, K. (2005) *Researching business and management*, Palgrave
- Miles, M.B., and Huberman, A.M., (1994) *Qualitative data analysis: An expanded sourcebook*. Sage
- Miller, W. L., & Crabtree, B. F. (1994) 'Qualitative analysis: how to begin making sense', *Family Practice Research Journal*, Vol. 14 (3), pp.289-297.
- Min, H., & Min, H. (1997) 'Benchmarking the quality of hotel services: managerial perspectives', *International Journal of Quality & Reliability Management*, Vol. 14 (6), pp. 582-597.

- Mostafa, M.M., (2005) 'An empirical study of patients' expectations and satisfaction in Egyptian hospitals', *International Journal of Health Care Quality Assurance*, Vol.18 (7) pp. 516-32.
- Moule, P. and Goodman, M. (2009) *Nursing research: An introduction*. Sage Publications
- McGorry, S. (1999) 'An investigation of expectations and perceptions of health-care services with a Latino population', *International Journal of Health Care Quality Assurance*, Vol. 12, (5), pp. 190-198.
- Nicholls, J.A.F., Gilbert, G.R., Roslow, S., (1998) 'Parisimonious measurement of customer satisfaction with personal service and the service setting', *Journal of Consumer Marketing*, Vol. 15, (3), pp. 239-253.
- Oliver, R. L., (1981)' Measurement and evaluation of satisfaction processes in retail settings', *Journal of Retailing*, Vol. 57 (3), pp. 25-48.
- Pakdil, F., and Aydin, O., (2007) 'Expectations and perceptions in airline services: An analysis using weighted SERVQUAL scores', *Journal of Air Transport Management*, Vol. 13, pp. 229-237.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985) 'A conceptual model of Service Quality and its implication for future research', *Journal of Marketing*, Vol. 49 (4), pp. 41- 40.
- 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 (1), pp. 12 -40.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1991) 'Refinement and reassessment of the SERVQUAL scale', *Journal of Retailing*, Vol. 67, (4), pp. 420-50.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1994) 'Alternating scales of measuring service quality: a comparative assessment based on psychometric and diagnostic criteria', *Journal of Retailing*, Vol. 70, pp. 201-30.

- Perry, C. (1998) 'Processes of a case study methodology for postgraduate research in marketing', *European Journal of Marketing*, Vol. 32 (9/10), pp. 785-802.
- Petrovici, D. And Phillips, P. (2009) 'Conceptualising the perceived performance in hospital services: a patient's perspective', *University of Kent, Working Paper Series*, No.169
- Phillips, D. D. C. (2000) *Postpositivism and educational research*. Rowman & Littlefield
- Potter, M., Gordon, S., and Hamer, P. (2003a) 'The difficult patient in private practice physiotherapy: A qualitative study', *Australian Journal of Physiotherapy*, Vol. 49, pp. 53-61.
- Potter, M., Gordon, S., and Hamer, P. (2003b) 'The physiotherapy experience in private practice: The patients' perspective', *Australian Journal of Physiotherapy*, Vol. 49, pp. 195-202.
- Quine, W.V.O., (1980) *From a logical point of view*, Cambridge, MA: Harvard University Press
- Raduan, C.R., Uli, J., Mohani, A. and Kim, L.N. (2004) 'Hospital service quality: a managerial challenge', *International Journal of Health Care Quality Assurance*, Vol. 17 (3), pp.146-59.
- Resnick, S. And Griffiths, M. (2011) 'Service quality in alcohol treatment, *International Journal of Health Care Quality Assurance*, Vol. 24 (2), pp. 149-163.
- Robledo, M.A. (2001) 'Measuring and managing service quality: integrating customer expectations, *Managing Service Quality*, Vol.11 (1), pp. 22-31.
- Rust, R. T., Oliver, R.L. (1994) 'Service quality insights and managerial implications from the frontier. In Rust, R.T. and Oliver, R.L. (Eds)', *Service Quality: new directions in theory and practice*. Sage publications, London pp 1-19
- Ruyter de, K., Wetzels, M., Broemer, J., (1998) 'On the relationship between perceived service quality, service loyalty and switching costs', *Journal of Service Management*, Vol. 9, (5), pp. 436-453.



Saunders, M. Lewis, P., and Thornhill, A. (2007) *Research Methods for Business Students*, 4<sup>th</sup> edition, Prentice Hall, London

Sewell, N. (1997) 'Continuous quality improvement in acute healthcare: creating a holistic and integrated approach', *Journal of Health Care Quality Assurance*, Vol. 10 (1), pp. 20-26.

Shemwell, D.J., Yavas, U. and Bilgin, Z. (1998) 'Customer service provider relationships: an empirical test of a model of service quality, satisfaction and relationship orientated outcome', *International Journal of Service Industry Management*, Vol. 9 (2), pp. 155-68.

Smith, G., Smith, A., Clarke, A. (2007) 'Evaluating service quality in universities: a service department perspective', *Journal of Quality Assurance in Education*, Vol. 15, pp. 334-351.

Spreng, R.A. and Mackoy, R.D. (1996) 'An empirical examination of a model of perceived service quality and satisfaction', *Journal of Retailing*, Vol.72, pp.201-14.

Strauss, A., and Corbin, J. (1998) *Basics of qualitative research*, Thousand Oaks

Sultan, F., & Simpson Jr, M. C. (2000) 'International service variants: airline passenger expectations and perceptions of service quality', *Journal of Services Marketing*, Vol. 14 (3), pp.188-216.

Sureshchandar, G.S., Rajendran, C. and Anatharaman, R.N., (2002) 'Determinants of customer perceived service quality: a confirmatory factor analysis approach', *Journal of Services Marketing*, Vol. 16, (1) pp. 9-34.

Sureshchandar, G.S., Rajendran, C. and Anatharaman, R.N., (2002) 'The relationship between service quality and customer satisfaction – a factor specific approach', *Journal of Services Marketing*, Vol. 16 (4), pp. 363-379.

Tashakkori, A., & Teddlie, C. (Eds.). (2003) *Handbook of mixed methods in social & behavioural research*. Sage.

Teboul, J. (1991) *Managing Quality Dynamics*, Prentice Hall, London

- Teas, R.K., (1993) 'Expectations, performance evaluation and consumers' perceptions of quality', *Journal of Marketing*, Vol. 57 (2), pp. 56-69.
- Teas, R.K., (1994) 'Expectations as a comparison standard in measuring service quality: an assessment of a reassessment', *Journal of Marketing*, Vol. 58 (1), pp. 132-139.
- Urdang, B. And Howey, R. M., (2000) 'Assesing damages for non-performance of a travel professional – a suggested use of SERVQUAL', *Tourism Management*, Vol. 22, pp. 533-538.
- 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 (3), pp30-49.
- Van Herk, H., Poortinga, Y. H., & Verhallen, T. M. (2005) 'Equivalence of survey data: relevance for international marketing', *European Journal of Marketing*, Vol. 39 (3/4), pp. 351-364.
- Vinagre, M.H. and Neaves, J. (2008) 'The Influence of Service Quality and Patients' Emotions on satisfaction', *International Journal of Health Care Quality Assurance*, Vol. 21 (1), pp. 87-103.
- Walker, J. and Baker, J. (2000) 'An exploratory study of a multi-expectation framework for services', *Journal of Services Marketing*, Vol. 14 (5), pp. 411-431.
- Ware, J.E. and Synder, M.K. (1975) 'Dimensions of patient attitudes regarding doctors and medical care services', *Medical Care*, Vol., 13 (8).
- Yin, R.K., (2003) *Case study research: Design and methods*. Vol. 5. Sage.
- Youseff, F.N., Jones, R. And Hunt, A. (1996) 'Health care quality in NHS hospitals', *International Journal of Health Care Quality Assurance*, Vol. 9 (1), pp. 15-28.
- Zammito, J.H., (2004) *A nice derangement of epistemes: post positivism in the study of science from Quine to Latour*, The University of Chicago Press, Chicago
- Zeithaml, V.A., Parasuraman, A., Berry, L.L., (1990) *Delivering Quality Service; Balancing Customer perceptions and Expectations*, The Free Press, New York