European Journal of Social Sciences Studies
ISSN: 2501-8590
ISSN-L: 2501-8590
Available on-line at: www.oapub.org/soc

doi: 10.5281/zenodo.3547671 Volume 4 | Issue 5 | 2019

EFFECT OF SERVICE QUALITY AND PATIENT SATISFACTION: HOW DENTAL HOSPITALS IN INDONESIA DEAL WITH THAT?

Yaya Aria Santosa[i],
S. M. Ferdous Azam
Postgraduate Centre (PGC),
Management and Science University,
University Drive, Off Persiaran Olahraga,
40100 Shah Alam, Selangor,
Malaysia

Abstract:
The purpose of this research is to investigate how healthcare service quality and patients' satisfaction are related. Thus, the study aims to assess patient's expectations, patients' satisfaction levels and measure the quality gap for SERVQUAL dimensions. This study employs a quantitative descriptive research approach to achieve the research objectives by testing a set of hypotheses. The data collection is by means of a self-administered questionnaire to collect primary data from 350 patients in Indonesian dental hospitals with special reference to Jakarta and Bali. The research findings reveal that the patients' expectation and satisfaction with the healthcare SERVQUAL (tangibility, reliability, responsiveness, assurance, and empathy) is not matched and there is a gap in the service quality. However, the results indicate a service quality gap in both dental hospitals. In addition, the type of hospital has been found to affect patients' satisfaction for tangibility, reliability, responsiveness, and empathy and assurance dimensions.

Keywords: service quality, patient satisfaction, dental hospitals, Indonesia

1. Introduction

The term hospital (hospital) comes from the Latin word, host (host), which is also the root word of the hotel and hospitality. General hospitals are usually facilities that are easy to find in a country, with a large inpatient capacity for intensive or long-term care. This type of hospital is also equipped with surgical facilities, plastic surgery, delivery rooms, laboratories, and so on. But the completeness of these facilities can vary according to the ability of the organizer. Very large hospitals often called Medical

[i] Correspondence: email jayaaria@yahoo.com

Centers, usually serving all modern medicine. Most hospitals in Indonesia also open health services without staying (outpatient) for the general public (clinic). Usually, there are several clinics/polyclinics in a hospital.

In Indonesia, evidence has shown that the healthcare sector is currently facing various challenges and difficulties. This is reflected by the increasingly common practice of paying personally for treatment abroad. The majority of the Indonesian population perceives the national healthcare sector as inadequate, and they are dissatisfied with all levels of health services. However, Indonesia has succeeded in improving the quality of its health services and in the general health of the population over the past few decades. Hence, this comprehensive study is an initial attempt to generate a reliable, evidence-based framework to assess the level of healthcare service quality (SQ) and patients' satisfaction (PS). Quality in the healthcare sector is increasingly becoming a central health policy issue in the health systems of both developed and developing countries (Shaw & Kalo, 2002; Øvretveit, 2004; Azam and Moha Asri, 2015; Tham et al., 2017; Udriyah et al., 2019; Al Shehhi and Azam, 2019a).

Today's patients are better informed and also more demanding, and as such, hospitals need to be consumer-driven and have their ear close to the ground, so to speak in order to know what patients need and expect in order to achieve patients' satisfaction. Also, patients now have a choice or are more willing to switch, and they will therefore go to whoever can give them the quality services they believe they deserve (Ramsaran-Fowdar, 2008).

In light of what has been mentioned above, quality can affect satisfaction directly or indirectly for satisfaction can be affected by the lean management, which can positively influence the quality and provide patient satisfaction. As such, this current study will seek to determine if lean management can alter or enhance the relationship between SQ and PS in Indonesia. Furthermore, this present study will also strive to identify the specific quality dimensions along with lean management; which does influence patient satisfaction in the healthcare context. For that, numerous researches have also explored how SQ and PS are related. Studies have also been carried out on public hospitals that have taken an empirical approach to address this relationship (Cong et al., 2014; Yousapronpaiboon & William, 2013). Additionally, most the majority of these reported public healthcare studies have concentrated on healthcare in North America, Europe, but only rarely in Asia. Little research has been carried out in North African Arab countries, to investigate the relationship between SQ and patient satisfaction in general public hospitals (Al-Hawary, 2012; Diab, 2012).

2. Review of the Literature

Defining and determining healthcare quality is always a challenge because it is not measured by the service provider by the client/patient whose main concern is personal health (Eiriz & Figueiredu, 2005). For this reason, some researchers have suggested that the most reliable source of information related to patient satisfaction would, therefore,

be family members and friends, Furthermore, such observers – family members and friends are also potential future clients besides being important collectively as an influential factor in patient healthcare choices (Strasser et al., 1995; Naidu, 2009).

One of the most explored disciplines in service marketing is SQ (Thawesaengskulthai et al. 2015). As mentioned by Thawesaengskulthai, et al. (2015), many previous studies have connected SQ to customer satisfaction (Cronin & Taylor, 1992; McAlexander, Kaldenberg, & Koenig, 1994), behavioural intention (Headley & Miller, 1993; Zeithaml, Berry, & Parasuraman, 1996) and value and satisfaction (Cronin, Brady, & Hult, 2000). SQ perception has commonly established that SQ is a multi-dimensional, higher order construct and there has been no consensus among researchers regarding whether SQ perceptions should be measured or not (Gronroos, 1984; Parasuraman, Zeithaml, & Berry, 1988). Similarly, Pollack (2008) argues that service quality is a multi-dimensional construct and researchers have suggested a range of SQ determinant factors. For instance, Gronroos (1984) pointed to two categories of SQ: technical quality (i.e. what the customers receive from the service), and functional quality (i.e. how the service is rendered). Gronroos (1984) has also recently proposed that SQ can be holistically defined to encompass professionalism and skills, attitudes and behaviour, being accessible and flexible, reliable and trustworthy, service recovery, servicescape, reputation and credibility (Gronroos, 2000; Haque et al., 2014; Rachmawati et al., 2019; Tarofder et al., 2019; Al Shehhi and Azam, 2019b).

On the other hand, Lehtinen and Lehtinen (1991) mentioned three SQ dimensions- physical quality, corporate quality and interactive quality. The interactive quality dimension perceives SQ as arising from the service provider interacting with the service receiver which is thus required to augment the customer-centred perspective of SQ which is the current dominant paradigm (Svensson, 2006).

As an extension of the study by Rust and Oliver (1994), Brady and Cronin (2001) suggested hierarchically conceptualising SQ as comprising three dimensions: outcome quality (how the customer evaluates the core service.), interaction quality (how the customer' evaluates the process of service delivery), and the quality of the physical environment (how the consumer evaluates any tangible aspect in relation to the service. Besides all these, Brady and Cronin (2001) mention three SQ dimensions which constitute the SQ: interpersonal quality, outcome quality, and environmental quality. Originally, SERVQUAL had ten dimensions of SQ: security, competence, reliability, courtesy responsiveness, accessibility, credibility, communication, awareness, and knowledge of the customer and tangibles. Generally, the most commonly-accepted concept of SQ encompasses five dimensions, namely tangibility, reliability, responsiveness, empathy, and assurance (Parasuraman et al., 1988). In the early 1990s, the model was popular as RATER, which is the acronym for Reliability, Assurance, Tangibility, Empathy, and Responsiveness (Chan et al., 2003; Azam et al., 2014; Haur et al., 2017; Tarofder et al., 2017; Katukurunda et al., 2019; Chong *et al*., 2019).

In the SQ Model proposed in 1985, there were ten dimensions discovered. For the purpose of examining the dimensionality of the scale, the reliability of the

components and the development of the instrument to measure SQ in 1985, Parasuraman et al. conducted a quantitative research approach to establish an instrument to measure SQ, now widely known as SERVQUAL, which is used "to measure customer perception of SQ in service and retailing firms." The instrument's definition of SQ refers to a particular attitude, associated with but not quite the same as satisfaction, which is derived from a comparison of what a consumer perceives and what is expected of the service experience (Parasuraman, Zeithaml, & Berry, 1988). A premier quality healthcare service is the primary significance of the health sector in the 20-year vision document as SQ is a fundamental concern in the healthcare sector (Ali, Hamid, & Emadi, 2015). SQ is recognised as a multi-dimensional construct (Pollack, 2008) and scholars have provided a range of SQ determinants (Teshnizi, Aghamolaei, Kahnouji, Teshnizi, & Ghani, 2018).

This research comprises the dimension of SQ, which is divided into five combined dimensions from an original number of 10 which are:

1. Tangibility: This dimension comprises the appearances of physical facilities, equipment, and of personnel.
2. Reliability: This dimension comprises the ability to provide the stipulated service reliably and with accuracy.
3. Responsiveness: This dimension comprises the intention to assist customers with prompt service.
4. Assurance: This dimension comprises the knowledge and courtesy of employees instil trust and confidence.
5. Empathy: This dimension comprises the caring, persona; attention provided the customer.

According to the model, by comparing the customer's service expectation with the perception of the actual performance, the SQ can be measured. The model uses 22 questions to measure service expectation and perception respectively. The tangibility dimension comprises the physical service features such as the presence of employees, equipment, and facilities. The reliability dimension comprises accurate, reliable, and dependable performance of the service (service outcome). The remaining three dimensions represent features of the interaction quality. The responsiveness dimension implies being prompt and willing to attend to the customer. Caring and personalised attention and also awareness of customer needs and convenient access to the service are included in the empathy dimension. Lastly, the dimension of assurance encompasses the capability, courteousness and trustworthiness of employees who produce customer trust and confidence (Pollack, 2008). A SERVQUAL instrument has been utilised in diverse service categories such as education, construction, travel, hospitality, and dentistry and healthcare, (Al-Neyadi, Abdallah, & Malik, 2016). Numerous researches to measure SQ have been conducted on the healthcare industry (Kitapci, Akdogan, & Dortyol, 2014). Some of these studies have been done on public healthcare (Kitapci, Akdogan, & Dortyol, 2014; Aagja, & Garg, 2010; Andaleeb, & Millet, 2010; Camilleri, & O'Callaghan, 1998; Manaf, 2005) while some of them have been focused in private

healthcare (Kitapci, Akdogan, & Dortyol, 2014; Andaleeb, & Millet, 2010; Camilleri, & O'Callaghan, 1998; Butt, & Run, 2010; Jayasuriya and Azam, 2017; Dewi et al., 2019; Nguyen et al., 2019; Kanapathipillai and Azam).

Many researchers have used the SERVQUAL model to measure SQ in various areas of the service sectors, including travel and tourism, dental services, business schools, higher education, hotels, car servicing and car rental, hospitality, architectural services, accounting firms, business-to-business channel partners, recreational services, airline catering, banking, apparel retailing, hospitals and local government (Buttle, 1996).

Quality measurement is confined to the perspective of the evaluator and will be dependent on some issues: the goal of the evaluation, method of evaluation, and approach to knowledge as well as for whom the evaluation is carried out. Traditionally, the quality of healthcare used to be evaluated and measured by healthcare professionals (Shelton, 2000). This was usually done through setting standards and evaluating quality against these standards (Ellis & Whittington, 1993). Øvretveit (1998) argued it is worth noting that quality evaluation differs from the quality measurement. This is because the measurement is a concept which tends to mean the process of quantifying the amount of an item and does not involve judging its value.

Shelton (2000) also contended that assessment measures used by health professionals to evaluate and ensure quality, such as clinical and cost-effectiveness, are insufficient to ensure the quality of healthcare because such measures do not give rise to PS. Problems are not only limited to concern about who should evaluate quality, but also to what is to be evaluated and which aspects of quality are the most appropriate to evaluate. Øvretveit (1998) identified three common approaches to evaluating the quality of care: outcome, process, and experimental evaluation. In outcome measures of quality, the focus tends to be placed on outcome only, regardless of the service process and its internal activities. Brook et al. (1996) identified five methods that can be used to measure quality based on the process or outcome data. The first three are implicit, and the last two are explicit: Implicit methods: have no prior standards or agreement about what reflects good or bad quality. Brook et al. (1996) pointed out that the results of quality measurement will differ depending on the method utilised. Moreover, specific process-based methods are stricter than implicit outcome methods.

Along with it, developed for the measurement of the SQ of a wide array of services, SERVQUAL has been utilised to measure the SQ of banking, credit card services, repair and maintenance and long-distance telephone services (Parasuraman et al., 1988; 1991). While each service provided is unique in many aspects, the justification that validates the development of this SERVQUAL dimensions applies to all services in general (Thawesaengskulthai et al., 2015). Even though the SERVQUAL was not developed specifically for assessing quality in the hospital sector, the model has been improvised and adapted to match the attributes of the hospital sector. Along with it, the model has been proven valid and reliable for the hospital sector (Chan et al., 2003; Duffy et al., 2001; Babakus et al., 1992).

The dimensions of the SERVQUAL model have been questioned, with many authors suggesting that adaptation of the dimensions chosen depends on the sector the model is implemented for (Finn DW et al. 1991). Furthermore, a few researchers have also warned of the risk of patients having high expectations (Clow. et al., 1993). The outcomes evaluated by Parasuraman et al. (1998. 1991) have stated that the SERVQUAL is a valuable tool for evaluating SQ of healthcare services. SERQUAL is not just a tool to evaluate SQ but also to identify the most effective and ineffective dimensions that affect the SQ; it simply identifies the dimensions that need improvements to enhance the PS (Maghfuriyah et al., 2019; Pushpakumara et al., 2019; Al Shehhi and Azam, 2019c).

In the literature, a wide array of conceptual frameworks has been studied for the evaluation of the quality of the care the healthcare centre proposes. In the traditional medical approach, the primary objective of the healthcare centre is focused on the increment of the profitability of the desired healthcare outcome with the available state of knowledge and technology (Thawesaengskulthai et al., 2015). There are many studies where SERVQUAL dimensions have been used but mostly in the USA (Anderson, 1995; Australia (Chan et al., 2003) and Europe (Sargeant et al., 1998). Also, in many countries like Malaysia, Singapore, USA, Iran, Thailand, Greece, Saudi Arabia, UAE and Jordan, the SERVQUAL model has been widely implemented to analyse the health SQ (Lim & Tang, 2000; Babakus & Mangold, 1992; Alrubaiee, & Alkaa'ida 2011; Suki, Lian, & Suki, 2011; Untachai, 2013; Karassavidou, et. al., 2009; Hussein, & Amal, 2010; Al-Neyadi, Abdallah, & Malik, 2016); Nekoei-Moghadam & Amiresmaili, 2011; (De Silva et al., 2017; Kuruwitaarachchi et al., 2019; Pambreni et al., 2019).

Pai and Chary (2013) reported that the SERVQUAL model had been used as the tool for 49% of the studies to analyse hospital SQ studies. Along with it, the researchers added that the number of dimensions used in the research varied from researcher to researcher. ; Lim and Tang (2000) used 'accessibility' and 'affordability' dimensions in their study in Singapore; whereas Lee, Delene, Bunda, and Kim (2000) suggested two extra dimensions, namely, 'medical services' and 'professionalism' for their research and Reidenbach and Sandifer-Smallwood's (1990) in their work reduced the ten dimensions of the original SERVQUAL model to seven dimensions. Likewise, in this research, the new five dimensions of the SERVQUAL model are used for the study along with the lean management as the mediating variable towards PS.

3. Research Methodology

This study adopted a post-positivistic and deductive philosophical approach. This paradigm suits the study at hand as it ensures that the researcher and the researched person are independent of each other. In addition, post-positivism paradigm aims to pursue objectivity by recognising the possible effects of biases as it states that theories and values of the researcher can influence what is observed (Philips & Nicholas 2000). In terms of healthcare, several researches have also investigated how SQ and satisfaction are related. Some studies have been done on public hospitals that used the

empirical approach to address this relationship (Cong et al, 2014; Yousapronpaiboon & William, 2013).

Moreover, the majority of the published studies on public healthcare concentered on healthcare in North America, Europe, and relatively fewer in Asia. As for North African and Arab countries, there has not been much research to test the relationship between SQ and PS in public hospitals (Al-Hawary, 2012; Diab, 2012). This research has developed a set of hypotheses for the testing of the relationships between dependent variables (DVs) and independent variables (IVs) and used statistical tools to assess these relationships. Based on the research findings, the theoretical system can be tested through correlation methods.

A research design represents the plan or an overall strategy for conducting given research. According to Oso and Onen (2006), research design aims to ensure that a research process is systematic and scientific enough so that the findings obtained can be applied in real life. Also, research design is essential in social research because it combines the methodology as research map and research methods as steps to go through the research journey. Accordingly, therefore, Jogulu and Pansiri (2011) argue that both qualitative and quantitative research methods have equal status. This study is defined as theory-oriented research as it aims to contribute to the theory testing (Dul & Hak 2008). This study adopts a quantitative descriptive approach. The reason why the quantitative approach is used in this research is to help the researcher to predict the impact the quality services dimension has on patient satisfaction.

Descriptive research focuses on describing the characteristics of a particular individual or characteristics of a group (Kothari 2004). On the other hand, Mugenda and Mugenda (2003) view descriptive research as a process of collecting data in order to test hypotheses or to answer questions concerning the current status of the subject of study. Additionally, Sekaran (2006) stated that a descriptive study is conducted to describe the characteristics of the study variables to interpret a given phenomenon. A descriptive survey design was employed for this research in order to quantitatively describe specific aspects of the population (Patients).

Recognising the research aim to finding out what is the relationship between particular elements, a quantitative research method was employed to measure empirically measure and analyse such a relationship. The quantitative research method is suitable for answering the research questions of this study through a systematic procedure of planning, implementing, and examining a given phenomenon under the proposed model (Ghauri, 2005). This study employs a descriptive quantitative research design, which makes it possible to observe measure and test the hypostudy by using numbers and statistical processes (Thomas 2003). This research began by collecting numerical data, classifying them following the suggested model, and using the correlational method in the attempt to determine the extent of a relationship between perception of patients' satisfaction and the Indonesian healthcare services provided. Finally, the analysis offers a further understanding of the results as well as some assumptions.

After defining the population, the next step is to identify the sample frame, which is the process of listing the elements to draw an actual sample. This study looked to the patients who had obtained the services from the dental hospitals in Jakarta and Bali.

The target population is defined as the aggregation of study elements and involves all members of a real or hypothetical set of people, events, or objects to which the study wishes to generalise the findings (Oso & Onen, 2006). On the other hand, sampling is the process of selecting from a target population in order to provide information that can be used to make judgments about a much larger number of cases (Kothari, 2004). The targeted population for this research involved patients who visited Indonesian dental hospitals during the last 12 months in Jakarta and Bali states. Respondents were approached in their homes and hospitals.

The study population consisted of all in-patients or their companions who were seeking medical and dental care during the study period in selected Indonesian dental hospitals during the last 12 months in Jakarta and Bali states as illustrated further in the study. There were no specific exclusions for selecting from the study population; all in-patients or their companions, Indonesian and non-Indonesians, male and female, aged 18 years and above, were represented (the age of legal accountability is 18 years in Indonesia). The only exclusion criterion for selecting from the study population was the psychiatric hospital patients.

Non-Probability sampling method was used for data collection. Under this sampling procedure, convenience sampling procedure was appropriate for this research. Convenience sampling method depends on the data collected from the population who were willing to participate in the study. In this sampling method, primary data that are available first are used without any modification. This approach of sampling focuses on getting participants wherever can find them and wherever convenient. In order to get initial primary data concerning specific issues such as a customer concerning SQ, this approach is used. For this research, this sampling technique was effective, and in order to collect the basic data, structural questionnaires were developed.

The focus on Jakarta and Bali's hospitals was deemed appropriate, as both states have many hospitals of varying quality that attend to a diverse set of patient needs. The sample size was based on convenience sampling and reports from related studies. Due to resource and time constraints, a representative sample of 350 individuals was targeted. To ensure representation, sample sizes of 185 from Bali dental hospitals and 165 were collected from Jakarta dental hospitals respectively.

Given that the study's population included several categories, the study's sample was selected according to the Stratified non-random sample method, to represent the various groups of the study's population. A consecutive sampling technique was employed. That is, the study's questionnaires were administered to in-patients in the selected hospital 'wards and sections; after the questionnaire was completed by the first

patient, the next available patient was selected, and so on, until the required sample size was achieved in each selected hospital ward or section.

This research employed a survey questionnaire for the collection of the required data to answer the research questions and test the research hypotheses. A structured questionnaire was constructed in such a way as to require direct answers in a particular prescribed format to facilitate consistency of responses among respondents, (Oso & Onen, 2006). The questionnaire was designed based on the previous research and literature but adapted as necessary and with the addition of some new measures for this study to collect information on assessing healthcare services quality in Indonesia along with patients' satisfaction level. This study was guided by the recommended procedures stated by Deville's (2003) to operationalise the constructs.

In this respect, four subsequent steps were followed, namely, identifying the domain of the constructs, generating an item pool, measuring purification, and assessing the reliability and validity of items as well. In the questionnaire the respondents were presented with a series of attitude dimensions for each of which they were asked whether, and how strongly, they agreed or disagreed; using some positions on a five-point Likert scale.

4. Data Analysis and Findings

The results of the analysis are given from the highest Cronbach alpha score to the lowest: Lean management – 5 items (0.904), and PS – 5 items (0.901) respectively. Nevertheless, all of the constructs provided high reliability with a Cronbach alpha greater than 0.9, which means that the questionnaire has SQ management.

Table 4.1: Table showing the Model fit statistics of the study

The goodness of Fit Statistics	Lean Management	Perceived SQ	Expected SQ	Patient's Satisfaction	Fit Values
Chi-Square Value (CMIN)	17.114	1212.700	1151.167	27.651	
Degree of Freedom (Df)	5	311	299	51	≥ 0
Chi Square / Df (CMIN/Df)	2.134	4.598	3.571	4.712	2 - 5
Goodness of Fit Index (GFI)	0.911	0.901	0.907	0.917	> 0.9
Root Mean Square Error of Approximation (RMSER)	0.075	0.065	0.057	0.055	< 0.08
Adjusted Good of Fit Index (AGFI)	0.911	0.901	0.904	0.900	> 0.9
Comparative Fit Index (CFI)	0.976	0.971	0.974	0.945	> 0.9
Normed Fit Index (NFI)	0.969	0.954	0.39	0.965	> 0.9

The above Table 1 shows the model fit statistics. To analyse the validity CFA approach (AMOS 21) was used. The SEM approach allows simultaneous estimations of multiple regression analysis in one single framework. Browne and Cudeck (1993) in their study indicated that the model fit could be checked by RMSEA which is less than 0.08 and has a good fit and less than 0.05 which has a closer fit. Chin and Todd's (1995) study proposed that for the goodness of model fit GFI (Goodness of Fit Index) and NFI (Normed Fit Index) should be above 0.9 and AGFI (Adjusted goodness-of-fit Index) should be above 0.8. Bentler (1990) suggested that for a good model fit CFI (Comparative Fit Index) should be higher than 0.9. The goodness of the final model fit has been shown in the above table. As per Schumacker and Lomax (2004), the Chi-Square or CMIN value should be between 2.0 and 5.0 for an acceptable fit and anything higher than 5.0 would indicate a poor model fit. Here, CMIN is Chi-Square statistic and DF are the degrees of freedom.

In order to assess the reliability of study variables, Cronbach Alpha test was employed to measure the internal consistency of the items and provide a useful estimate of reliability (Gregory 2000). The reliability of a measure reveals the extent to which items are positively correlated to one another, how close they are to (1) range (Hair et al. 2006). Reliability is considered high if the scale items are highly correlated. It has been stated that coefficient alpha values of 0.70 and above are entitled to represent acceptable reliability, those above 0.80 represent good reliability, and those above 0.90 represent excellent reliability, (Mugenda & Mugenda 2003; Hair et al. 2006). SPSS software version 21.0 was employed to conduct the Cronbach standardised test for all variables of the study. Table 2 illustrates the Cronbach Alpha of the study variables.
In this study, Cronbach's Alpha was analysed for each of the variables individually, namely; Tangibility, Reliability, Responsiveness, Assurance, Empathy, Lean management and PS.

The pilot study was conducted with 50 questionnaires delivered to the Jakarta city and Bali city profile groups. First, the SQ of each item was calculated to represent gap score "GAP" for five SERVQUAL dimensions: tangibility, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, & Berry, 1988; Parasuraman, Berry, & Zeithaml, 1991). SQ gap score is perception minus expectation and defined as follows:

$$GAP = P - E \quad (1)$$

where:
P and E are the ratings of the corresponding perception and expectation items respectively.

Second, the difference score "GAP" of each item are group into its correlate dimension of the five SQ dimensions, and the variable was calculated separately to establish the internal consistency through Cronbach's Alpha score. Table 4.16 presents a summary of the number of items and Cronbach's alpha coefficients obtained from the

pilot test and the actual survey of 350 respondents. In the IV SQ, there were four items for tangibility dimension, five items for reliability dimension, four items for responsiveness dimension, four items in responsiveness dimension and five items in the empathy dimension. In the mediator variable, lean management, there are five items. In the dependent variable PS, there are five items.

Table 4.2: Pilot Study & Actual Survey Cronbach's Alpha Result

		Cronbach's Alpha			
		Pilot Test		Actual	
Dimensions	**No of Items**	**Private**	**Public**	**Private**	**Public**
Tangibility	4	0.937	0.835	0.896	0.842
Reliability	5	0.850	0.863	0.904	0.837
Responsiveness	4	0.921	0.839	0.956	0.812
Assurance	4	0.890	0.890	0.912	0.821
Empathy	5	0.830	0.945	0.815	0.925
GAP	22	0.936	0.934	0.950	0.940
Lean Management	4	0.837	0.784	0.918	0.890
Patient's Satisfaction	5	0.908	0.943	0.938	0.901

The above Table 2 shows the Cronbach's alpha result of both pilot and actual study of dental hospitals. All eight scales inclusive of the SQ gap attained an appropriate level of reliability exceeding 0.70 without removing any items. During the pilot study among the dimensions and the mediating variable of a private hospital, the weakest scale is empathy (α = 0.830), and most robust scale is tangibility α = 0.937). In the actual survey of private hospital correspondence, the weakest scale is still empathy (α = 0.815), and most robust scale is responsiveness (α = 0.956). As for public hospitals, during the pilot study, the weakest scale is lean management (α = 0.784), and most robust scale is empathy (α = 0.945). In the actual survey of a public hospital, the weakest scale is responsiveness (α = 0.812), and most robust scale is empathy (α = 0.925).

The evaluation of the internal consistency of the questionnaire instrument of all eight scales through Cronbach's Alpha was higher than the 0.70 recommended by Hair et al. (2006) with a minimum of 0.822. The reliability coefficients for both dental hospitals for the perception minus expectation gap score for the five SERVQUAL dimensions, lean management and PS are consistently high across the sample, thus showing high internal consistency among items within each dimension, and the questionnaire instrument is reliable for measuring the corresponding variable. Furthermore, the Cronbach's Alpha coefficient derived from this study is the same for both dental hospitals to the coefficient reported by Parasuraman et al. (1988) with the minimum value for bank sample at 0.85 and maximum at 0.92.

5. Conclusion and Recommendation

It is obvious from the SERVQUAL results that a significant gap exists between what patients expect and what Dental hospitals in Indonesia are providing and in general

there is a feeling of disappointment and dissatisfaction with the healthcare sector, both private and public. As has been mentioned in the earlier chapters, much has been published about the healthcare industry in general and specifically referring to certain countries and it remains clear that the issue of patient satisfaction (PS) among the general public has been and continues to be a significant public health issue.

As an industry dispensing healthcare, it involves people, both the recipients of healthcare and the providers of healthcare and there exists a significant gap between what is expected and what is provided. The issue involves the expectations of the healthcare seeking public and the industry players who provide the service, and two significant issues are dominant.

The first involves the people who seek and receive healthcare from either public or private providers. The second involves the industry players. One takes; the other gives and it appears that the takers are not happy with what they are given while the givers are doing their best to determine just exactly what it is that will make the recipients satisfied and happy, which will, in turn, make the providers happy. On the part of the providers, the notion of SRTVWUAL has been a tool used to try and understand the public they serve, and in this concluding chapter of the study, SERVQUAL is revisited to show just how challenging it can be for human beings to try and understand their fellow human beings.

Much criticism, over some issues, has been published about the SERVQUAL instrument although it must be accepted that this instrument does identify and has identified the weaknesses in private and public healthcare management. With the availability of SERVQUAL, healthcare management has at least a tool to use to try and improve their service, although the tool may not be perfect as numerous researchers has identified its weaknesses.

One of the next obstacles facing hospitals these days is continually rising in patient's expectations and subsequent demands for service improvement (Kandampully, 1998). Driven by intensification of ever-changing technological advancement and treatment facilities, the pressure of patient's demands for quality improvement, on hospitals have to use different approaches to live up to patient's expectations (Porter, 1980). Therefore, hospital managements need to identify the critical SQ dimensions that contribute to improving SQ, lean management and PS (Ladhari, Ladhari & Morales, 2011). The findings of this study add that, the ultimate success of a hospital depends on the PS via SQ.

The findings of this study also have enlightened hospital management in both Indonesian dental hospitals in identifying the dimensions of SQ that influence lean management and PS. Priority of the hospitals is to draw attention to the dimension depending on the origin type of hospital. In Private Indonesian hospitals, tangibility and reliability are the most important dimensions in determining lean management and PS respectively. The Private Indonesian hospitals could offer better patient satisfaction by emphasising these two dimensions, whereas, in Indonesian Public hospitals empathy and assurance is the most important dimension in determining lean

management and PS respectively. Indonesian Public hospitals could achieve better PS by emphasising these two dimensions.

Hospital management in both dental hospitals should focus on the most important dimensions in their overall SQ. The Private Indonesian hospitals should emphasise the institution's ability to manage the tangibility dimension and improve the assurance and empathy dimensions while Indonesian Public hospitals should stress tangibility and reliability while boosting the most important dimension, which is empathy. Given that reliability, assurance and empathy are mainly human interaction, both types of hospitals should invest financial resource in training programmes to raise staff awareness on the importance of these dimensions in achieving better PS and implant a culture of service excellence in the hospital's vision and mission.

This study has acknowledged several limitations. First, the future researcher in this study area could address this issue by using a larger sample size. The number of respondents for each hospital type limits the interpretation of the differences of SQ, lean management, and PS in the types of hospitals in Indonesia. If the sample size for each type of hospital were huge, the study could further identify the most important SQ dimension 'which each respective type of hospital could emphasise for its PS improvement. A key challenge for researchers is to devise methods to collect data from each respective hospital identically.

Secondly, the study should be replicated in other countries, specifically those with different cultural, social, and economic environment. The finding of such study will facilitate a better understanding of the effects of cultural differences on patient's perception and expectation of hospital service delivery.

Lastly, this study emphasises. However, general hospitals have established a strong presence in Indonesia which cannot be ignored. Future study in this area with the addition could provide new insights by comparing the differences in SQ gap of foreign and local hospitals in Indonesia.

References

Aagja, J. P. and Garg, R. (2010) "Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context", *International Journal of Pharmaceutical and Healthcare Marketing*, 4,(1), pp.60 - 83.

Al Shehhi and Azam, S. M. F. (2019a). Total Quality Management and Project Management towards Organisational Success of Agriculture and Fisheries in Sultanate of Oman: A Measurement Model, *European Journal of Management and Marketing Studies*, 4 (1): 1-17.

Al Shehhi and Azam, S. M. F. (2019b). Developing and Validating the TQM Framework in the Sultanate of Oman Agriculture and Fisheries Context, *European Journal of Economic and Financial Research*, 3(4): 30-42.

Al Shehhi and Azam, S. M. F. (2019c). Measuring the Mediating Role of Project Management between Total Quality Management and Organisational Success in Sultanate of Oman, *European Journal of Human Resource Management Studies*, 2(2): 45-58.

Al-Hawary. S. I. S., (2012). Healthcare services quality at private hospitals, from patients' perspective: A comparative study between, Jordan and Saudi Arabia, African Journal of Business Management, 6(22); 6516-6529.

Al-Neyadi, H. S., Abdallah, S., & Malik, M. (2016). Measuring PS of healthcare services in the UAE hospitals: Using SERVQUAL. *International Journal of Healthcare Management*, 1-10.

Alrubaiee, L., & Alkaa'ida, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality–patient trust relationship. *International Journal of Marketing Studies*, *3*(1), 103.

Andaleeb, SS. and Millet, I. (2010) "Service experiences in hospitals in Bangladesh: are there gender inequities?", *International Journal of Healthcare Quality Assurance*, 23, (6), 591 – 606.

Anderson, E. (1995). Measuring service quality and a university health clinic. International Journal of Healthcare assurance, 8(2), 32-37.

Azam, S. M. F. and Moha Asri A., (2015). "Differential Roles between Owner and Manager in Financial Practice That Contributes to Business Success: An Analysis On Malaysian Small Business", *Academic Journal of Interdisciplinary Studies*, 4 (1 S2): 123-134.

Azam, S. M. F., Haque, A., Sarwar, A. and Anwar, N. (2014), "Training Program Effectiveness of Service Initiators: Measuring Perception of Female Employees of Bank Using Logistic Approach", *Asian Research Journal of Business Management*, 1 (2): 98-108.

Babakus, E., & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. J. Bus. Res. 24, 253 – 268.

Brady, M. K., and Cronin, J. J. Jr. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach

Brook, R. H., McGlynn, E. A., & Cleary, P. D. (1996). Measuring quality of care.

Brown, T. J., Cudeck, G.A. Jr., and Peter, J.P. (1993). Improving the measurement of service quality. Journal of Retailing, 69, (1), 127-39.

Butt, M. M. and Run, E. C. (2010) "Private healthcare quality: applying a SERVQUAL model", *International Journal of Healthcare Quality Assurance*, 23, (7),658-673.

Buttle, F. (1996). SERVQUAL: Review, critique, research agenda. European Journal of Marketing, 30(1), 8-32.

Camilleri, D. & O'Callaghan, M. (1998). Comparing public and private care service quality. International Journal of Healthcare Quality Assurance, 11(4), 127-33.

Chan, C., Entrekin, L., & Anderson, C. (2003). Psychometric assessment of the perception of service quality. Research and Practice in Human Resource Management, 11(1), 65-74.

Chong, P. L., Ong, T. S., Abdullah, A. and Choo, W. C. (2019). Internationalisation and Innovation on Balanced Scorecard (BSC) among Malaysian Small and Medium Enterprises (SMEs), *Management Science Letters*, 9(10): 1617–1632

Clow, K. E., & Vorhies, D. W. (1993). Building a competitive advantage for service firms. Journal of Services Marketing, 7(1), 22-32.

Cong. N. T & Mai. N. T. T (2014). Service Quality and Its Impact on Patient Satisfaction: An Investigation in Vietnamese Public Hospitals Journal of Emerging Economies and Islamic Research, 2(1), 1-13.

Cronin, J. J. Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. Journal of Marketing 56(7), 55-68.

Cronin, J. J., Brady, M. K., & Hult, T. M. (2000). Assessing the effects of quality, value, customer satisfaction on consumer behavioral intention lean management. Journal of Retailing, 76(2), 193-218.

De Silva, A. D. A., Khatibi, A. and Azam, S. M. F. (2017). Do the Demographic Differences Manifest in Motivation to Learn Science and Impact on Science Performance? Evidence from Sri Lanka, *International Journal of Science and Mathematics Education*, 16(S1), 47–67

Dewi, N., Azam, S. M. F. and Yusoff, S. K. M. (2019). Factors influencing the information quality of local government financial statement and financial accountability, *Management Science Letters*, 9 (9): 1373-1384

Duffy, J. A., Duffy, M., & Kilbourne, W. E. (2001). A comparative study of resident, family, and administrator expectations for service quality in nursing homes. Healthcare Management Review, 26(3), 75-85.

Eiriz, V., & António Figueiredo, J. (2005). Quality evaluation in healthcare services based on customer-provider relationships. *International Journal of Healthcare Quality Assurance*, *18*(6), 404-412.

Finn, D. W., & Lamb, C. W. (1991). An evaluation of the SERVQUAL scales in a retailing setting. Advances in Consumer Research, 18, 338-357.

Gronroos, 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", 11, (3), 150-152

Hair, J. F. J., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Haque A., Sarwar, A., Azam, S. M. F. and Yasmin, F. (2014), "Total Quality Management Practices in the Islamic Banking Industry: Comparison between Bangladesh and Malaysian Islamic Bank", *International Journal of Ethics in Social Sciences*, 2 (1): 5-18.

Haur, C. H., Khatibi, A. and Azam, S. M. F. (2017), "Antecedents of Consumers' Perception towards Online Advertising in Malaysia: The Structure Equation Modeling Approach", *European Journal of Management and Marketing Studies*, 2 (3): 15-30.

Headley, D. E., & Miller, S. J. (1993). Measuring service quality and its relationship to future consumer behavior. Journal of Healthcare Marketing, 13(4).

Jayasuriya, N. A. and Azam, S. M. F. (2017). *International Review of Management and Marketing*, 7(5), 178-183.

Kanapathipillai, K. and Azam S. M. F. (2019). A Conceptual Understanding Of The Critical Factors That Induce Women Entrepreneurial Success In The Klang Valley, Malaysia, *European Journal of Management and Marketing Studies*, 4(2): 90-110.

Katukurunda, K. G. W. K., Yajid, S. M. A., Khatibi, A. and Azam, S. M. F. (2019). Students' Satisfaction towards Biosystems Technology; Does Programme Quality Matters? (Evidence from Sri Lankan Perspectives), *European Journal of Open Education and E-learning Studies*, 3 (2): 174-190.

Kitapci, O., Akdogan, C., & Dortyol, I. T. (2014). The impact of service quality dimensions on patient satisfaction, repurchase intentions and word-of-mouth communication in the public healthcare industry. *Procedia-Social and Behavioral Sciences*, 148, 161-169.

Kuruwitaarachchi, N., Yajid, S. M. A, Khatibi, A. and Azam, S. M. F. (2019). Enhance the use of Internet Based Advanced Communication Technologies in Small and Medium Scale Enterprises in Sri Lanka, *European Journal of Social Sciences Studies*, 3 (2): 44-57.

Ladhari, R. (2008). Alternative measures of service quality: A review. Managing Service Quality, 18 (1), 65-86.

Lee, H., Delene, L. M., Bunda, M. A., & Kim, C. (2000). Methods of measuring health-care service quality. *Journal of Business Research*, *48*(3), 233-246.

Lehtinen, J. R., and Jukha, M. C. (1985), "Applications of Service Quality and Services Marketing in Healthcare Organizations", Building Marketing Effectiveness in Healthcare, Academy of Health Sciences Marketing, D.Terry Paul (ed.), pp.45-48.

Lim, P. and Tang, N. (2000), "Study of patients expectations and satisfaction in Singapore Hospitals", International Journal of Healthcare Quality Assurance, 13 (7), pp.290-9.

Maghfuriyah, A., Azam, S. M. F. and Shukri, S. (2019). Market Structure and Islamic Banking Performance in Indonesia: An Error Correction Model, *Management Science Letters*, 9 (9): 1407-1418.

Manaf, N. H. A. (2005) "Quality management in Malaysian public healthcare", *International Journal of Healthcare Quality Assurance*, 18, (3), 204 – 216.

McAlexander, J. H., Kaldenberg, D. O., & Koenig, H. F. (1994). Service quality measurement. Journal of Healthcare Marketing, 14(3), 34–40.

Naidu, Aditi (2009). Factors affecting patient satisfaction and healthcare Quality. International Journal of Healthcare Quality Assurance, 22 ,(4), 366-381.

Nekoei-Moghadam M., Amiresmaili M. (2011). Hospital services quality assessment: hospitals of Kerman University of Medical Sciences, as a tangible example of a developing country. *Int J Healthcare Qual Assu*; 24: 57–66.

Nguyen, H. N., Tham, J, Khatibi, A. and Azam, S. M. F. (2019). Enhancing the Capacity of Tax Authorities and its Impact on Transfer Pricing Activities of FDI Enterprises in Ha Noi, Ho Chi Minh, Dong Nai, and Binh Duong Province of Vietnam, *Management Science Letters*, 9 (8): 1299-1310.

Øvretveit, J. (2004). Nordic privatization and private healthcare. *The International journal of health planning and management*, *18*(3), 233-246.

Pai, Y., & T. Chary, S. (2013). Dimensions of hospital service quality: A critical review: Perspective of patients from global studies. International journal of healthcare quality assurance, 26(4), 308-340.

Pambreni, Y., Khatibi, A., Azam, S. M. F. and Tham, J. (2019). The Influence of Total Quality Management toward Organization Performance, *Management Science Letters*, 9 (9): 1397-1406.

Parasuraman, A. (2000). Superior customer service and marketing excellence: two sides of the same success coin. Vikalpa, 25, (3), 3-13.

Parasuraman, A., Berry, L. L., and Zeithaml, V. A. (1991). Refinement and reassessment of the SERVQUAL scale. Journal of Retailing, 67 (4), 420-50.

Parasuraman, A., Berry, L. L., and Zeithaml, V. A. (1993). More on improving service quality measurement.

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

Parasuraman, A., V. A. Zeithaml and L. L. Berry (1988). "SERVQUAL: A multiple-item scale for measuring consumer perc." *Journal of retailing* 64(1): 12.

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

Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1988). SERVQUAL: A multi-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64, spring, pp. 21-40.

Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1994). Alternative scales for measuring service quality: a comparative assessment based on psychometric and diagnostic criteria. Journal of Retailing, 70, (3), 201-30.

Pollack, Birgit Leisen. (2008). The nature of the service quality and satisfaction relationship. Managing Service Quality, 18, (6), 537-558.

Pushpakumara, W. D. H., Atan, H., Khatib, A., Azam, S. M. F. and Tham, J. (2019). Developing a Framework for Scrutinizing Strategic Green Orientation and Organizational Performance with Relevance to the Sustainability of Tourism Industry, *European Journal of Social Sciences Studies*, 4 (3): 1-18

Rachmawati, D., Shukri, S., Azam, S. M. F. and Khatibi, A. (2019). Factors Influencing Customers' Purchase Decision of Residential Property in Selangor, Malaysia, *Management Science Letters*, 9 (9): 1341-1348

Ramsaran-Fowdar, R. R. (2008). The relative importance of service dimensions in a healthcare setting, International Journal of Healthcare Quality Assurance, (1), 104-124.

Reidenbach, E. R. and Sandifer-Smallwood, B. (1990). Exploring Perceptions of Hospital Operations by a Modified SERVQUAL Approach. Journal of Healthcare Marketing, 10, (4), 47- 55.

Rust, R. T., & Oliver, R. L. (Eds.). (1994). Service quality: New directions in theory and practice. Thous and Oaks, CA: Sage Publication, Inc.

Sekaran, U., & Bougie, R. (2010). Research Methods for Business: A Skill. Building Approach. UK: John Wiley.

Strasser, R. (2003). Rural health around the world: challenges and solutions. *Family practice*, *20*(4), 457-463.

Svensson, G. (2006). New aspects of research into service encounters and service quality. International Journal of Service Industry Management, 17 (3), 245-57.

Tarofder, A. K. and Azam, S. M. F. and Jalal, A. N. (2017), "Operational or Strategic Benefits: Empirical Investigation of Internet Adoption in Supply Chain Management", *Management Research Review*, 40 (1): 28-52

Tarofder, A. K., Haque, A., Hashim, N., Azam, S. M. F. and Sherief, S. R. (2019). Impact of Ecological Factors on Nationwide Supply Chain Performance, *Ekoloji*, 28(107): 695-704

Teshnizi, S. H., Aghamolaei, T., Kahnouji, K., Teshnizi, S. M. H., & Ghani, J. (2018). Assessing quality of health services with the SERVQUAL model in Iran. A systematic review and meta-analysis. *International Journal for Quality in Healthcare*, 30(2), 82-89.

Tham, J., Yazid, M. S. A, Khatibi, A. A. and Azam, S. M. F. (2017), "Internet and Data Security – Understanding Customer Perception on Trusting Virtual Banking Security in Malaysia", *European Journal of Social Sciences Studies*, 2 (7): 186-207

Thawesaengskulthai, N., Wongrukmit, P., & Dahlgaard, J. J. (2015). Hospital service quality measurement models: patients from Asia, Europe, Australia and America. Total Quality Management & Business Excellence, 26(9-10), 1029-1041.

Udriyah, U., Tham, J. and Azam, S. M. F. (2019). The Effects of Market Orientation and Innovation on Competitive Advantage and Business Performance of Textile SMEs, *Management Science Letters*, 9 (9): 1419-1428

Untachai, S. (2013). Modeling service quality in hospital as a second order factor, Thailand. *Procedia-Social and Behavioral Sciences*, *88*, 118-133.

Yousapronpaiboon, K. & William C. (2013). A Comparison of Service Quality between Dental hospitals in Thailand, International Journal of Business and Social Science, 4(11), 176- 184.

Zeithaml V. A., Parasuraman A. and Berry L. L. (1985). Problems and Strategies in Services Marketing. Journal of Marketing, 49, 33- 46.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The nature and determinants of customer expectations of service. Journal of the Academy of Marketing Science, 21, (1), 1-12.