

The Relationship between Healthcare Quality and Inbound Health Tourism: Saudi German Hospital Case Study Cairo - Egypt.

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Abstract

The development and execution of a quality measurement and improvement approach based on a particular combination of two TQM tools SERVQUAL and QFD was investigated in the thesis. The approach focused on whether it was appropriate to apply these quality improvement strategies to the Saudi German hospital medical tourism industry. It was progressively tested and enhanced in three medical tourists' attractions located in Cairo – Egypt. The introduction chapter delineates the research's significance, while the literature review develops relevant theoretical viewpoints.

The following research question was the focus of the study: How can medical operators enhance their service quality by finding a tool for measuring it? Case study from each of the health medical tourism industry's cultural, heritage, and environmental segments were chosen to serve as the research's setting and data source. These are all well-established companies with respectable market and industry profiles. The research instrument has been refined and the execution of the research technique in the extended major case study has been backed by the investigations conducted through two complementary case studies. To assess the accuracy of the data from the various surveys and to account for variations in the outcomes, statistical analyses were used. According to research findings, the combination of the two tools would give small business owners a way to connect customer service satisfaction measurement to the fundamental operational elements of their enterprise with additional refinement and adjustment through ongoing usage. Any major variations in customer expectations about standards of quality service can be partially explained by looking at the visitor profiles of the medical tourists' attractions that were gathered from the surveys. The results indicate that small medical tourists' attractions should routinely implement the combined SERVQUAL and QFD quality management technique as a tool for quality improvement to meet customer satisfaction and help achieve external quality service accreditation.

Keywords: Healthcare Quality, Inbound Health Tourism, Egypt.

1.1 Introduction

This thesis is focused on the application of Total Quality Management (TQM) principles to a medical service industry, in this case the Egypt medical tourism industry with particular emphasis on the smaller medical tourists' attraction providers. The aim has been to investigate the adaptation of TQM tools and techniques to meet the needs of medical service organizations within the medical tourism industry. Most of the principles and techniques of TQM have been developed for large sized manufacturing or production companies and are, in general, too complex for small operators. Additionally, they also need to be adapted to meet the organizational requirements of service organizations rather than production companies.

For this reason, several specialized tools such as SERVQUAL have been developed for service industries. However, TQM is recognized as an important methodology for the configuration and implementation of competitive strategy at both national as well as international levels for the small and medium sized enterprises (SMEs).

International medical tourists are visiting Egypt interacts with a chain of organizations beginning and ending with the airline or cruise ship on which they arrive. In between arrival and departure, the medical tourists interact with a variety of small attractions and destination experiences that are of often variable quality. The larger organizations such as the airlines already have significant quality assurance programs. However, for small operators, the full TQM requirements as encapsulated in the Malcolm Baldrige type award are too complex and costly to implement. Simpler but still robust techniques are required to help the SME operators to satisfy their customer's service quality needs. (Graf et al., 2024)

The quality assurance research group at Massey University has been working to develop a portfolio of quality improvement tools for small service operators and this thesis represents a continuation of this program. An important further aim is to educate the operators to use these tools to assist their companies to meet the existing industry sponsored quality assurance assessment programs such as Qualmark and the Egypt Medical tourism Awards. Because every interaction the medical tourists have with the host can affect their perception of the country they visit, it is extremely important that all parts of the service delivery chain provide a highly satisfying experience for the medical tourists.

The medical tourism industry is a major component of the service sector in Egypt. Medical tourism is a very significant contributor to the Egypt economy. It is the country's single largest export sector. In 2004, medical tourism brought 2.8 million international visitors into the country, which contributed over \$7.5 billion to the Egypt economy. (Kim et al., 2016)

The research study evolved out of the recognition that operators of SME businesses in Egypt would benefit from having a means of translating the results of visitor satisfaction surveys into a concrete plan of action. Medical tourists' operators frequently attempt to collect visitor opinions but can find it difficult to make use of the results of these surveys in any strategically significant manner. Using appropriate tools in a synergistic way may help to close this gap between awareness and action. There are three important questions associated with the attainment of the main research aim or purpose.

- What are the appropriate service quality measurement techniques that are applicable to small medical tourists' attractions?
- How can SERVQUAL be used as a quality and customer satisfaction measurement in these medical tourists' attractions?
- How effective can the contribution by internal quality assessment tools such as SERVQUAL and QFD be towards the continuous improvement of service quality in small tour attractions?

2. Literature Review

2.1 Background

As stated in Chapter One, this research project reviews the applicability of SERVQUAL as a technique for the identification of medical tourists' service requirements and priorities as an input to Quality Function Deployment (QFD). The House of Quality in QFD in turn is the next progressive step required to establish a programs of quality improvement for the provision of services to medical tourists. The target group for this study is the small to medium sized provider of medical tourists' attractions. In many cases, they constitute part of the "front line" of the medical tourism industry on which the larger organizations such as tour operators, airlines and accommodation suppliers rely on attracting and satisfying medical tourists' needs. The purpose of the literature review is to place quality service improvement as an issue within both the national and international research context. For this reason, a review of the current state of research on quality in the medical tourism industry, SERVQUAL and QFD provided the basis from which to establish the research methodology. (Miltner et al., 2021; Oldland et al., 2020)

This section therefore reviews these three fields and leads to the confirmation and detailed identification of the actual research problem studied in this project. Also, for this project it was important to relate the quality improvement tools and processes to the external assessment quality award programs in Egypt. These award programs are important for medical tourists' operators to compare their performance with others in the industry

via an independent external assessment process based on international criteria. Accordingly, a brief review of the award programs currently used in the Egypt medical tourism industry is provided. Much of the process described in this thesis could also be used in partial fulfillment of the requirements of the ISO 9000 quality standards but, at this stage this has not been the focus of the program. This chapter examines the key quality management assessment and improvement tools, which are applicable in the service and medical tourism industry by reviewing the fundamental concepts of quality, Total Quality Management system as well as the internationally recognized quality management practices documented in the literature.

The section is divided into five sections. The first part of the related literature reviews the various definitions of quality and Total Quality Management, followed by an introduction to ISO 9000 quality systems and the Malcolm Baldrige National Quality Awards. The Egypt Business Excellence Awards is investigated next as one of the internationally recognized quality management programs. From the general to specific, the third part of the literature examines the service quality measurement models, such as the SERVQUAL instrument and QFD, on which the study is grounded, as outlined by referring to leading writers. Next the literature covers the quality management system and practices developed in the Egypt medical tourism industry. It identifies the significance of quality improvement programs for the Egypt medical tourism industry and problems that exist for small and medium sized enterprises in the implementation of quality management systems. The final part of the chapter summarizes the appropriateness or otherwise and the issues associated with existing quality assessment and improvement tools and techniques currently being applied in the service and medical tourism industry. It looks at the present research in developing specific quality management techniques applicable in the Egypt medical tourism industry.

2.2 Quality Management Frameworks for the Service Industry

2.2.1 Concepts of Quality

Quality can be considered as the attributes of a product and/or service, WMCH as perceived by the customer, make the product/service attractive to them, and give them satisfaction. Quality focuses on adding value to the product/service (Marco-Ibáñez et al., 2023; Servetkienė et al., 2023; Wulandari et al., 2021)

2.2.2 Importance of the Service Quality System

Service quality has become an important issue for many medical tourism organizations due to the growing sophistication of customer demand and the globalization of such attitudes and skills. The adoption of quality

management techniques is generally regarded as having positive implications for business performance and is viewed as an effective means for organizations to achieve competitive advantage (K S et al., 2023; Miltner et al., 2021; Oldland et al., 2020; Upadhyai et al., 2019). A quality management system is defined as the organizational structure, responsibilities, procedures, processes, and resources for implementing total quality management (Ajmi & Aase, 2021; Kalf et al., 2022; Mosadeghrad, 2014). The purpose of a quality system is to set up a framework of reference points for the company to ensure that every time a process is performed the same Information, procedures, techniques, abilities, and controls are applied and used consistently. A quality system is considered as one of the key building blocks for an organization's TQM program. Earlier research in the Egypt medical tourist's attraction sector showed, however, at that stage that only 13 % of companies surveyed had used TQM for managing service quality and 30% of the companies used customer surveys and customer feedback to measure service quality (K S et al., 2023; Otokiti, 2019; Upadhyai et al., 2019)

Other characteristics, such as the fact that consumption and production are partly simultaneous activities and that customer's participation in the service production process, follow from the process characteristics. the consumption of services is classified as process consumption, whereas the purchase of physical objects is referred to as outcome consumption. This has implications for medical tourism SMEs both in their day-to-day operations as well as for their strategic positioning within their industry segment and area of business activity. (Allen-Duck et al., 2017; Lin et al., 2020)

Service customers usually have different needs, tolerance and expectations and there also exists a wide difference in their willingness and ability to pay for the desired service that is on offer. The service provider therefore must make available a range of different types of services to cater for its range of customers. The control of service process standards is often in practice dependent on the behavior and attitudes of staff, their training, and commitment to continuous improvement and customer care.

A common definition of service quality is that the service should correspond to the customers' expectations and satisfy their needs and requirements. the concept of service should be approached from the customer's perspective. It is the customer's total perception of the outcome which is the service. It forms the perception of quality and determines whether they are satisfied or not. However, customers have different values and different grounds for assessment, and they may perceive the same service in different ways. in service organizations, as compared to manufacturing firms, the emphasis is on conformance to customer

expectations as opposed to manufacturing activities where the focus is on conformance to specifications.

Because of the very nature of services, businesses must meet consumer expectations and ensure that post-experience perceptions of the service either match or surpass these expectations. Furthermore, because customers have varying expectations and distinct demands and motives, it is typically challenging to quantify consumer expectations and performance criteria. Services are also more labor-intensive, and customer impression of service quality is largely influenced by staff behavior and performance. The talk above demonstrates how crucial quality is to service organizations and how much value they should place on it. (Araujo et al., 2020; Endeshaw, 2021)

Employee participation in the program and senior management leadership are essential for the effective development and execution of a high-quality program. Knowledgeable employees understand the importance of excellence in all aspects of their workdays. A quality management program's success depends on all employees receiving adequate training and development. Therefore, the organization's strategic business plan needs to incorporate measures to increase quality. By considering quality as a strategic operational policy, the business can adapt to the demands of its customers and the developing competitors. (Gustavson et al., 2022; Mosadeghrad, 2014)

A study on the quality management practices of service firms identified three categories of tactics used by businesses in Egypt to improve the quality of their services. The results demonstrate that firms place a high premium on preserving service quality, and that the most widely used quality management strategies are service management, quality control, and quality assessment. The marketing department frequently drives the development of quality practices in the services industry, and a customer-focused approach is crucial to the success of quality programs like Total Quality Management (TQM)

2.2.3 Service Quality Measurement Tools

Importance-Performance Analysis (IPA) and SERVQUAL are two of the primary research tools that have been created throughout the years to examine the ideas of quality and customer happiness in the service sector. IPA is a process that illustrates the relative significance of different product features and the company's success. One of the main advantages of employing JPA is the identification of areas for service quality improvements. Its use has significant consequences for decision-makers in marketing and management. Using a straightforward visual examination of

this matrix, policy makers can determine which areas require the concentration of resources and programs by visualizing the results graphically on a two-dimensional grid.

Expectancy disconfirmation techniques like SERVQUAL aid in the explanation of customer satisfaction ratings, service quality perceptions, and consumer perceptions. In studies of service quality, the confirmation-disconfirmation paradigm has been widely used. It implies that customers can assess their experiences against expectations, which serve as a frame of reference. Consumers create their expectations before utilizing or buying a good or service. These standards serve as the benchmark for evaluating real performance. Expectations are affirmed when perceived performance matches expectations, disconfirmed when perceived performance does not meet expectations, and affirmed when perceived performance exceeds expectations. The purpose of this is to investigate how a customer's pre-purchase expectations and their perceptions of the caliber of the services they obtained are related. When evaluating the quality of the performance, customers frequently find themselves comparing the service performance to their expectations. these expectations in turn offer a starting point for determining a customer's degree of happiness. Based on the SERVQUAL instrument, quality service assessment has undergone additional development and modifications. (Couceiro et al., 2022; Melorose et al., 2016)

With the same components as SERVQUAL, they presented SERVPERF, focusing solely on the effect and service quality. LODGSERV, a measurement tool that reflects distinctive features of lodging facilities and contains items similar to SERVQUAL. Their research yielded statistically significant results on four of the five dimensions, except for the "reliability" element. The two components of service quality that highlighted are the technical aspect of the service being delivered and the functional aspect (i.e., how the service is provided). By assessing service quality, one can identify problems related to quality, evaluate results prior to and following modifications, and establish clear guidelines for service performance. (Daykhes et al., 2020; Johnson & Garman, 2015; Russkikh et al., 2022)

Numerous researchers argue that difference scores produce more effective applications than performance ratings alone, even if there is some evidence that utilizing SERVPERF alone results in relatively high levels of satisfaction. Each method has the potential to be a very helpful tool for monitoring changes in visitor satisfaction over time and outlining the benefits and drawbacks of the business. A precise performance measurement is provided by SERVPERF and other direct disconfirmation metrics. It acts as a barometer of how well the service has performed based on the customer's overall level of pleasure or discontent with the service contact. There is no

need to measure expectations because clients' expectations vary depending on the services they receive, and the SERVPERF instrument does not try to estimate difference scores. One argument put out was that precise quantification of expectations can only be achieved prior to the service contact. On the other hand, when performance indicators are the only ones considered, a lot of important information is lost from an operational perspective (Allen-Duck et al., 2017; Servetkienè et al., 2023). In reality, operators are more interested in the practicability of such tools, their ability to provide timely and relevant customer feedback and to assist with quality improvement and decision making. While the debate continues as to the one best method of evaluating customer perceived service quality, academics run the risk of forgetting about the original purpose for which such techniques were designed i.e. their value as diagnostic quality benefits identified are:

- It is good at gaining the views of customers regarding service encounters, e.g. customer relative importance, expectations, and satisfaction.
- It can alert management to consider the perception of the service of both management and customers.
- To guarantee that expectations are met, plans and methods can be developed based on addressing the service gaps.
- SERVQUAL can pinpoint areas of strength and weakness.
- It can rank locations of poor service.

The application of SERVQUAL in the service and medical tourism industry, Service quality can be defined as Expectations exceeding performance results in perceived quality being below desirable levels, which leads to customer unhappiness. According to this claim made by Parasuraman et al., SERVQUAL can be modified slightly to fit the needs of every type of service organization. Managers can identify the most effective areas for performance improvement with the aid of information on gaps in service quality. Setting priorities for performance development is made easier when the biggest negative gaps are paired with an evaluation of the areas with the highest expectations. claim that SERVQUAL has numerous possible uses. The functions of SERVQUAL are periodically tracking service quality trends; determining the relative importance of the five dimensions in influencing customers' overall quality perceptions; categorizing a company's customers into several perceived-quality segments; and tracking the level of service provided by each unit of multi-unit companies.

(Lin et al., 2020) suggest the SERVQUAL model as an instrument for the measurement of perceived service quality within a wide range of service categories, and identified gaps between client and management perceptions of hotel attributes and service offered, affecting four major travel and

medical tourism sectors. It is argued that the existence of these gaps is a source of dissatisfaction with services offered. They indicated that the successful provision of a service begins with the ability of management to assess the client's expectations correctly. The quality of service provided is subjected to an evaluation process by which the consumer compares what is received with expectation. Service quality is not only influenced by the provision but also by the nature of the expectation.

(Couceiro et al., 2022) also support the view that the SERVQUAL instrument can facilitate multi-service segment comparisons to the benefits of organizations in those segments and those responsible for management in the entire medical tourism system. A modified SERVQUAL instrument was developed to measure the quality of service provided in Egypt medical tourists' attractions. For example, modifications were made in the wording of the questionnaire, the service quality dimensions were re-grouped, and the service quality standards and procedure section to identify different types of service quality standards were expanded in each of the dimensions in order to reflect the nature of a particular attraction. The results from the quantitative study of Egypt museums and historical attractions have helped the medical tourists organizations in the identification of their training needs, the standards and procedures required for service delivery as well as areas to be improved.

SERVQUAL was applied in combination with the ISO 9000 quality standards. The SERVQUAL instrument to hotels in Crete that have adopted the ISO 9000 quality standard. The investigation of those hotels indicated that the ISO standard has not been widely adopted in hotels, because it requires the formation of formal quality procedures for the implementation and control of quality in all aspects of the operation. The findings of the study on hotels suggest that leisure guests in the Cretan hotels view tangibles as the most important satisfaction attributes. However, the management in the study regarded tangibles as the least important quality dimensions for guests. This difference "raises some issues about how managers should monitor quality and prioritize resources to manage it effectively". SERVQUAL was applied to a range of Scottish council services, and the contribution of the service quality measurement was assessed. (Mishra, 2012; Stackpole et al., 2021)

The potential use of SERVQUAL were identified as: understanding current service quality; comparing different customer groups; comparing different parts of the service; understanding the internal customer; and performance over time. The SERVQUAL instrument needs to be tailored to the UK public service environment, including wording and distribution of expectations and perceptions statements. This study has indicated that

SERVQUAL surveys should be conducted every year to allow yearly comparison and determine how service improvements have affected customers' perceptions and expectations of the service over time and the effectiveness of service development and improvement initiatives in targeted dimensions (Graf et al., 2024; Kim et al., 2016)

The two key issues that have been challenged by researchers with respect to the gap analysis approach to service delivery management is firstly the nature of the expectations recorded, and secondly the utility of measuring expectations at all. It has been suggested that expectations are only formed as a result of previous service encounters, that is perceptions feed directly into expectations. (Araujo et al., 2020) questioned the meaning of an expectation measure and indicated that a substantial portion of the variance in the expectation scale is due to differences in respondents' interpretations of the question being asked rather than to variance in respondents' attitude. A study of the hospitality industry found that the five dimensions of service quality did in fact exist, but they were significantly different from the original five dimensions identified by the SERVQUAL authors. There has been debate about whether it is practical to ask consumers about their expectations of service immediately before consumption and their perceptions immediately after. Some analyses have therefore used combined single scales to measure gaps

Despite the criticism among researchers, expectations are considered as important in quality service delivery. Service providers need to discover what customers expect. Expectations are mainly from past experience with similar services, but word-of-mouth and mass media also play roles. If many first-time customers use the service, expectations may not be well-formed. The service provider is well advised to determine just how well formulated and how realistic the expectations of these new customers may be. Although the SERVQUAL instrument has been criticized by some researchers (Johnson & Garman, 2015; Mishra, 2012; Stackpole et al., 2021), it is still regarded as a leading measure of service quality. The gap model, a valuable contribution to service literature, identifies four internal discrepancies in managerial perceptions of service quality and tasks related to customer delivery. Gap 1 pertains to service delivery, while Gap 5 pertains to the customer, serving as the true measure of service quality. The service gap model is utilized to ascertain management attitudes and opinions towards the service quality ethos and its importance in everyday management practice.

2.3 Quality Management Approaches

Quality management is about competitive capacity, reputation, and profitability (Russkikh et al., 2022). There are many different strategies in

quality management. The quality evolution primarily aimed to enhance internal processes, organizational systems, methods, and tools, quality management is based on key principles:

- Understanding what people want from a service or product and delivering it to match those needs (fitness to purpose).
- Drawing detailed specifications based on the articulated customer needs and delivering carefully to them (conformance to specifications).
- Understanding and managing the variables in the manufacturing / service delivery process which can lead to deviation from specification (process control). (Upadhyai et al., 2019)

All companies can achieve business excellence by implementing Total Quality Management (TQM), a tried-and-true method. TQM has been widely utilized as a system of total quality management ever since it was first introduced in the 1950s. To achieve customer satisfaction, companies adopt Total Quality Management (TQM), which is an all-encompassing effort including all members of the workforce and centered on continual improvement. According to TQM, an integrated system of tools, procedures, and training is used to continuously acquire customer satisfaction, and thus defines and supports the culture of the organization.

The Egypt Business Excellence Awards was developed by the Egypt Business Excellence Foundation in 2000, from the former National Quality Awards that started in 1992. It is currently the only quality program in Egypt that provides results and feedback to applicants based on the internationally recognized Malcolm Baldrige National Awards performance excellence criteria. Each year the Foundation updates Egypt-specific version of the business excellence framework as a benchmark against international best practice. Organizations employing the framework claim improved employee relations, increased productivity, experienced greater customer satisfaction and loyalty, and increased market share and profitability. The Awards criteria also focus on the following areas:

- Strategic objectives, performance measures to enable assessment of the results - the key performance indicators that track conformity to quality specifications.
- The design of a measurement framework as well as how the company carries out their performance appraisal and what they do with the results of the analysis.
- How the organization learns about customer and market requirements, preferences, and expectations - based on its understanding of the outputs that it creates and the outcomes that they generate for their customer

segments.

- The organization's system for design, management and improvement of processes relating to product and service design and delivery.
- Actual performance in key business areas which can provide comparative information from recent years to enable assessment of trends

3. Research Methodology

This study has adopted a mixed approach employing quantitative and qualitative research methodologies. The SERVQUAL customer surveys were centered on quantitative data collection using structured questionnaires while the staff focus group data collection process as used in building the House of Quality was primarily qualitative in nature. The application of mixed methods allows the simultaneous and integrated collection of qualitative and quantitative data during the fieldwork phase. To ensure the applicability of the research methodology, the linked SERVQUAL and QFD techniques were pilot tested in three case studies. However, when the consistency of the SERVQUAL results was tested, it was found that there were some internal disparities that suggested in turn that an investigation of the possible demographic causes of the internal SERVQUAL survey variations would help to identify differing requirements of particular market segments.

They are SMEs with mixed domestic and international customers, and all broadly located in the 'heritage' area e.g. the Egyptian culture, natural phenomena and with man-made elements and transformations. They are typical of such types of medical tourists' attractions in Cairo. The advantages associated with the case studies are that in-depth data is collected on multiple cases. However, there may also be disadvantages such as the findings often being specific to the case studied and the results of research in that case are not always able to be generalized to other case types and contexts

Three case studies were selected from the city of Cairo and its immediate environment. This region is considered a key and well-established destination, popular with both international and domestic visitors. The Cairo district is renowned for its medical tourists attractions including a network of lakes, geothermal activities, Egyptian cultural attractions and outdoor pursuits. Cairo has a long historical association with medical tourism from the early spa developments that started over a century ago to the contemporary range of attractions. Due to its well established reputation, profile and developed infrastructure, Cairo has experienced continuous growth in medical tourists arrivals over the past decades. The majority of international visitors to Cairo are from Australia, Japan, USA,

and Western Europe particularly Germany and the United Kingdom and the emerging Asian markets. The case study companies were selected from the Cairo District attraction list, which represents the majority of the popular medical tourists attractions within the immediate medical tourists region. These organizations are all small to medium sized and have all been Egypt Medical tourism Awards winners. They were chosen to help develop answers to the research question and related conditions as set out in the associated research objectives. The selection of these Egypt Medical tourism Awards winners and Qualmark registered companies as the target setting was considered as the most appropriate way to gain the supportive response and information required given the project circumstances. This enabled the researcher to select appropriate group of visitor participants to take part in this research project. (Graf et al., 2024; Kim et al., 2016)

The case study methodology adopted a three-step approach. In the first instance, one-to one semi-structured interviews were conducted with the management teams in each establishment to set up objectives of the project and to develop and fine tune the research instrument - the SERVQUAL questionnaire. The next step involved the application of the SERVQUAL instrument in order to ascertain any actual and perceived gaps between customer expectations and perceptions of the service offered in each attraction. The final step was the trial application of the results of the SERVQUAL questionnaire to the construction of the House of Quality within QFD. (K S et al., 2023; Upadhyai et al., 2019)

4. Results and Discussion

This part first provides background details of the tour attraction which constitutes the case study. It then illustrates the process of using SERVQUAL as an initial tool for measuring the visitors' expectations and perceptions of service quality. Based on the pilot application of SERVQUAL and QFD methodology demonstrated in the three companies, an extended implementation of the quality improvement program was carried out in Saudi German Hospital in 2005. The company was selected as the principal case study because of staff size and the willingness of the management to continue to participate in the project as well as their relatively long-term association with the study. A substantial SERVQUAL survey was undertaken in Saudi German Hospital between January and March 2005 to ensure the information collected was representative of the population from which the sample was taken. The purpose of this chapter is to identify the trends and patterns in the visitor responses regarding their expectation and perception of the tour experience.

The results of the visitor surveys are linked and contrasted with a staff

survey conducted in March 2005 to determine the presence of any service quality gaps. The information obtained was used in the next step in the development of a quality improvement program, a House of Quality that was implemented within the key operational departments of Saudi German Hospital as part of the final phase of the research program. The formulation and implementation of the House of Quality were achieved using staff focus groups. The process was organized to introduce the concept of total quality management strategies to the service culture of the company and to assist management to construct a strategic plan and realizable operational objectives. This chapter presents the process and results of the full implementation of the SERVQUAL surveys and the House of Quality in QFD. Inferential statistical analysis was employed to test the reliability of the data in terms of customer expectation and perception by demographic variables. Hypothesis testing shows that customer expectation and perception for some service features provided by Saudi German Hospital may be in part related to external factors such as gender, ethnic groups, and educational levels of the respondents.

4.1 SERVQUAL Surveys Conducted in Saudi German Hospital

The initial contact with Saudi German Hospital started when the research proposal was presented to the management team. An official letter of approval was given by the CEO of Saudi German Hospital to get the tourist attraction involved in the research as a case study. A modified SERVQUAL questionnaire was generated from a focus group meeting with the management team of Saudi German Hospital on November 1 998. The aim of the survey was to measure the visitors' expectations and perceptions of service quality provided by the Saudi German Hospital. The questionnaire consists of 23 questions, which covers the five dimensions of the service quality (see Table 4.2).

4.1.1 The principal survey

A formal approval for the final implementation of the quality program was obtained from the management of Saudi German Hospital in early December 2004. a further experiment was developed in which a large sample was targeted for the SERVQUAL surveys. The visitor survey data was collected by an independent interviewer who was trained and worked with the bus drivers over the two-month survey period. To ensure the consistency of the data collection process, the interviewer kept a daily log of survey work that was scrutinized and recorded at the completion of each daily survey cycle. A record was also kept of the progress of each tour group that was being surveyed to monitor any external or logistical conditions that may be considered to unduly influence the sampling and questionnaire administration process. The sample population of visitors was selected based

on a proportion of the average number of visitors per night to the Saudi German Hospital. A full list of bookings together with visitor nationalities was made available by Saudi German Hospital to facilitate the sampling process. The visitors were given full information about the purpose of the research before the SERVQUAL questionnaires were distributed. The visitor expectation component of the surveys was conducted before the tour started and the perception component was undertaken after completing the tour to ensure the accuracy of the respondents' opinions. The visitor surveys commenced on the 15th of January and finished on the 10th of March 2024. The data was collected during the wintertime as this fits the peak to shoulder season for tourists to visit the Saudi German Hospital.

A sample of 200 visitors to the Saudi German Hospital were sufficient based on the company's estimate that around 1200 visitors would visit the attraction during that period as noted in Chapter Three. Every other day in the week, two out of five busloads of visitors were randomly selected each night to participate in the survey. Probability sampling methods were used to give visitors an equal chance to participate in the survey. A balance between the profiles of the visitors for the various days of week was established to improve the representativeness of the sample. A total of 1832 questionnaires were collected of which 1787 were usable for data analysis. Participants were generally keen to have their opinions solicited for the survey questions. A staff survey was conducted at the end of March 2024. 30 out of 43 full-time staff participated in the survey, giving a response rate of 70%. Due to time constraints and with management approval, part-time and casual staff was not included in the survey. This also ensured that the staff contribution came from those with the most depth and breadth of experience in working with the company's clientele. The information collected was initially analyzed using the SERVQUAL gap model to determine the level of service quality as perceived by the customers and the extent to which the staff understand the expectations of their customers.

4.2 The SERVQUAL Survey Results

The results obtained from both the visitor and staff surveys are discussed in the following subsections using descriptive statistics to show the characteristics of the research sample. A measure of central tendency such as mean scores for each question identified the most common features of the responses. Frequency distribution of customer expectations and perceptions for each SERVQUAL question was analyzed before testing the statistical significance of the results.

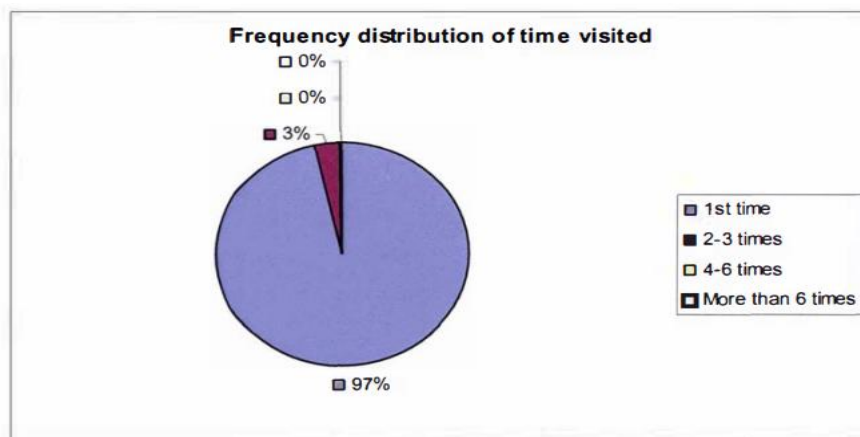


Figure 4.1 Time Visited

4.2.1 Visitor Profile

Demographic profiles of the visitors were collected to indicate the major market segments that participated in the surveys over the two months. The information was used further in the comparison and analysis of customer expectations and perceptions in relation to respondents' gender, educational level, and country of origin in the hypothesis testing of the statistical significance in the sample results. As shown in Figure 4.1 and Figure 4.2, the majority of visitors surveyed over this season were first time visitors (97%). There were a small number of repeat customers (3%). More than one third of respondents came with their families (39%) or as part of an organized group (31%). Some of them came with friends (23%). Only a small number of respondents came by themselves (7%).

Travel with

The results show a wide range of distribution in age groups; however, the largest group was visitors who were between 20 to 24 and the over 60-year groups followed by the age group of 25 to 29. As shown in Figure 4.4, less than one-third (28%) of the respondents were professionals. The second largest group was retired people (20%) followed by students (17%). The other occupational classifications such as management, service and sales accounted for less than 10% of the total visitors surveyed. There were also a small number of participants (1%) who are grouped as others, such as a homemaker.

The majority of the respondents had a high educational attainment. For example, more than half of the participants had a tertiary educational qualification (61 %), with 25% having secondary school and 13% with polytechnic qualifications. Only a small number of respondents (0.8%) had received a primary level of education only and others (0.2%) had some other forms of education such as training certificates (see Figure 4.5).

Educational levels

The participants came from 42 different countries. More than one third of the visitors surveyed came from the UK (36%), followed by Australia (12%), USA (11%), Egypt (10%), and Canada (6%). Most of the remaining visitors surveyed came from a mix of European countries. Many visitors (75%) came from countries with English as the first language. Most of the respondents (91 %) came for holidays. Some of them came to visit friends and relatives (4%). Only a small number of respondents came to the city for business (3%) and for other reasons (2%) such as locals accompanying friends and relatives.

As shown in Figure 4.6, more than one third of the respondents came to know about Saudi German Hospital via organized tours such as Kiwi Experience, Magic Bus and other accommodation providers. Word of mouth was the main source of information for this tourist attraction. Only a small number of respondents found Saudi German Hospital via the web site and road signs. In terms of gender distribution of this survey, it is interesting to find that the number of female respondents (57%) was slightly larger than that of males (43%). This is possibly attributable to the fact that when couples were handed a questionnaire, some male customers would pass it on to their female partner to answer.

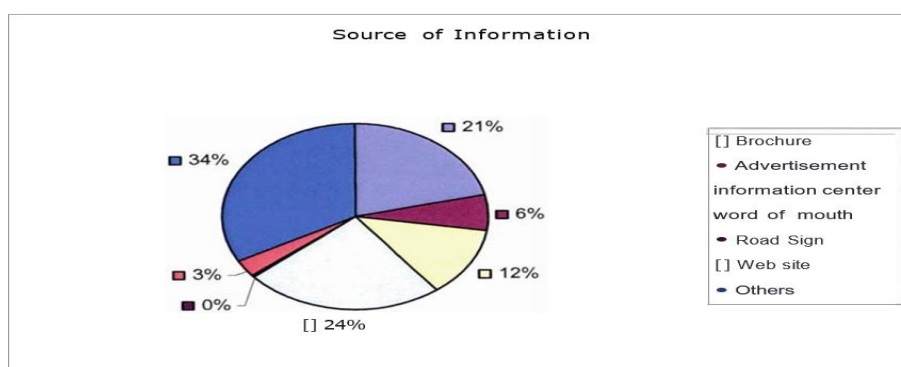


Figure 4.6 Source of Information

4.4.2 Customer expectation and perception gaps

A gap analysis was conducted to compare the difference between visitors'

expectations and their perceptions of the services and facilities. The first step for the gap analysis was to estimate a mean score for each of the 23 SERVQUAL questions. This included visitor expectation and perception as well as the management and staff estimation of importance and customer expectation of service provided. Subsequently, the difference between the mean scores was calculated to give the appropriate gap by subtracting the score of perception from that of expectation. The average scores of expectations and perception were compared to see the gaps between the level of customer expectation and their satisfaction for the visitors surveyed

As shown in Appendix D 2, the average scores of perception and expectation gaps were positive except for "toilets are provided and are clean" (Q 13). It means that on an average basis, customers were satisfied in almost all the service areas.

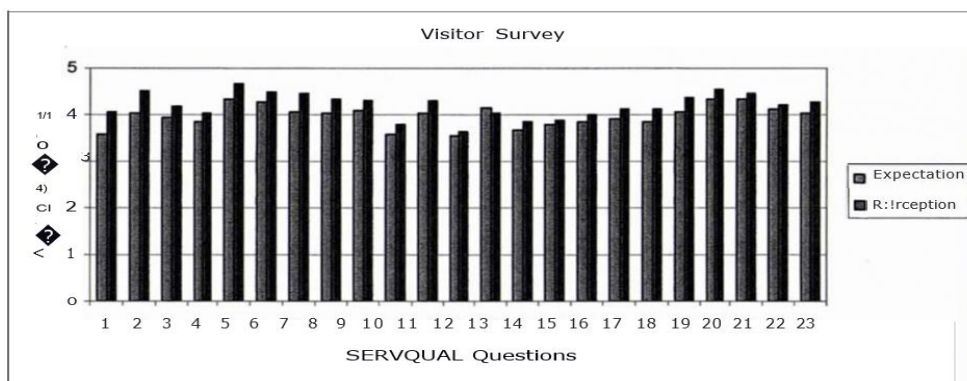


Figure 4.7 Comparison of Customer Expectation and Perception

The positive areas The service features with negative gaps or smaller positive gaps have indicated the areas for improvement for the organization to satisfy and delight their future customers.

4.4.3 Customers' understanding of the relative importance of service quality

One of the research objectives is to identify customers' judgement on the relative importance of services to their overall experience. The purpose of this part of survey was to prioritize customer requirements based on the five dimensions of the SERVQUAL questions. These ranked customer needs were used to help the company to understand the real requirements and determine the priorities in quality improvement to meet the customers' expectations. The average visitor importance scores in Figure 4.8 showed that customers considered the following facilities and services are the most

important to their tour experiences such as:

- The cultural performance (Q21)
- The whole tour experience (Q20)
- The whole tour is value for money (Q22)
- The staff are friendly (Q5)
- The staff has knowledge (Q6)
- Toilets and its cleanliness (Q13)
- Visitors feel comfortable during their visit (Q9)
- The content and length of the activities (Q23)
- The presentation of food house is authentic (Q11).

The service areas that were perceived as relatively low in importance were "the physical appearance of the city booking office" (Q1) with the remaining service areas being considered as important to the visitors' overall experience in the Saudi German Hospital. The visitor important information was further used as the input for the customer importance rating in the House of Quality which is discussed in Section 4.6.

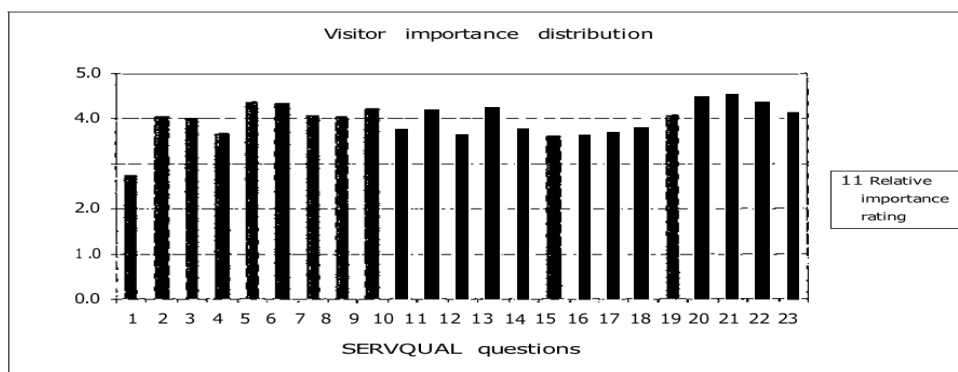


Figure 4.8 Visitor importance rating of service quality

The overall results of customer importance rating of service features show that the visitors considered the provision of core service and staff performance were the most important to their satisfaction with the whole tour experience. They imply that the most important parts of the tour experience were an authentic, informative, and understandable cultural performance together with well-trained staff who can deliver a delightful experience. Some of the peripheral services such as "comfortable during visit", "the quality and presentation of the food provided", and "the toilets" as well as the tangible part of the Saudi German Hospital are also rated as very important. A majority of the service features were ranked as important to the tourists such as the service dimensions of access and responsiveness. The lowest level of customer importance rating was found in the physical appearance of the city

booking office. This variable was considered as only "some importance" to the visitors' cultural experience as it was secondary to the main purpose of the visit.

4.4.4 Comparative analysis of expectation of service quality

The gap scores of expectation of service quality were calculated using the average of the measured visitor expectation values deducted from the staff's perception of visitors' expectation. The purpose of this comparison was to recognize the differences between staff views of customer expectation and the visitors' real expectation. Results as demonstrated in Figure 4.9 show that the overall gap scores are positive. This means that the staff's estimation of visitor expectation closely matches but generally a little greater than what their customers had expected. This further suggests that the staff surveyed have a clear understanding of how the customers actually picture their own needs.

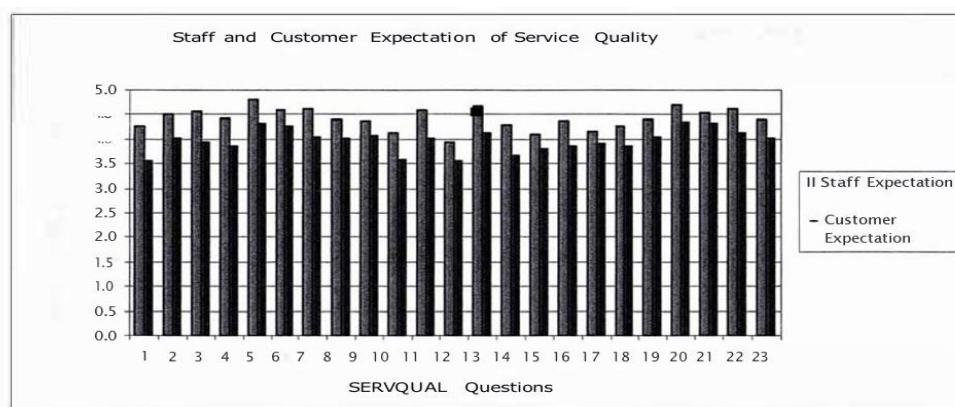


Figure 4.9 Difference between staff view of visitor expectation and measured customer expectation

4.4.5 Gap analysis of staff views of importance of service quality and visitors' expectations

The results in the staff survey show a generally high level of understanding of the importance of service quality. Management and staff surveyed ranked 12 out of 23 service areas as "extremely important" and the remaining areas as "very important".

However, the comparison of staff importance of service quality values and their view on the level of visitor expectations have shown a number of negative gaps.

As indicated in Figure 4. 1

The difference between staff importance and their perception of visitor expectation of the service quality indicates that staff did not rank certain

service elements as important to the visitors as their estimation of the customers own ranking might have been expected to be. For example, staff surveyed might think that customers had high expectations on the pricing and range of products in the tribal market, but to the customers, this service item was not as important to them as some of the other features.

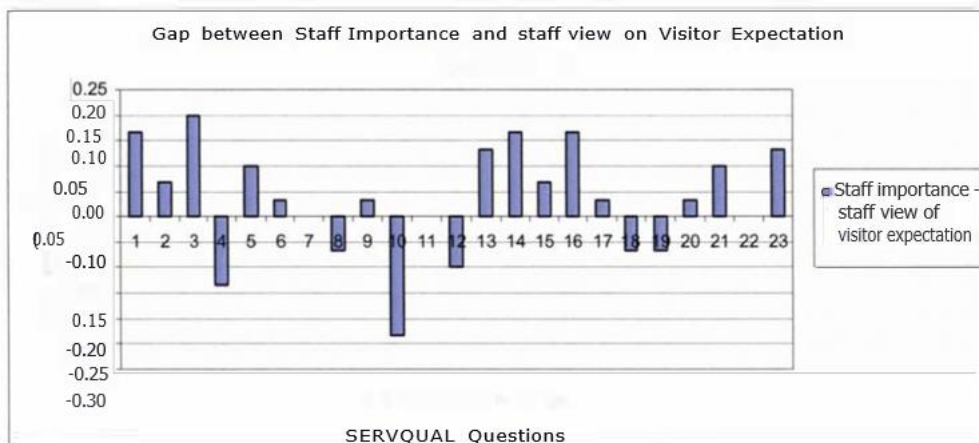


Figure 4.10 Difference between staff importance of service quality and their view of visitor expectations

4.4.6 Staff knowledge on service quality standards

As part of the staff survey, the participants were required to indicate their understanding of the availability of service quality standards and procedures currently existing or otherwise in the company. The information was grouped and presented as a percentage of the total respondents for the five dimensions of service quality. Five options were given to indicate the current status of the quality performance standards available. For example, 1 stands for "Don't know", 2 "No Standards Exist", 3 "Have Informal Standards", 4 "Have Formal Standards Not Documented" and 5 "Have Documented Standards".

As shown in Figure 4.11, more than half of the respondents think the company has documented standards in terms of operational procedures, a quality assurance program, and the overall content of program and services, while more than one third of the staff surveyed considered there are documented standards in staff training and service specifications. Overall, there appeared to be a wide spread of answers with regard to the availability of quality standards.

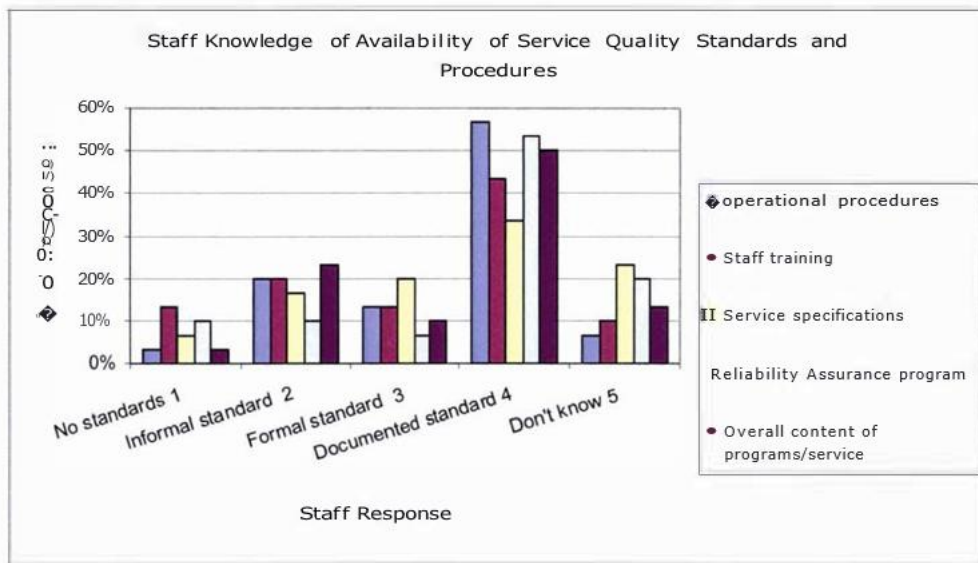


Figure 4.11 Staff understanding of quality standards

In summary, the visitor surveys using the SERVQUAL questionnaires conducted over the two months in Saudi German Hospital indicated a positive performance in the provision of facilities and services. The visitors surveyed were satisfied on average with the quality of service in all the areas covering the five dimensions of the service being offered with the exception of the toilets. The results of customer expectation and perception have shown that the level of customer satisfaction was high and their judgments on the relative importance of facilities and services being offered were identified.

Visitor comments along with the questionnaire responses have indicated areas as needing improvement including the number and cleanliness of the toilets, the length of tour, the waiting time between activities, the sound system in the concert hall, the organization of the program and the physical capacity of the Saudi German Hospital. This information will be used as the "voice of customers" in the design of the House of Quality which in turn will establish a program to give priority to actions which can be taken to improve the customer assessment of the quality of their experience.

The information will be used in more advanced analysis of customer expectation and perceptions in relation to the participant's gender, country of origin and their educational levels to see which possible factors that influence the levels of customer satisfaction. The two-month visitor survey has indicated that the Saudi German hospital experience still maintains a high

level of customer satisfaction, but it has also shown areas where improvement could be made. It was suggested that the SERVQUAL instrument is not the only way of assessing the underlying causes of gaps and that other quantitative and qualitative research can supplement the instrument.

Practitioners should consider administrating a range of instruments to measure service quality rather than just one (Williams, 1998). One of the objectives of the research program is to test the merit of the QFD program to identify and prioritize the actions that need to be taken to improve service quality. This is especially so in those situations where there are conflicting demands on staff time, costs of improvements and detailed technical requirements associated with the changes. Assuming that the improvement program arising from the QFD process is implemented, and then a further survey in the future should be undertaken to determine that the level of customer satisfaction in the current negative gap areas has been improved.

4.5 Statistical Analysis of SERVQUAL Survey Results

The gap analysis of visitor expectation and perception which was based on the average result of the overall responses has shown a balance point for a set of data. The average results of expectation and perception indicate an approximate acceptable value for each of the SERVQUAL questions.

However, the mean values might be affected by unusually large or small scores within a category of responses. When some of the values are extremely large or small compared to the majority of the responses, the mean might not be an appropriate average to represent the data. The frequency distribution of expectation and perception scores in Appendix D 6 show that more than half of the respondents have selected their expectation and perception as "high" and "very high". Only a small number of respondents chose their expectation and perception as "very low" and "low" except for Question E10 and E12 and Question P12 which represent around 10% of the total sample. It can be assumed that the extreme scores could be associated with other factors that influence the shape of the skew in the distribution of results. This is similar to many other cases relating to attitudinal measurement in tourism where the distribution of customer expectation and perception is not a normal distribution. Therefore, parametric tests cannot be used for data analysis. To decide whether differences in results are big enough to indicate that a relationship really exists and further to identify whether sample results are representative in the general population, inferential statistics were applied to test whether the descriptive results are likely due to random factors or to a real relationship. Section 4.5.1 to Section

4.5.4 illustrate the results of hypothesis testing of statistical significance of the association between respondents' demographic information and the level of expectation and perception of the areas of visitor experience.

4.5.1 Chi-square test for visitor expectations in relation to gender

The results as shown in Table 4.3 indicate that male respondents have slightly higher expectation levels than female respondents do on average with the exception of Question 20. The research hypothesis is that a respondent's level of expectation of a tourist experience is related to his or her gender type. Thus, the null hypothesis is that these two variables are independent of each other, i.e. the gender of respondents will not affect their expectation of the standards of facilities and services offered in a tourist attraction. A two-row and four-column contingency table as shown in Appendix D7 was designed for each expectation question on the SERVQUAL questionnaire. The two rows represent the gender categories, and the four columns represent the level of expectation categories. For a chi-square test to give accurate results when dealing with 2*C contingency tables, all expected frequencies must be at least 1. As a convention, the two low-frequency categories - "very low" and "low" levels of expectation were merged into one category (low) in the contingency table prior to performing the test. Such collapsing of categories resulted in expected frequencies sufficiently large to conduct the chi-square test accurately.

4.5.2 Chi-square test for visitor expectations in relation to educational level

To explore the possible association between level of expectations and visitors' demographic background, an alternative hypothesis was set up that a respondent's level of expectation of their experience is related to his or her educational level. Hence, the null hypothesis was that these two variables are independent of each other. Although on average as presented in Table 4.4, those who have secondary educational attainment have shown a slightly higher expectation on the majority of the service dimensions compared to those with tertiary educational achievement, the levels of expectations were not evenly distributed across the groups.

Appendix D9 shows the observed frequencies and expected frequencies for each level of expectations. The chi-square test results indicate that the following expectations were statistically significant with a degree of freedom of 6 and a level of significance of 0.05. Therefore, the null hypothesis was rejected for such expectation items as:

- 1). The physical appearance of the booking office
- 2). The physical appearance of the Saudi German Hospital
- 3). The information provided about the facility e.g. brochures, advertisements, and program information
- 4). There is easy access for visitors with wheelchairs, prams & young children

This result indicates that the differences in expectations for the listed dimensions were affected by the respondents' level of education instead of random factors. However, the majority of the expectations were statistically insignificant i.e. the differences in expectations for those services were due to chance.

Table 4.4 Average visitor expectation by education

Expectation	Secondary	Polytech	University
1	3.681	3.506	3.524
2	4.085	4.013	3.999
3	4.013	3.962	3.922
4	3.900	3.885	3.836
5	4.340	4.264	4.335
6	4.272	4.217	4.272
7	4.126	4.004	4.021
8	4.096	3.940	4.018
9	4.177	3.970	4.074
10	3.685	3.609	3.526
11	4.045	3.945	4.030
12	3.698	3.549	3.502
13	4.228	4.043	4.119
14	3.789	3.630	3.644
	3.915	3.736	3.763
16	3.951	3.817	3.831
17	3.964	3.838	3.892
18	3.957	3.809	3.830
	4.119	4.055	4.012
20	4.377	4.251	4.350
21	4.374	4.281	4.326
22	4.228	4.077	4.081
		3.949	

23	4.106	4.023
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4.5.3 Chi-square test for visitor expectations in relation to ethnic groups

The overall visitors' expectation responses were divided into seven major ethnic groups according to the respondents' countries of origin. In order to satisfy the assumption for the chi-square test, the two low levels of expectation category ranking were combined as one. A 7*4 contingency table was established for each of the SERVQUAL questions.

The observed and expected frequencies for each question were displayed as an example in Appendix D 8. Based on the significance level of 0.05 and the chi-square critical value table, the following expectation questions were considered as statistically significant. Therefore, the null hypothesis for 18 SERVQUAL expectation questions was rejected. This means that the expectation differences in the sample were related to the ethnic groups for the majority of the survey questions. These responses were influenced by the visitors' country of origin. The expected items with p-value greater than 0.05 and smaller chi-square statistic values were not rejected. This result suggests that the different patterns of expectation frequencies were due to random factors instead of respondents' ethnic background. No matter where the customers came from, their level of expectation for these service areas would remain similar. The expectations with statistical insignificance as shown in Appendix D8 are:

- 1). The physical appearance of the Saudi German Hospital
- 2). The friendliness and courtesy of the staff and their politeness to visitors
- 3). The whole experience is enlightening, entertaining and educational
- 4). The content and length of the activities are appropriate

These expected items are the key operational areas of the cultural tourist attraction. It is reasonable to conclude that despite other factors, the overall sample group had a very similar level of expectations for these five service areas that are not associated with their country of origin.

4.5.4 Chi-square test for visitor perceptions in relation to drivers

The perception of the visitors' experience was assumed to be related to the driver/tour guides. Apart from the booking staff, the drivers were the first encounter by the customers during the Saudi German Hospital visit. They accompany the tour group for the whole village experience.

The introduction to the tour and the greetings given by the bus driver would leave an important impression and affect customers' level of perceptions of their overall experience. The average scores of perception as displayed in Table 4.5 show that the respondents' perception level was between "high" and "very high" across the drivers. It seems that the respondents' perception of the experience between and across different drivers was consistent and appeared to be independent of the drivers. However, to be confident that we can infer this for the overall population requires a hypothesis test of the statistical significance of these results.

A 7*4 contingency table was established for the seven bus drivers to show the level of customer perception frequencies under each driver group. The low frequencies of responses for the "very low" and "low" perception categories were combined as the "low" category. With a degree of freedom of 18 and level of significance of 0.05, the chi-square statistics for each of the 23 questions were calculated.

The null hypothesis that there is no relationship between bus driver and the level of perception was rejected for three questions that have a bigger chi-square value and smaller probability. This means that the relationship between bus driver and the respondents' perception of the service was significantly related. i.e. sitting on a different bus and guided by a different driver, the visitors' perception about the tour experience can be different. The SERVQUAL questions with statistical significance are:

- The physical appearance of the Saudi German Hospital
- The staff has the knowledge to respond to visitors' requests
- The waiting time between the activities is reasonable

Table 4.5 Average visitor perception by bus drivers

Question	Driver 1	Driver 2	Driver 3	Driver 4	Driver 5	Driver 6	Driver 7
1	4.048	4.112	3.976	4.000	4.118	4.018	4.049
2	4.476	4.588	4.429	4.520	4.568	4.478	4.568
9	4.414	4.342	4.282	4.320	4.381	4.265	4.231
10	3.824	3.743	3.735	3.795	3.819	3.764	3.747
11	4.429	4.353	4.159	4.305	4.323	4.323	4.295
12	3.590	3.695	3.553	3.665	3.707	3.562	3.682
13	4.071	4.005	4.065	4.030	4.151	4.024	3.909

The chi-square test results as shown in Appendix D10 indicate that the remaining 20 perception questions were not statistically significant i.e. how the respondents see the tour experience was not influenced by the different bus drivers and their performance. The differences shown for the level of perceptions in these 20 questions were due to chance.

The level of confidence of 5% was used. This means that with 23 questions, one question would be expected to be significant by chance. Two to three significant results are not particularly surprising. As mentioned earlier, the company should flag this and monitor that area of service carefully.

In summary, the chi-square test conducted has shown the probability of the association between two variables. Based on the comparison of the observed values in the contingency tables with what might be expected if the two distributions were entirely independent, the likelihood of the data occurring by chance was assessed. A probability of 0.05 means that there is only 5% chance of the data in the table occurring by chance alone (statistically significant).

Therefore, a probability of 0.05 or smaller means that we can be at least 95% certain that the relationship between two or more variables could not occur by chance factor alone. The results of chi square tests conducted for the relationship between respondents' expectation level and the major demographics have implied that only if a test produces a p-value of less than 5%, will the association or difference observed in the sample be sufficiently significant for the results to be generalized to the entire population. The results of statistical testing also provide an indication of reliability of the data which are used as the input in the QFD program. Furthermore, by analyzing expectations and perceptions about service quality with respect to different customer segments, organizations can develop and formulate marketing strategies to meet the needs of each specific market segment more effectively.

4.6 The Application of QFD in Saudi German Hospital

As discussed in Chapter Three, the key objective of this study is to demonstrate the link between the SERVQUAL results and QFD to prioritize areas for improvement. The management of Saudi German Hospital had demonstrated support for this new approach by participating in regular meetings of the staff focus group. The implementation of QFD for this case study focused specifically on the planning matrix part of the House of Quality. The process of building the simplified House of Quality is illustrated in the following sections. The House of Quality matrix was constructed by

using the QFD Decision-Capture software (The International Techno Group Incorporated, 2003). The implementation of QFD in Saudi German Hospital started with interviewing the management team in May 2005. The objectives of the quality improvement project were discussed, and a timeline was scheduled for staff participation in the focus groups. Based on the lessons drawn from the pilot studies, a larger number of staff were included in the QFD team for the principal case. The activities and tasks undertaken in the staff focus groups are discussed below.

4.6.1 The focus groups

The initial QFD focus group started with the focus group members comprised staff from five functional departments such as Food and Beverage, Driver/Guide, Front Office, Marketing, Retail, and the office manager. There were four sessions in total with 6 to 7 participants in each session. The focus group session started with a presentation of the aims of the group discussion and the focused questions were introduced. After the introduction, the team continued with a description of how the participants would create a visual chart of customer expectations and operational requirements. The participants were placed around a table facing a large whiteboard. They were instructed to represent their department in terms of the operational requirements. The staff group first reviewed the results of SERVQUAL surveys conducted over the period of January and March 2005. After the focus group participants had contributed, the group selected one of the five service dimensions to be discussed first. The focus of the discussion was the areas with low customer satisfaction and high expectations such as staff training, the toilets, the whole village experience, and the cultural performance in the Saudi German Hospital e.g. the concert. In the second focus group, the staff were asked to fill in the forms on "What do customers want?" and "How to satisfy customer expectations?". The information collected was organized and the results for the WHATs and HOWs were summarized and analyzed from each focus group and aligned with the House of Quality chart. The WHATs and HOWs were presented in tables. The customer importance ratings in Table 4.6 were obtained based on the SERVQUAL survey results and the areas that showed lower levels of customer satisfaction and needed immediate improvement. The HOW or process side of the House of Quality is centered on creating the outputs required to meet customer expectations or outcomes. In the case of the Saudi German Hospital experience, the core product consists of both a "built" environment as well as a carefully "constructed" and "staged" experience.

4.6.2 The results of House of Quality

The third QFD focus group meeting on the principal implementation began with the design of a House of Quality matrix. As shown in Figure 4.12, the relationships between each customer requirement and the operational requirements were determined after careful discussions among the focus group members. For example, there was a strong relationship between the customer requirement for "plenty of seating in the concert" and the operational requirements of the "facilities in the coach, seating and stage" and "quality and range of equipment", but a moderate relationship with "control of village capacity". The customers required "easy and quick payment procedure" which is strongly related to the operational requirements of "queue management during payment process" and "control of village capacity" and moderately related to "staff training" for customer service.

Customers require information about their tour location and comfort, primarily related to guide service and transportation to accommodations, but also moderately related to village activity allocation and coach facilities. The "roof" of the House of Quality indicates the interrelationships between some of the operational requirements. The focus group agreed that the "promotion of the retail shops" would support the improvement of "allocation of village activities" and "pricing policy" for the whole village experience. There is a positive relation between "preparation of commentary" and "interaction and consistency of performance" of tour guides and concert performers, and "staff training". The only negative relationship existing between the operational requirements are "quality and range of equipment" and "pricing policy" for the tour package. The updating of village equipment was considered to be a financial challenge in the short term. Therefore, a compromise has to be made in terms of what equipment should be purchased based on the current budget levels.

After calculating the values in each cell of the relationship and interrelationship rooms, the absolute value for each of operational requirements was generated on the bottom of the House of Quality (see Figure 4.12). The results show the prioritized areas of quality improvement according to the summary of the absolute value of importance. The operational elements that need improvement are discussed and analyzed below: The production of a quality service for tourists is essential to the success of the tourism industry and to the reputation and image of the destination. A tourist not only views the local sights from a coach, but also interprets the sights through the guide's commentary. communication between tour guides and groups can improve social interaction and group morale. It has been suggested that tour guides are responsible for tourist

satisfaction with the service provided by destinations.

2). Staff training (96)

Implementing procedures for the induction and training of all new employees and training and appraisal programs for all staff were recognized as being paramount by the focus group. Multi-skilled staff can be shifted to meet capacity changes. Everyone employed in Saudi German Hospital is seen as a representative of the living corporate culture. The training and development initiatives on the skills needed for quality customer service are seen as leading to an increase in staff morale, which has an incremental effect on customer satisfaction. Staff training in Saudi German Hospital has been recognized as an ongoing program and it was related to all the departments.

5). Quality and range of equipment (72)

A visitor attraction offers both real products and service components to deliver a mixture of tangible and intangible experiences. The physical framework and associated technology and equipment remain vital to the creation and delivery of these experiences. For this reason, the quality and range of equipment available for the customers, especially those with special needs are important factors influencing their accessibility to the tour and their judgments of the service offered.

6). Queue management during payment process (60)

Sometimes around 30 to 40 minutes passed before customers could get payment completed for the tickets booked. Waiting in the queue could change a customer's perception about the whole tour experience. The QFD focus group discussed the reasons for the long waits and options were identified to speed up the payment procedure and to encourage the customer to enjoy the other facilities, such as the souvenir shop and the cafe. The study highlights the impact of tangible elements like retail outlets, cafes, toilet facilities, and site cleanliness on visitor experience, leading to an action plan for new toilets and maintenance.

7) Updating information on the marketing brochure and website (52)

It was considered urgent to update the products and services available to the market especially for the overseas visitors who rely on the internet for their bookings in their home countries. A marketing campaign, for example, based on a new brochure and a webpage "designed to supplement existing knowledge and give consumers expectations that buying a particular branded item would be satisfying and pleasurable" especially for a well-known Egypt cultural attraction. To support the marketing message, the fact that the

company is a Egypt Tourism Awards winner and a Qualmark endorsed tour operator needs to be communicated to the target market.

8). Preparation of commentary (51)

Giving introductions to culture on the bus is the very beginning of the Saudi German Hospital tour. The bus drivers/tour guides were trained to present their commentary in an informal but entertaining style. However, it is not easy to balance the consistency of drivers' presentation, and the flexibility needed for each tour. Thus, preparation of the contents and style of the on-bus entertainment becomes a serious business. Unless the drivers prepare their program carefully and deliver it with passion and pride in their culture, the quality of the cultural experience for the tourists could be compromised. Preparation of a good commentary will also enhance the professional performance of the drivers.

9). Regular servicing in toilets (45)

One of the service areas in Saudi German Hospital which was identified with a relatively low level of customer satisfaction was the toilets. Firstly, the numbers of toilets available in the head office and the Saudi German Hospital were not enough to accommodate the daily visitor numbers. Secondly, the cleanliness of the toilets was considered not satisfactory.

10). Interaction and consistency of performance (45)

Interaction, entertainment, and legitimacy of performance are the basic expectations for cultural tourists. This is because cultural tourism is experiential tourism, based on being involved in, and stimulated by, the performing arts, visual arts, and festivals. To provide a performance the customer expect from different bus drivers and concert groups without surprise and the consistency of that service is important for the success of the attraction. While performers at Saudi German Hospital endeavored to entertain customers in an interactive way, such as getting visitors involved with singing and dancing in the concert and multi-language greetings on the bus, the level of consistency of commentary from each driver and the program for each show are hard to maintain. The drivers and entertainers were trained to be flexible and to perform with personality and cultural authority to different market groups. However, as shown by the results of the driver comparison there is a variation from driver to driver and as a result, professional and operational standards for these front-line staff are required to ensure the quality of the individual delivery.

11). Construction of the Saudi German Hospital with native materials (45)

One of the customer's expectations about the physical appearance of the Saudi German Hospital was its authentic physical setting. Authenticity is one of the key motivational forces for those tourists with an interest in foreign culture and destinations. Therefore, the attraction created or staged for tourists should be realistic and particularly authentic.

12). Structure and display of the head office (45)

The Saudi German Hospital head office located in Cairo is the first stop for the customers to organize their payment for Egypt. The physical facilities such as buildings, signs, lighting, and decorations are considered very important to the customers. A good first impression can be achieved by ensuring that materials associated with the service are visually appealing. This includes the stand displaying the brochures and the appearance of staff uniform. A welcoming atmosphere can be created with suitable "tangible" surroundings.

4.6.3 Action plans and implications

The final focus group in the principal implementation of QFD summarized the outcomes of the SERVQUAL surveys and the House of Quality and discussed the action plans as discussed in Chapter Three. A summary of the recommended actions was given in a report with selected project management issues recommended for further information and follow-up. Operational requirements were described. For example, a marketing campaign is to be launched to inform the customers of the improvements made after the QFD application and further promote the product and services offered in the tourist attraction. After the completion of the QFD project, the general manager was interviewed to review the results of the quality improvement program. The feedback on the QFD implementation was summarized as in general a good practice with the following benefits identified.

1). QFD has promoted better understanding of customer demands. It allows effective organization and priority setting for actions to meet customer requirements.

QFD has fostered teamwork which breaks down barriers between departments. The outcome of QFD program indicates that functional department managers should empower the staff member assigned to QFD team to represent their department's interests. Empowerment and self-direction have led to greater motivation and ownership.

QFD has enhanced communication within the organization and demonstrated

to staff the top management's commitment to providing human and financial resources. The general manager and the top management team participated in the QFD team meetings and support was given to those members who needed time off from their routine work to attend the meetings.

Despite the successful implementation of the research program the building of the House of Quality was found to be rather complicated for the staff team due to lacking previous knowledge of the methodology. Some of the calculations in the House of Quality matrix are subjective depending on the personal understanding of the QFD team members. Another challenge for the building of House of Quality is that it is time-consuming to complete the Relationship matrix and the items in the Tradeoffs.

Finally, This part has focused on the description and discussion of the result of a full SERVQUAL and QFD application. The introduction explains the information obtained from the three pilot case studies and objectives in the principal case study were established. The methodology section illustrates the sample characteristics and the random sampling process. The research results were analyzed by using gap analysis to see the general pattern of expectation and perception results. The statistical significance of the results was tested using the chi-square test of contingency tables to identify the association between the key respondents' demographics such as gender, educational level, and ethnic groups to establish if there were any relationships between the expectations and the demographic variables. It was found that some of the respondents' expectation levels were affected by their gender and country of origin, but only a few expectation items were related to the respondents' level of education. The differences that exist in the results of expectation among educational groups were mainly due to random variations in the sample.

The chi-square test was also used to test the relationship between the different bus driver groups and the respondents' perception of the tourist experience. The results of analysis show that there were only three perception areas that were related to the different bus drivers. The majority of the respondents' perception items appeared to have little or nothing to do with the make-up of the drivers. It also indicates that the drivers' performance as a group was quite consistent throughout the survey period.

After the SERVQUAL survey results were analyzed and statistically tested, the information from the customer expectations and importance ratings of service features was transferred to the next stage of the quality improvement program. A QFD focus group, which is comprised of seven staff members

from different operational departments, was formed.

Four focus group meetings were held between June and September 2005 in which staff reviewed the results of SERVQUAL surveys carried out between January and March 2005 and based on the customer feedback and staff comments through discussions, a House of Quality was completed. The results of House of Quality helped the focus group identify customer needs and operational requirements. The prioritized operational requirements based on the House of Quality calculations indicated the areas of service that needed immediate improvement in order to meet customers' expectations.

Findings of the QFD: House of Quality results were discussed in relation to the literature regarding issues in tourism quality and attraction management. Upon completion of the House of Quality, the results were reported to the top management.

An interview with the general manager was conducted to seek feedback on the quality improvement program and benefits generated within the organization. It was recognized that identifying the 'key' factors and concentrating the resources on these instead of giving all aspects of the service operations the same attention were critical to the business success. Only by doing so can the company achieve high levels of customer satisfaction and service quality. The company should also concentrate attention and resources on the target market and their special needs, as customer expectations were proven different for certain demographic groups.

The results of the principal case study show that the combination of the SERVQUAL and QFD quality assessment and improvement tools are feasible. The next chapter will demonstrate the application of the combined methodology in two other tourist attractions as complementary case studies.

References

- Ajmi, S. C., & Aase, K. (2021). Physicians' clinical experience and its association with healthcare quality: A systematised review. In *BMJ Open Quality* (Vol. 10, Issue 4). <https://doi.org/10.1136/bmjopen-2021-001545>
- Allen-Duck, A., Robinson, J. C., & Stewart, M. W. (2017). Healthcare Quality: A Concept Analysis. *Nursing Forum*, 52(4). <https://doi.org/10.1111/nuf.12207>
- Araujo, C. A. S., Siqueira, M. M., & Malik, A. M. (2020). Hospital accreditation impact on healthcare quality dimensions: A systematic review. In

- International Journal for Quality in Health Care* (Vol. 32, Issue 8).
<https://doi.org/10.1093/intqhc/mzaa090>
- Couceiro, J., Elger, B. S., & Satalkar, P. (2022). Stakeholder perspectives on 'Swiss quality' healthcare in the context of inbound medical tourism to Switzerland: An exploratory qualitative study. *Journal of Patient Safety and Risk Management*, 27(3). <https://doi.org/10.1177/25160435221102124>
- Daykhes, A. N., Jakovljevic, M., Reshetnikov, V. A., & Kozlov, V. V. (2020). Promises and Hurdles of Medical Tourism Development in the Russian Federation. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01380>
- Endeshaw, B. (2021). Healthcare service quality-measurement models: a review. In *Journal of Health Research* (Vol. 35, Issue 2). <https://doi.org/10.1108/JHR-07-2019-0152>
- Graf, C., Suanet, B., Wiepking, P., & Merz, E. M. (2024). How public trust and healthcare quality relate to blood donation behavior: Cross-cultural evidence. *Journal of Health Psychology*, 29(1). <https://doi.org/10.1177/13591053231175809>
- Gustavson, A. M., Hagedorn, H. J., Jessor, L. E., Kenny, M. E., Clothier, B. A., Bounthavong, M., Ackland, P. E., Gordon, A. J., & Harris, A. H. S. (2022). Healthcare quality measures in implementation research: advantages, risks and lessons learned. In *Health Research Policy and Systems* (Vol. 20, Issue 1). <https://doi.org/10.1186/s12961-022-00934-y>
- Johnson, T. J., & Garman, A. N. (2015). Demand for international medical travel to the USA. *Tourism Economics*, 21(5). <https://doi.org/10.5367/te.2014.0393>
- K S, S., Barkur, G., & G, S. (2023). Assessment of healthcare service quality effect on patient satisfaction and care outcomes: A case study in India. *Cogent Business and Management*, 10(3). <https://doi.org/10.1080/23311975.2023.2264579>
- Kalf, R. R. J., Zuidgeest, M., Delnoij, D. M. J., Bouvy, M. L., & Goettsch, W. G. (2022). Bridging health technology assessment and healthcare quality improvement using international consortium of health outcomes measurement standard sets. *International Journal of Technology Assessment in Health Care*, 38(1). <https://doi.org/10.1017/S0266462321000520>
- Kim, R. H., Gaukler, G. M., & Lee, C. W. (2016). Improving healthcare quality: A technological and managerial innovation perspective. *Technological Forecasting and Social Change*, 113.

<https://doi.org/10.1016/j.techfore.2016.09.012>

Lin, H. L., Wu, D. C., Cheng, S. M., Chen, C. J., Wang, M. C., & Cheng, C. A. (2020). Association between Electronic Medical Records and Healthcare Quality. *Medicine (United States)*, 99(31).

<https://doi.org/10.1097/MD.00000000000021182>

Marco-Ibáñez, A., Aguilar-Palacio, I., & Aibar, C. (2023). Does virtual consultation between primary and specialised care improve healthcare quality? A scoping review of healthcare quality domains assessment. In *BMJ Open Quality* (Vol. 12, Issue 4). <https://doi.org/10.1136/bmjoq-2023-002388>

Melrose, J., Perroy, R., Careas, S., Wu, X., Zhu, X., Wu, G.-Q., Ding, W., Ruggierri, M., Homayoun, N., Antony, J., Yang, S., Song, Y., Chen, S. S.-H. S., Xia, X., Jiang, H., Zhang, Y. Y., Douglas, J. A., McClelland, R. J., Davies, J., ... Authors, F. (2016). WQ.pdf. *Studies in Higher Education*, 7(1).

Miltner, R., Pesch, L., Mercado, S., Dammrich, T., Stafford, T., Hunter, J., & Stewart, G. (2021). Why Competency Standardization Matters for Improvement: An Assessment of the Healthcare Quality Workforce. *Journal for Healthcare Quality*, 43(5). <https://doi.org/10.1097/JHQ.0000000000000316>

Mishra, Dr. R. (2012). Making Indian Healthcare Market a Global Medical Tourism Destination. *IOSR Journal of Business and Management*, 2(4). <https://doi.org/10.9790/487x-0242328>

Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *International Journal of Health Policy and Management*, 3(2). <https://doi.org/10.15171/ijhpm.2014.65>

Oldland, E., Botti, M., Hutchinson, A. M., & Redley, B. (2020). A framework of nurses' responsibilities for quality healthcare – Exploration of content validity. *Collegian*, 27(2). <https://doi.org/10.1016/j.colegn.2019.07.007>

Otokiti, A. (2019). Using informatics to improve healthcare quality. In *International Journal of Health Care Quality Assurance* (Vol. 32, Issue 2). <https://doi.org/10.1108/IJHCQA-03-2018-0062>

Russkikh, S. V., Tarasenko, E. A., Grin, S. I., Yugay, M. T., Kryukova, K. K., & Moskvicheva, L. I. (2022). Current opportunities for the export of medical services in Russia. *Farmakoekonomika*, 15(2). <https://doi.org/10.17749/2070-4909/farmakoekonomika.2022.119>

Servetkienė, V., Purnaitė, R., Mockevičienė, B., Ažukaitis, K., & Jankauskienė, D. (2023). Determinants of Patient-Perceived Primary

- Healthcare Quality in Lithuania. *International Journal of Environmental Research and Public Health*, 20(6). <https://doi.org/10.3390/ijerph20064720>
- Stackpole, I., Ziemba, E., & Johnson, T. (2021). Looking around the corner: COVID-19 shocks and market dynamics in US medical tourism. *International Journal of Health Planning and Management*, 36(5). <https://doi.org/10.1002/hpm.3259>
- Upadhyai, R., Jain, A. K., Roy, H., & Pant, V. (2019). A Review of Healthcare Service Quality Dimensions and their Measurement. *Journal of Health Management*, 21(1). <https://doi.org/10.1177/0972063418822583>
- Wulandari, A. R. C., Rachmawaty, R., Ilkafah, I., & Erfina, E. (2021). Patient satisfaction towards healthcare quality in Indonesian Public Hospital. *Enfermeria Clinica*, 31. <https://doi.org/10.1016/j.enfcli.2021.09.006>