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**Collage of Graduate Studies**

**Deanship of Development and Quality**



**The Role of Service Quality Implementation on Customers  
Satisfaction**

Case Study: National Medicine and Poisons Board

دور تطبيق جودة الخدمة علي رضا العملاء

دراسة حالة: المجلس القومي للأدوية والسموم

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Quality Management & Excellence**

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# الآية

قال تعالى

﴿وَلَسَوْفَ يُعْطِيكَ رَبُّكَ فَتَرْضَىٰ﴾

سورة الضحى الآية (5)

## **Dedication**

I dedicate this dissertation to my supportive parents, thank you for always reminding me that —nothing is impossible with Allah, and for your support, prayers, understanding and patience

To my brothers, sisters and my lovely friends thank you for your support, encouragement and inspiration.

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I am mostly thankful to Allah for giving me the courage and strength to complete this thesis

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## **Abstract**

This research aimed to study the relationship between service quality and customer satisfaction in the National Medicines and Poisons Board in the Sudan. The main objective of this study was help to improve the quality of service in the National Medicines and Poisons Board as a public sector in Sudan. This study used a questionnaire extracted from the service quality measurement form as a tool to obtain the impression of organization customer. The method of this study was descriptive approach, the study population are 776customers, the random sample included 199different companies and the main result is that the National Medicines and Poisons Board currently provides a service that doesn't meet the general expectations of customers, who seem dissatisfied with the level of service quality provided to them. The study also highlights on aspects of deficiencies, and suggested conducting more research studies on the issue of service quality in the public sector in the future; in terms of satisfaction for internal customers and measuring providers' performance based on their behavior and attitude towards customers during providing service.

## المستخلص

يهدف هذا البحث إلى دراسة العلاقة بين جودة الخدمة ورضا العملاء في المجلس القومي للأدوية والسموم في السودان. الهدف الرئيسي من هذه الدراسة هو المساعدة في تحسين جودة الخدمة في المجلس القومي للأدوية والسموم كقطاع عام في السودان. استخدمت هذه الدراسة استبياناً مستخرجاً من نموذج قياس جودة الخدمة كأداة للحصول على انطباع عميل المؤسسة. اتبعت هذه الدراسة المنهج الوصفي ، وتكوّن مجتمع الدراسة من 776 عميلاً ، وشملت العينة العشوائية 199 شركة مختلفة وكانت النتيجة الرئيسية هي أن المجلس القومي للأدوية والسموم حالياً يقدم خدمة لا تلبّي التوقعات العامة للعملاء، الذين يبدو غير راضين عن مستوى جودة الخدمة المقدمة لهم. كما سلّطت الدراسة الضوء على جوانب القصور واقترحت إجراء مزيد من الدراسات البحثية في موضوع جودة الخدمة في القطاع العام مستقبلاً من ناحية الرضا للعملاء الداخليين وقياس أداء مقدمي الخدمة بناءً على سلوكهم تجاه العملاء أثناء تقديم الخدمة.

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# Chapter One

## Introduction

### 1.1 Background

Quality is one of the most commonly used concepts across the economy having different meanings since . As the world evolved, the meaning of the concept has expanded and diversified. Many works were written and specialists in branch could be considered: M. Juran, A.V. Feigenbaum, G. Taguchi etc. From the work of these specialists we can find that final quality target is the customer and its failure is severely penalized. (Irina Nicolina Hădărean ȃomlea et al)

Dennis Harrington (1996) stated that in the past period, the concept of service quality was important but the necessity of service quality is increasing three or four times day by day than before. The business and customer understanding of service quality and satisfaction enhancing the importance of this concept. The understanding from the customer's point of view is making the customers choosier and the business is becoming more competitive. (Sarmin Sultana and Shohel Rana)

Public sectors were established to serve people and thus service quality it provided was dictated by people satisfaction or contact experience, amid demands of various people, administrative institution service could satisfy people only by innovation and continuous improvement of service quality. To ordinary people, administrative institution operation was to execute public power by means of various laws and regulations. It was often the case that complicated administrative procedure or bad attitude of staff left people nothing other than passive receiving of specific affair dealing. (Chih-Tung Hsiao and Jie-Shin Lin)

National Medicines and Poisons Board is the national authority concerned with setting standards, controls and conditions for import, manufacturing, control, storage, pricing, deportation, and the use of medicines, cosmetics, and all medical supplies and pharmaceutical preparations according to the approved standards (Drug and Toxicology Act 2009 Article).

Dealing in the National Medicines and Poisons Board with companies and factories imported and manufactured for medicines and medical supplies and all the necessary raw materials for the industry who are considered clients of the council.

## **1.2 Statement of the research problem**

According to previous studies, most institutions have implemented quality management practices that have recorded good service quality and high customer satisfaction resulting in organizational performance, so that the institutions of public sector as National Medicines and Poisons Board must implement quality management system to provide service according to the international standards of quality and provide high quality service to pharmacists and medical field companies industrial and import, used to enhance competitiveness and achieve customer satisfaction.

When the service quality is implemented the property produces different benefits such as customer satisfaction by meeting customer needs and wants, improving internal communication with the people in the organization and solving any problems in the organization through the quality of service provided which leads to customer satisfaction and thus increasing profitability and sustainability in the market.

From observation there are few public sector institutions in Sudan who applying the quality management system lead to a lack of quality of service provided that makes customers dissatisfaction with the service provided to them.

## **1.3 Research Questions:**

This study sought to investigate the role of implementing service quality on customer satisfaction at Sudanese National Medicines and Poisons Board in order to answer the following questions:

- 1- How can help to improve service quality in National Medicines and Poisons Board?
- 2- How the service quality implemented in NMPB effects on customer satisfaction?
- 3- To what extent the National Medicines and Poisons Board implementing service quality?

- 4- How can measure customer satisfaction in National Medicines and Poisons Board?
- 5- What the most important dimensions of service quality that affect customer satisfaction in National Medicines and Poisons Board?

## **1.4 Research Objectives**

### **1.4.1 General objective**

The main objective of this research is help to improve service quality in National Medicines and Poisons Board.

### **1.4.2 Specific objectives**

1. To investigate the relationship between service quality and customer satisfaction in National Medicines and Poisons Board.
2. To determine the level of service quality in National Medicines and Poisons Board.
3. To measure customer satisfaction in National Medicines and Poisons Board.
4. To determine the most important dimensions of service quality that affect customer satisfaction in National Medicines and Poisons Board.

## **1.5 The Significance of the Research**

Quality and their applications have become the focus of attention all organizations, regardless of the nature of its activities as it seeks to achieve its goals and gain customer satisfaction and achieve competitive advantages.

The National Medicines and Poisons Board is one of vital institutions with a direct impact to the national economy and development as well as dealing with the public and customers to develop the service provided and the commitment to quality assurance and standards need to become civilized.

The importance of this research is derived from the role of the quality in the pharmaceutical and medical service which provided by the National Medicines and Poisons Board among its different medical services as reflected in customer satisfaction and the progress in providing this services.

Customer satisfaction is the most important parameter to judge the quality of service provided by the service provider to the customer. Positive feedback from

the customer leads to the good faith of service providers in the market, which indirectly expands their business, while negative reactions make it shrink.

This study provides the management for National Medicines and Poisons Board with a better understanding of their processes and identifies tools for implementing continuous improvement programs that can improve customer satisfaction. This study can help manage the organization to encourage innovation, making it adaptable to change, motivating people to improve quality, and integrating business as a result of the common goal. All this gives the enterprise a valuable and a high degree of customer satisfaction.

This study adds to existing literature on SQ implementation in academic institutions. While students and lecturers may make references to this study, future researchers may decide to do more research based on the issues raised here.

## **1.6 Research Hypotheses**

The study examines the following hypotheses:

**H1** There is a positive relationship between the well equipped National Medicines and poisons Board facilities and service quality.

**H2** There is a positive relationship between the reliability of providing services in the National Medicines and Poisons Board and the service quality.

**H3** Service quality increases when National Medicines and Poisons Board employee responsiveness to the customer needs and complain.

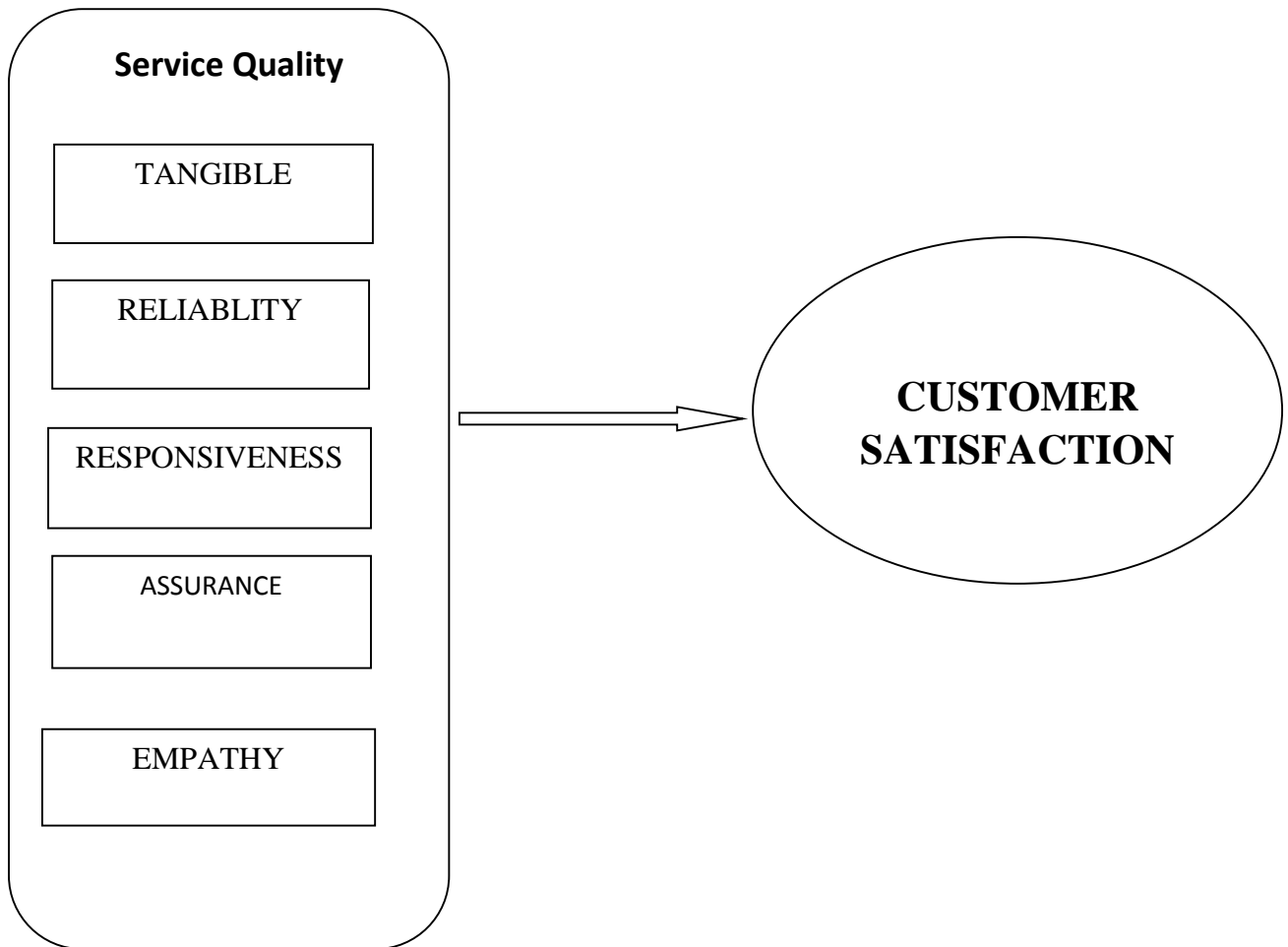
**H4** There is a positive relationship between the assurance in providing service to National Medicines and Poisons Board customer and service quality

**H5** There is a positive relationship between National Medicines and Poisons Board provider's empathy towards National Medicines and Poisons Board customers and service quality.

**H6** There is a positive relationship between service quality and customer satisfaction in the National Medicines and Poisons Board.



## 1.7 Theoretical Framework



**Figure (1.7.1) (Designed by Researcher)**

## 1.8 Delimitations

This study conducted in Khartoum state in National Medicines and Poisons Board as a public sector.

## 1.9 Research structure

The research consists of five Chapter as follow:

- Chapter one (Introduction, problem statement, significance of the study, research questions, hypothesis of the study, purpose of the study, objectives of the study, limitations and delimitations, methodology, Population of the study, Sample of the study, and Data collection tools).
- Chapter two (Literature Review).
- Chapter three (Materials and Methods).
- Chapter four (Results Analysis and Discussion).
- Chapter five (Conclusion and Recommendation).

# Chapter Two

## Literature Review

### 2.1 Quality

Quality is a very commonly used term but can be described very vaguely. Quality is an unusually slippery concept, easy to visualize and yet difficult to define. It is a matter of feeling and the definition varies from person to person depending on the perspective in which defined. Quality has been defined in different ways by the quality gurus as – conformance to standards or specifications; fitness for use; meeting customer’s requirements or expectations; delighting the customer etc. The code defines as ‘quality therefore is the totality of features and characteristics of a product/service that bears on its ability to satisfy given needs’. (Bhaskar Mazumder et al)

If we are selecting a tablet for purchasing, we shall compare the different brands of that particular tablet on the basis of their therapeutic efficacy and side-effects, color and odors. Thus a customer/user of a product makes a comparison of features or attributes of the product and also the absence of deficiency in it, while comparing the quality.

Thus the quality, for a product or service, has two aspects, both of which together make for an appropriate definition of the term. The first relates to the features and attributes of the product or service. These ensure that the product or the services meets the needs of the user. The second aspect concerns the absence of deficiencies in the product.

### 2.2 History of the Quality Movement

As early as the 1950s, Japanese companies began to see the benefits of emphasizing quality throughout their organizations and enlisted the help of an American, W. Edwards Deming, who is credited with giving Japanese companies a massive head start in the quality movement. His methods include statistical process control (SPC) and problem-solving techniques that were very effective in gaining the necessary momentum to change the mentality of organizations needing to produce high- quality products and services. Deming developed his 14 points to communicate to managers how to increase quality within an organization, (TLFeBOOK).

Deming believed that 85 percent of all quality problems were the fault of management. In order to improve, management had to take the lead and put in

place the necessary resources and systems. For example, consistent quality in incoming materials could not be expected when buyers were not given the necessary tools to understand quality requirements of those products and services. Buyers needed to fully understand how to assess the quality of all incoming products and services, understand the quality requirements, as well as be able to communicate these requirements to vendors. In a well-managed quality system, buyers should also be allowed to work closely with vendors and help them meet or exceed the required quality requirements.

According to Deming, there were two different concepts of process improvement that quality systems needed to address: (1) common (systematic) causes of error, and (2) special causes of error. Systematic causes are shared by numerous personnel, machines, or products; and special causes are associated with individual employees or equipment. Systematic causes of error include poor product/service design, materials not suited for their use, improper bills of lading, and poor physical conditions. Special causes of error include lack of training or skill, a poor lot of incoming materials, or equipment out of order, (TLFeBOOK).

Another influential individual in the development of quality control was Joseph M. Juran, who, like Deming, made a name for himself working in Japanese organizations focusing on improving quality. Juran also established the Juran Institute in 1979; its goals and objectives were centered on helping organizations improve the quality of their products and services. Juran defined quality as “fitness for use,” meaning that the users of products or services should be able to rely on that product or service 100 percent of the time without any worry of defects. If this was true, the product could be classified as fit for use. Quality of design could be described as what distinguishes a Yugo from a Mercedes-Benz and involves the design concept and specifications. The quality of a product or service is only as good as its design and intention. Thus, it is important to include quality issues in the design process, as well as to have in mind during the design phase the difficulties one might have in replicating the product or service with the intended quality level, (TLFeBOOK).

Quality of conformance is reflected in the ability to replicate each aspect of a product or service with the same quality level as that intended in the design. This responsibility is held by individuals to develop the processes for replication, the workforce and their training, supervision, and adherence to test programs. Availability refers to freedom from disruptive problems throughout the process and is measured by the frequency or probability of defects for example, if a process does not have a steady flow of electricity and this causes defective parts, or when

an employee must complete two jobs at once and is therefore forced to make concessions on the quality of both products or services.

Juran also developed a comprehensive approach to quality that spanned a product or service's entire life cycle, from design to customer relations and all the steps in between. Juran preached that an organization should dissect all processes and procedures from a quality perspective and analyze for a "fitness for use." Once this is completed the organization can begin to make changes based on the "fitness for use" model, (TLFeBOOK).

## **2.3 Service Quality**

The term "Service Quality" is an association of two different words; "service" and "quality". Service means any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything.

"Service quality" means the ability of a service provider to satisfy customer in an efficient manner through which he can better the performance of business.

In the service sector too 'quality' is an important element for the success of business. It is because of the realization of its positive link with profits, increased market share, customer satisfaction. Several earlier studies and authors pointed out that quality concept in service is different from the concept prevalent in the goods sector. The reasons for such a treatment are inherent features of services like intangibility, inseparability from the provider, heterogeneous etc. Hence there is a distinct framework for quality explication and measurement, (Kalidas. M.G).

### **2.3.1 Service Quality definition**

According to Parasuraman et al. (1988), service quality can be defined as an overall judgment similar to attitude towards the service and generally accepted as an antecedent of overall customer satisfaction (Zeithaml and Bitner, 1996). Parasuraman et al. (1988) have defined service quality as the ability of the organization to meet or exceed customer expectations. It is the difference between customer expectations of service and perceived service (Zeithaml et al., 1990). Perceived service quality results from comparisons by customers of expectations with their perceptions of service delivered by the suppliers (Zeithaml et al., 1990). If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction

occurs (Parasuraman et al., 1985; Lewis and Mitchell, 1990), (Prabha Ramseook –Munhurrun et al 2010).

### 2.3.2 The Concept of SERVQUAL Model

SERVQUAL is a very popular measurement tool that is used for assessment of the service quality. Service quality measurement is necessary for the company to assess to get the customer's opinion about their service performance. The voice of customer works as the guider for the service provider by providing their suggestions as well as complains. These suggestions enable the provider to take accurate steps to design the operational procedure. And to get the idea of the perception, expectation is also under consideration as it is another important part to measure the service quality.(Sarmin Sultana and Shohel Rana)

Scholars from across the academic spectrum have contributed to an understanding of service quality, however, with over two decades of study and much lively debate, conceptual work on service quality can be best described as divergent. Parasuraman et al.(1988) presented SERVQUAL as a multi-item scale developed to assess service quality that is defined as 'the degree and direction of discrepancy between customers' service perceptions and expectations'. SERVQUAL require respondents to answer questions about both their expectations and their perceptions. (A. Prakash and R.P. Mohanty)

Clearly, from a Best Value perspective the measurement of service quality in the service sector should take into account customer expectations of service as well as perceptions of service. However, as Robinson (1999) concludes: "It is apparent that there is little consensus of opinion and much disagreement about how to measure service quality". One service quality measurement model that has been extensively applied is the SERVQUAL model developed by Parasuraman et al. (1985, 1986, 1988, 1991, 1993, 1994; Zeithaml et al, 1990). SERVQUAL as the most often used approach for measuring service quality has been to compare customers' expectations before a service encounter and their perceptions of the actual service delivered (Gronroos, 1982; Lewis and Booms, 1983; Parasuraman et al., 1985). The SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. (Dr. Arash Shahin)

It has five generic dimensions or factors and are stated as follows (van Iwaarden et al., 2003):

- **Tangibles.** Physical facilities, equipment and appearance of personnel.

Defined as the appearance of physical facilities, equipment's, communication materials and technology. All these provide enough hints to customers about the quality of service of the firm. Also, this dimension enhances the image of the firm. Hence tangibility dimension is very important to firms and they need to invest heavily in arranging physical facilities.

- **Reliability.** Ability to perform the promised service dependably and accurately. In broad sense reliability means, service firms' promises about delivery, service provisions, problem resolutions and pricing. Customers like to do business with those firms, who keep their promises. So it is an important element in the service quality perception by the customer and his loyalty. Hence the service firms need to be aware of customer expectation of reliability.

- **Responsiveness.** Willingness to help customers and provide prompt service. This dimension focuses in the attitude and promptness in dealing with customer requests, questions, complaints and problems. It also focuses on punctuality, presence, and professional commitment etc., of the employees or staff. It can be calculated on the length of time customers wait for assistance, answers to questions etc. The conditions of responsiveness can be improved by continuously view the process of service delivery and employees attitude towards requests of customer.

- **Assurance** (including competence, courtesy, credibility and security). Knowledge and courtesy of employees and their ability to inspire trust and confidence.

It can be defined as employee's knowledge, courtesy and the ability of the firm and its employees to inspire trust and confidence in their customers. This dimension is important in banking, insurance services because customers feel uncertain about their ability to evaluate outcome. In some situations like insurance, stock broking services firms try to build trust and loyalty between key contact persons like insurance agents, brokers etc and individual customers. In banking services "personal banker" plays the role of key contact person. This dimension focuses on job knowledge and skill, accuracy, courtesy etc of employees and security ensured by the firm.

- **Empathy** (including access, communication, understanding the customer). Caring and individualized attention that the firm provides to its customers.

It is defined as the caring, individualized attention provides to the customers by their banks or service firms. This dimension try to convey the meaning through personalized or individualized services that customers are unique and special to the firm. The focus of this dimension is on variety of services that satisfies different needs of customers, individualized or personalized services etc. In this case the service providers need to know customers personal needs or wants and preferences. (Kalidas. M.G)

## **2.4 Customer Satisfaction**

Customer satisfaction has been one of the top tools for a successful business. Customer satisfaction is defined as an overall evaluation based on the total purchase and consumption experience with the good or service over time (Forn ell, Johnson, Anderson, Cha and Bryant 1996). With marketing, customer satisfaction also comes along with it which means it as certain the expectation of the customer on how the goods and services are being facilitated by the companies. Actionable information on how to make customers further satisfied is therefore, a crucial outcome (Oliver 1999.) (Kabu Khadka and Soniya Maharjan), increasing customer satisfaction is not like pushing a button, it might actually be the hardest thing for a firm to do.

Customer satisfaction is the indication of how positively the customers have accepted the service and it is works as a key factor for retaining customers, that give more profit to the company by staying loyal for long time. Loyal customers like to tell others about company and service quality and this spread so fast by word- of- mouth. They work as the advertiser for the company and competing brands don't get any importance to them. The price does not represent any importance to their purchasing, and they agree to give any prices for the service. The company is able to get the customer's opinion and also the suggestions that help them to add more value to the services and create more customers (Philip Kotler, 2009, p. 390). (Sarmin Sultana and Shohel Rana).

## **2.5 Service Quality and Customer Satisfaction**

The quality comes from the experience acquired along the purchase and consumption process. Researches indicate that many aspects inherent to the products contribute to the attribution of value by the consumers, and are always associated to the goods characteristics, quality and its respective prices (Brito, Peris and Brito, 2004; Kotler, 2000; Oliver and DeSarbo, 1988; Rust and Zahorik, 1993; Cardozo, 1965). The results of a research done by Cronin;



Brady and Hult (2000) suggest that the quality produces impacts over the consumers' behavioral intentions.

Since the service quality is many times associated to an attitude or global judgment about the superiority of a rendered service, some studies done in such field suggest that the quality comes from the comparison of expectations and performance perception (Robinson, 1999; Brown and Swartz, 1989; Bolton and Drew, 1991). Teas (1993), Cronin and Taylor (1992) argue that the quality comes from the comparison between the performance or ideal levels or only from the perception of the rendered service performance.

Nevertheless, evaluating the services quality has not being an easy task, mainly because of its variability and intangibility that always leave gasps that interfere in the clients' satisfaction. Such aspect shows in many models of service quality, among them (Morris and Johnston, 1987; Dotchin and Oakland, 1994; Parasuraman, Zeithaml and Berry, 1985). The consumers' perception regarding the services levels, according to Zeithaml, Parasuraman and Berry (1990) is extremely important for the retailer, but is also considered subjective for its variability and intangibility that always leave gaps that interfere in the clients' satisfaction. Even though countless definitions have been attributed to the term satisfaction, the most popular definition admitted by Hoffman and Bateson (2003) is the one that conceives it as a comparison of the clients' expectations to its perceptions about the meeting of the real service. Grönroos (1995), Parasuraman, Zeithaml and Berry (1985) and Zeithaml, Parasuraman and Berry (1990) share the same idea when they affirm that the quality is determined by the difference between the quality expected and the quality noticed. According to Cardozo (1965), is this satisfaction that takes you to repeat the purchase, as well as the company's favorable publicity. To such importance may be attributed some factors that reflect directly over the organizations competitiveness support: loyalty to the brand, profitability and market share (Oliver, 1997). (Helenita Rodrigues da Silva Tamashiro)

## **2.6 Previous Studies**

According to Rehaman B and Husnain M (2018), evaluated the Impact of Service Quality Dimensions on Patient Satisfaction in the Private Healthcare Industry in Pakistan, The aim of this study was to identify the impact of service quality dimension on patient satisfaction in district Sargodha. Furthermore, this research examined the relationship among variables and their significance. The main

objective of this study was to identify which variable impact more on the patient satisfaction by using the SERVQUAL model. The Sample size used in this study was 380, data gathered by distributing questionnaires in different private and public organizations as well as by using an online survey. The study reveals that the most important factor that impact on service quality dimension is tangible “(Physical facilities, equipment, and appearance of personnel)” and empathy “(Caring, individualized attention the firm provides its customers)” so these are the most important factors of SERVQUAL model that impact on service quality. The study concluded that Most important factor that impact on the service quality is tangible and empathy so these are the most important factors among other five factors of SERVQUAL model and Future research may explore the service quality in various sectors in Pakistan in general and in the Sargodha region in particular.

In the study of IRUNGU (2017), determined the influence of quality service delivery on performance of pharmaceutical retail firms in CBD of Nairobi City County, Kenya. Used descriptive cross sectional survey research design to collect data, the target population of the study were the customers of 45 retail pharmacies and sample is a representative of the total population on which the researcher collects the data. The result of this study was Pharmaceutical retail outlets in CBD of Nairobi City County, Kenya, adopt quality service delivery as a strategy of differentiation and improving business performance. study recommended to Replicating the research in other areas outside Kenya and in other sectors of the economy like manufacturing, banking and agriculture , entrepreneurs as proprietors of business needs to be researched on their perception of quality service delivery largely success in an organization largely depends on support of senior management.

Also Kondasani (2016) analyzed perceived service quality, customer satisfaction and behavioral intention and looked at the most preferred private healthcare setting as perceived by Indian customers and the reasons thereof. Statistical tool such as AHP analysis, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Structural Equation Modeling (SEM), RIDIT analysis and GREY Relational Analysis (GRA) were used. Sample size of 526 from twelve private hospitals of Odisha, Andhra Pradesh and Telangana. The results was, useful to service providers and healthcare managers for better service performance and maintain long term sustainability in the competitive environment in private healthcare sector and the results may provide insight to healthcare

managers as to how they can improve their service quality in order to match customer expectation and improve hospital performance. The study concluded recommendations for hospital managers should discover which service quality dimensions lead to lower levels of customer satisfaction through regular customer surveys, may establish levels or standards of service quality offered across the hospital grades, and should invest and allocate their resources to frontline service encounter employees, and corporate hospitals and nursing clinics managers can benchmark non-corporate hospital in nine service quality dimensions.

Zelege (2012) examine the Impact of service quality on customer satisfaction at the public owned National Alcohol and Liquor Factory (NALF), found that the customer perceives Assurance to be the most important driver of service quality and customer satisfaction therefore NALF should leverage this dimension as a way of ensuring that their customers get the satisfaction they expect in the services offered that to determine the customers' perceptions of the services rendered to them by NALF with respect to customer support service for each of the service quality dimension, To determine NALF's customer perceptions of the service they currently receive for each of the service quality dimension, to determine which dimension of the services is poor quality, to determine which dimension of the services is best quality, and to recommend implementation of appropriate service quality performance improvement procedures where necessary. Finally the recommendation in this study to be significant predictor of service quality and customer satisfaction. Perhaps in different settings or environments the other dimensions may be discovered to be more important than assurance. Customer's satisfaction might be influenced by such factors as price, and service variety. It might be desirable for future studies to include these (and other) factors and Future researchers can corroborate the research findings by undertaking similar studies in other beverage industries.

On the other hand Tamashiro (2012) verified if the services rendered by the distribution networks of the pharmaceutical sector attend to their clients' expectations and satisfaction level and the results showed that there is a low level of satisfaction regarding the services rendered by the distribution networks of the analyzed sector. The study population was 271 companies, 103 constituted by pharmacies and drugstores were selected by the deliberately non-probabilistic technique to compose the sample. Finally, The study concluded recommendations for future studies as Reevaluate the way the services are being rendered by the distribution networks in the pharmaceutical sector, verifying if the services

attend the expectations of the retailers of Ribeirão Preto –SP; , doing a wider study that would involve other cities on the state of São Paulo. We believe that a comparative analysis could provide a larger view over the expectations, perceptions and satisfaction of the pharmaceutical retail regarding the services rendered by the distribution networks from São Paulo; and It would also be interesting the implementation of a study that would aim at comparing the perceptions of the managers of the distribution networks with the clients' expectations to verify if there is difference between their perceptions.

TWUM (2016) examined the relationship between employee commitment and patient's satisfaction, examined the relationship between service quality and patients' satisfaction and ascertain whether employee commitment will mediate the relationship between service quality and patients' satisfaction. The results observed, there was a significant positive relationship between employee commitment and customer satisfaction, there is significant positive relationship between doctor's perception of service quality and patients' satisfaction with doctors was supported, and employee commitment will mediate the relationship between service quality and patients' satisfaction. The researcher recommends that, in order to improve the service quality among hospitals in Ghana, there is the need for the Government and other stakeholders in the health industry such as the Ministry of Health and Ghana Health Service to ensure that hospitals in Ghana are provided with ultra-modern equipment and relevant medical logistics in order to enhance the level of efficiency of health professionals in the course of their work. Lastly, the researcher recommends that, doctors, nurses and other health professionals in hospitals across the country should be provided with proper conditions of service.

Azman Ismail et al (2016) were aimed first is to examine the relationship between service quality and customers' satisfaction. Secondly, is to measure the relationship between service quality, customers' satisfaction and customers' loyalty. The finding of this study show that CUSTSAT does act as an important mediating variable in the relationship between service quality and CUSTLOY. It suggested the capability of organization to appropriately implement the service quality components in executing daily job may strongly induce subsequent positive customer outcomes (e.g., behavioral intention, trust and commitment). Thus, these positive outcomes may lead to maintaining and enhancing the instability organizational performances.

Also Kitapci et al (2014), Investigated the effect of service quality (SQ) dimensions on satisfaction, Identified the effect of satisfaction on word of mouth (WOM) communication and repurchase intention (RI) and Studied how service quality dimensions influenced satisfaction by using a suggested research model and the results showed that responsiveness, assurance, and tangibility had significant influence on patient satisfaction, while in the case of reliability and empathy significance were not confirmed. It recommended to replicate the study on a larger scale, and possibly extend it to other industries and further research should attempt to replicate the findings in other contexts. Besides, a more representative sample selection will increase the validity of the study.

In the study of Adebisi and Lawal (2017), investigated the impact of service quality dimensions (tangible, reliability, responsiveness, assurance, empathy) on customer loyalty and Questionnaires survey method was employed in the study and the results demonstrate the importance of service delivery in health care industries, and the Health service providers need to improve their service delivery for the customers to stay loyal.

Also Asya Archakova(2013) in the objective of the research isto find out if Company X in Etelä-Karjala region offers good service quality, what is the level of customer satisfaction measurements and how it can be improved, including the general atmosphere in themarket, finding thatCustomer satisfaction and loyalty behaviors are a lead indicator of future organizational performance. The present study investigates how service quality influence on customer satisfaction and how customers define quality. The results of the survey are recommended to observe if the company needs to change or to improve its strategies and it gives not only information for the company's possible operations, but it shows a perfect example of service quality from the customer's point of view.

Alhuwitat and Salem (2017), investigated the level of pharmaceutical services quality in Jordan and its impact on building a strong relationship between pharmacists and their customers, and raise awareness between the Jordanian pharmacists on the importance of service quality in the development of the pharmaceutical profession, and identify major problem areas in implementing the IS09000 system and develop solution recommendations based on analysis and results. This study is a descriptive and analytical one, the study population amounted to 1473 pharmacies according to the records of JPA, the study sample of 110 pharmacists working in public pharmacies. the results observed that there is a

statistically significant effect of pharmaceutical services quality on building a strong relationship between pharmacists and their customers at level ( $\alpha=0.05$ ) from one dimension (Responsiveness), and there is a statistically significant effect of pharmaceutical services quality on customers' perceived value, satisfaction and loyalty and there is no statistically significant effect of pharmaceutical services quality on CRM at level ( $\alpha=0.05$ ). The recommended to Pharmacies sector should focus on the quality of pharmaceutical services provided to customers as a basic standard for building a strong relationship with customers because of the direct impact of these services on customers' perceived value, satisfaction and loyalty.

Masroujeh (2009), Identified the critical factors affecting customer's satisfaction and delight in the Palestinian pharmaceutical market. Determined the relationship between the factors and customer satisfaction and delight, determine the different importance levels of factors related to customer satisfaction and delight in the pharmaceutical market, suggest suitable recommendations for improving the customer care based on the study results. The method of this study was Descriptive approach, the study population are 332 pharmacies, the random sample of 234 pharmacies which represented 70% of the study population. the results Showed that professionalism of service was ranked the most important among the five factors, completeness of service received the lowest ranking among the factors, and Availability of service, responsiveness of service, and reliability of service were in the middle of the importance ranking. the study conducted that there is a need to adjust organizational processes within the pharmaceutical companies to achieve higher marketing performance, Companies should improve their employee evaluation and report systems in order to create motivational behavior driven environments that focus effort toward building strong customer relationship, Senior management can empower the professionalism of their staff by investing into training programs in order to nurture and improve the capabilities of their front line representatives, and to advance the current ways of doing business, Sales representative must focus on solving any problems directly without delay in order to avoid any dissatisfaction incident with pharmacists, Sales representatives should enforce the product knowledge, scientific pharmaceutical knowledge, market rules, and information about their competitors' activities and market strategies, and Sales representative should always answer their mobile phone and even if they are busy, they should answer the call and tell the caller that they will call them back.

Al.Bostanji (2013), aimed to determine the impact of service quality (quick responsiveness, empathy and tangibility) on customers loyalty in five stars hotels . To achieve the objectives of the study, a questionnaire was developed and distributed. The study population consists of all hotels customers in Riyadh, and convenience sample was selected after pilot study. 500 questionnaire were distributed 333 were recalled which representing (70%) of the sample. The study finds that there is a strong impact of service quality (quick responsiveness, empathy and tangibility) on customers loyalty in five stars hotels in Riyadh. Based on the above mentioned results, a set of necessary recommendations was formulated, which enable the hotels to strengthen the relationship between perceived service quality and customers loyalty. Providing services close to their expectations, employees training, and strengthen the culture of service quality are key factors.

According to Hamid et al (2015), aimed to determine the interaction effect of service quality and brand image on satisfaction of Sudanese private healthcare customer, the questionnaire was distributed in 8 branches of Makah hospitals in Sudan through the quota sampling ( Khartoum 36.5 % ,Omdurman 22% , port Sudan 6.5% , Nyala 3% , madani11% , al Kalakla 14% , Dmazin 3% , Kassala 4% by 450 patients used the descriptive method. and the results was that the perception quality in Sudanese Health sector consists of three dimensions (tangibles, responsiveness and empathy), and the results indicated that the interaction effect of service quality variables and brand image is a positive influenced customer satisfaction and can help health care providers and managers to have deep understanding out how patients' perceived service quality. in addition, it was recommended that the findings of this study can help healthcare providers and managers to have deep understanding about how patients' perceived service quality, and managers of health services need to carefully inspect the different quality dimensions of service delivery and their interactions with use satisfaction for several reasons. It would be recommended to future researchers that this type of survey be conducted on a larger scale to assist all private healthcare providers to deliver better service to their customers. It would be beneficial if all private healthcare providers would participate and help facilitate and expand the research scope.

In Sudanese construction companies, Ali (2016) found that the research confirmed that there is almost agreement that customer satisfaction have a direct positive

impact on improving company's performance, enhancing profitability, and increasing competitiveness and productivity.

Mohamed OA Bushara, et al (2015), achieved the objectives of the research which that to enhance new method in the field of quality and to adopt new data in the same field and to identify and monitor customers' perceptions of the quality services provided in The Agricultural Bank of Sudan, and the study results indicated that customer's evaluation of the actual service quality was generally positive however it doesn't reach the level of their expectation.

Omar and Arbab (2018), aimed to know the effect of Service Quality Dimensions on Students' satisfaction in UMST Hostel Accommodation, to know the effect of Service Quality Dimensions on Students' Perceived Value in UMST Hostel Accommodation, and to know the mediating effects of Perceived value between the Service Quality Dimensions and Students' Satisfaction in UMST Hostel Accommodation. Used Descriptive analysis, 8000 student and random sample of 370 students in were invited to complete a questionnaire. The research show Perceived value has a significant direct impact on student's satisfaction Hostel Accommodation, Perceived value does not mediate the relationship between tangibility, reliability, responsiveness, assurance and empathy and student's satisfaction Hostel Accommodation, and there are no significant increases of indirect effects for these relationships compared to direct impacts. These findings can be generalized to all Sudanese educational providers because there are so many variables other than (tangibility, reliability, responsiveness, assurance, and empathy) may contribute to student's satisfaction not excluded in this study. This opens an area of conducting future researches using other variables not included in addition to considering different types of ownership of Sudanese educational providers.

According to Bushara et al (2015), the main objective of this research is to enhance new method in the field of quality and to adopt new data in the same field, and to identify and monitor customers' perceptions of the quality services provided in The Agricultural Bank of Sudan. Used the descriptive approach, population consists of (739) customers of the Agricultural Bank of Sudan, Wad Medani Town branch, distributed questionnaire to 252 as a sample size. The study results indicated that customer's evaluation of the actual service quality was generally positive however it doesn't reach the level of their expectation, and the study recommendations include the necessity of improving the provided service quality by the Bank to



reach expectation for preserving the actual Banks customers and gain their loyalty and attract potential through the adopting of service quality as a strategy for competition and excellence.

Abdelmutalab Ibrahim Abdelrasul Adam (2015), aimed his study was to examine and evaluate the applicability of the SERVQUAL instrument in measuring higher education quality in Sudan, used a self-administered questionnaire adapted from the SERVQUAL model as a tool to get responses from the students. Based on random sampling on 250 students employing a survey instruments that measure five dimensions of quality attributes, the main implication is that Sudan University of Science and Technology is currently providing good higher education service but is not meeting the overall expectations of its students, who are dissatisfied with the level of service quality offered to them. Future research should focus on the evaluation of service quality from other stakeholders (such as the university staff, government, industries, society etc.).

The study carried by Ahmed 2016, aimed to assess service pharmaceutical quality in NHIF-WNS(National Health Insurance Fund at White Nile State) as reflected in customer satisfaction to understand and determine the most important set of dimensions which affect the pharmaceutical service quality in NHIF-WNS and to investigate the influences and impacts of factors that lead to the customer satisfaction in NHIF-WNS, the Population study consisted of 579,014 all insured persons, and distributed questionnaire to 210 as a sample size. Results of the study showed that the NHIF-WNS providers in the pharmacies deals with the customers in a good manner, providers knowledge about the drug, solving customers problems, instill confidence, greetings and courteous. This study recommended that it is important to reinforce a services quality culture in NHIF-WNS by continuous development of providers skills to insure an acquisition of a positive behavior and attitude through design an specialized training programs, exceeding the working time to be (24/7) in NHIF-WNS pharmacies, continuance in distributing the pharmacies according to the health map to insure equity in services distribution, encourage the positive behavior and attitude of employee which stated by customer as a positive signed when NHIF-WNS providers deal with customer, and for NHIF-WNS it's better to take into account the recommendation of customer to others to use the NHIF services. the future studies will Measuring provider performance based on behavior and attitude towards customers during providing services, Studying the external factors that affecting pharmaceutical service, doing a comparative study in drugs service quality using another tool than

Serviqual tool between National Health Insurance Fund in White Nile State (NHIF-WNS) and In similar organization in other state, and doing a comparative study in drugs service quality between Sudanese National Health Insurance Fund and similar organization at regional or international level.

## **2.7 Sudan National Medicines and Poisons Board**

Sudan National Medicines and Poisons Board ensure the safety, effectiveness and quality of pharmaceutical products, medical devices and cosmetics

The control work on pharmaceuticals in Sudan began after the independence of the sixties of the last century when the first law, the Pharmacy and Toxicology Act was prepared in 1963, which mandated the implementation of the Ministry of Health Federal represented by the General Directorate of Pharmacy and its departments in the various regions to see the control and licensing Pharmaceutical establishments in accordance with that law. The situation remained the same until the law was amended in 2001, but the supervisory role continued within the direct responsibilities and powers of the Ministry of Health through the General Administration of Pharmacy and the departments of State authority.

The Federal Council for Pharmacy and Toxics was established in 2001 under the Pharmacy and Toxicology Act 2001 and continued to operate under the umbrella of the Federal Pharmacy General Administration until 2007. Since that year it has been under the supervision of the Federal Minister of Health. Its members include representatives of institutions and entities related to the control of medicines And in addition to other medical products, and to have a general secretariat with direct executive functions and independent technical, administrative and financial authorities. In 2009, the law was amended to become the Drugs and Toxics Act of 2009 which is currently in force. According to the Drugs and Toxins Act of 2009, Article 6, the National Council for Drugs and Toxics is the national authority responsible for setting standards, controls and conditions for import, manufacturing, control, storage, pricing, transfer, use of medicines, cosmetics and all medical supplies and pharmaceuticals according to the approved standards.

The functions of the National Medicines and Poisons Board are to formulate the pharmaceutical policies, manufacturing, importing, distributing and controlling the circulation and reception of medicines, drugs, medical supplies, cosmetics, toxins and narcotics in cooperation with the relevant authorities in addition to the powers

of the Executive Council in the Drugs and Toxins Act 2009, (Sudan pharmaceutical profile).

# **Chapter Three**

## **Materials and Methods**

The researcher identified the main statistical source of field study terms as population and/or necessary information and data and their qualification to using an experience in their field of this group consist of a well-designed service quality measurement tool with valid measures and indicators which has the ability to check and monitor the quality of services in National Medicines and Poisons Board. In the light of this approach the method of this study was Descriptive approach.

### **3.1 Service Quality Measurement Tool (SERVQUAL Model)**

In order to test its convenience for use, a questionnaire form designed, administered through the National Medicines and Poisons Board customers.

For the use of a SERVQUAL model, five quality dimensions is defined based on the literature review to identify and justify why the model is used.

### **3.2 Design of the Questionnaire Form**

This design was chosen to meet the objectives of the study, namely to determine the National Medicines and Poisons Board customers' expectations and perceptions.

A survey questionnaire was developed consisting of questions that inquire about the quality service dimensions that measure the main variables. Each question was associated with constituent variables of the main variables.

### **3.3 The Study Population and Sample**

The study population consisted of all companies who are currently registered in the lists of beneficiaries of National Medicines and Poisons Board and are received services. National Medicines and Poisons Board has "776" companies registered as an external customers, distributed as factories- companies imported.

The sample that selected was distributed as cluster stratified as follow: “in 46 factories unit”, “148 companies’ imported unit, “in 6 other unit”. This distribution based on the unit’s population density, then (199) questionnaire forms were received.

### **3.4 Data Collection Procedure**

The questionnaire was administered through the companies who registered in the lists of National Medicines and Poisons Board and have a work permit or individuals who have transactions related to the clearance of medicines or medical consumables, this tool described the objective of the study and asked customer requested to participate in this study.

### **3.5 Reliability and Validity**

A small test sample 20 questionnaire forms executed were completed to test the applicability and consistency of the questionnaire components, basing on the test result Two hundred and ten questionnaire forms were distributed, and administered by well-trained data collectors.

To achieve content validity, questionnaires included a variety of questions on the knowledge of quality service.

Questions were based on information gathered during the literature review to ensure that they were representative of what respondent should know about their service.

Content validity was further ensured by consistency in administering the questionnaire. All questionnaires forms were distributed to the intended group of respondents by the well-trained data collectors.

The questions were formulated in simple language for clarity and ease of understanding. Clear instructions were given to the subjects.

### 3.5.1 Scale Reliability Testing

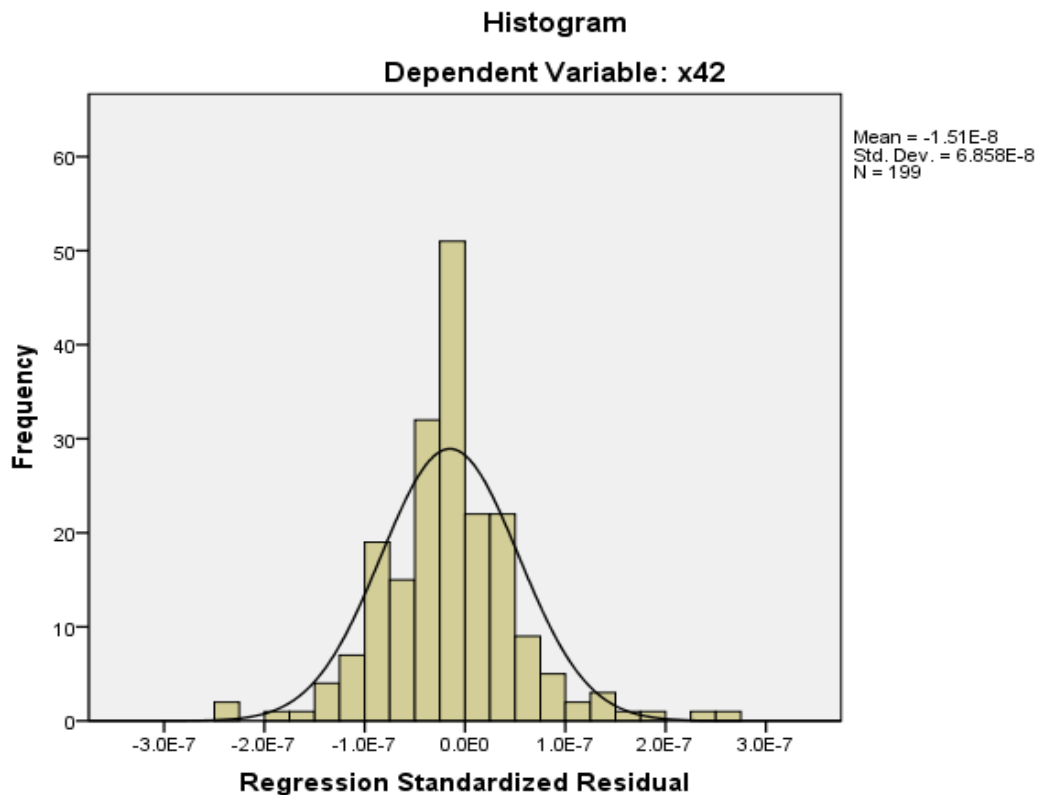
The scale reliability is the internal consistency of a latent variable and is measured most commonly with a coefficient called Cronbach's alpha and it found that, the purpose of testing the reliability of a construct is to understand how each observed indicator represents its correspondent latent variable.

Table (3.5.1) Alpha Cronbach's coefficient for Servqul model

<b>No. of questionnaire questions</b>	<b>Cronbach's alpha coefficient</b>
31	0.94

It is noted from Table (3.5.1) that the value of the coefficient of Alpha Cronbach's 94%, which was greater than 60% and this indicated that the questionnaire questions were consistent and honest.

### 3.5.2 The Normal Distribution Test:



**Figure (3.5.2)**

It is evident from Figure (3.5.2) that all questionnaire phrases follow the normal distribution.

### 3.6 Ethical Considerations

Conducting research requires not only expertise and diligence, but also honesty and integrity. This is done to recognize and protect the rights of human subjects.

To render the study ethical, the rights to self-determination, anonymity, confidentiality and informed consent be observed. Prior consent obtained from to the respondents to complete the questionnaires.

Respondent informed about the purpose of the study, the procedures that will be used in the collection of the data, and assured that there is no potential risks or costs involved.

In this study anonymity ensured by not disclosing the respondent name on the questionnaire and research reports and detaching the verbal consent from the questionnaire.

In this study, confidentiality was maintained by keeping the collected data confidential and not revealing the respondent identities when reporting or publishing the study. Respondent assured to be treated as autonomous agents by informing them about the study and allowing them to voluntarily choose to participate or not.



# Chapter Four

## Results Analysis and Discussion

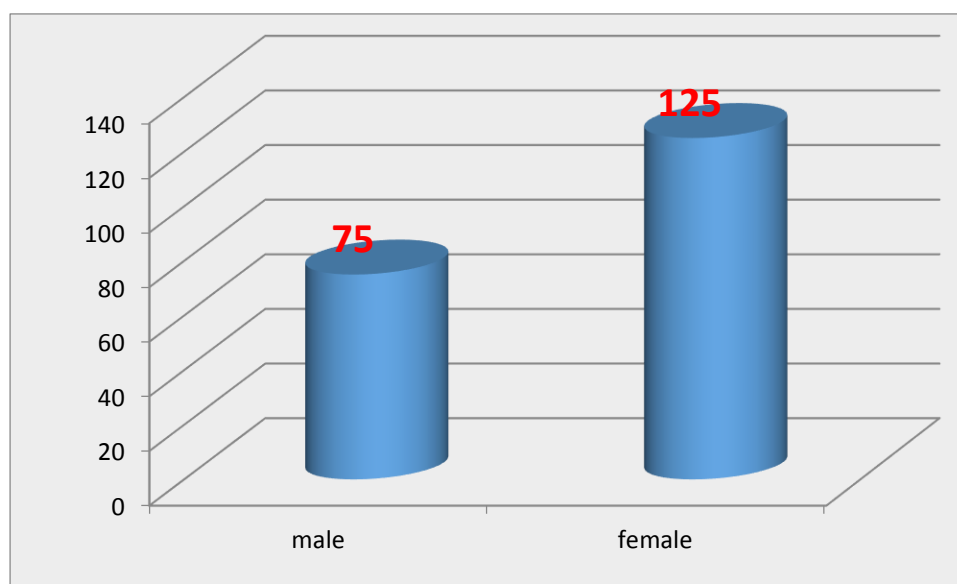
This Chapter contains the analysis of the research data in addition to the research hypotheses test. Was the study data tabulated from the questionnaire that was distributed to the respondent's customer of the Sudan National Medicines and Poisons Board these are her by displayed together with measures and indicators of the Servqul model.

### 4.1 Personal Data

#### 4.1.1 Gender

**Table (4.1.1)** Frequency distribution of the study population according to the gender variable

Sex	Frequency	Percentage %
Male	75	37.5 %
Female	125	62.5 %
<b>Total</b>	<b>200</b>	<b>100%</b>



**(Figure 4.1.1)**

The Table (4.1.1) and Figure (4.1.1) shows Frequency distribution of the members of the study sample according to the variable type.

It appears from the Table (4.1.1) and Figure (4.1.1) that 62.5% of the members of the study sample are females, while 37.5% are male.

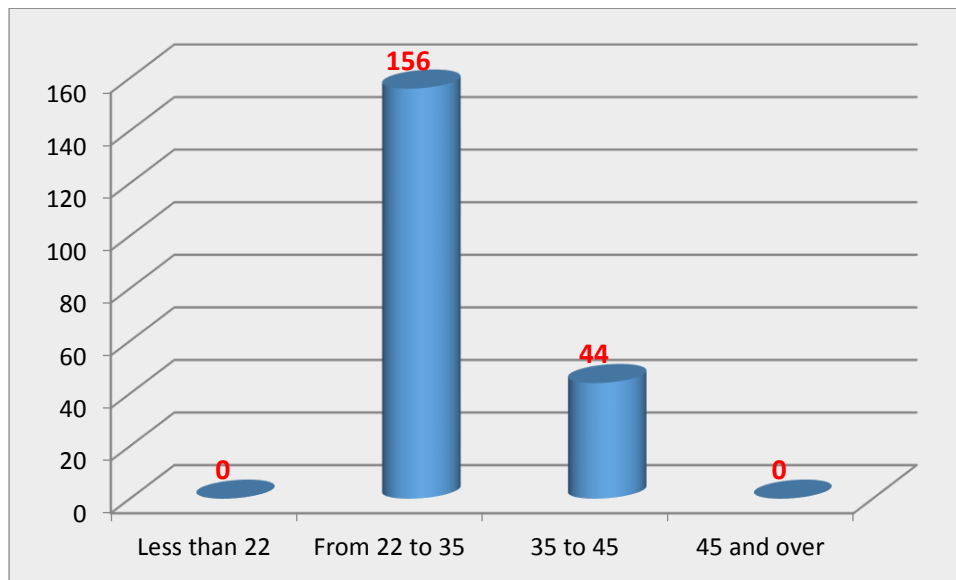
#### 4.1.2 Age group

**Table (4.1.2)**

The frequency distribution of the study sample according to the age variable

Age group	Frequency	Percentage %
Less than 22	0	0 %
22 to 35	156	78.0 %
35 to 45	44	22.0 %
45and over	0	0 %
<b>Total</b>	<b>200</b>	<b>100%</b>

**Source:** Researcher, 2020.



**(Figure 4.1.2)** The frequency distribution of the study sample according to the age variable

The table (4.1.2) and Figure (4.1.2) shows frequency distribution to members of the study sample according to the variable age.

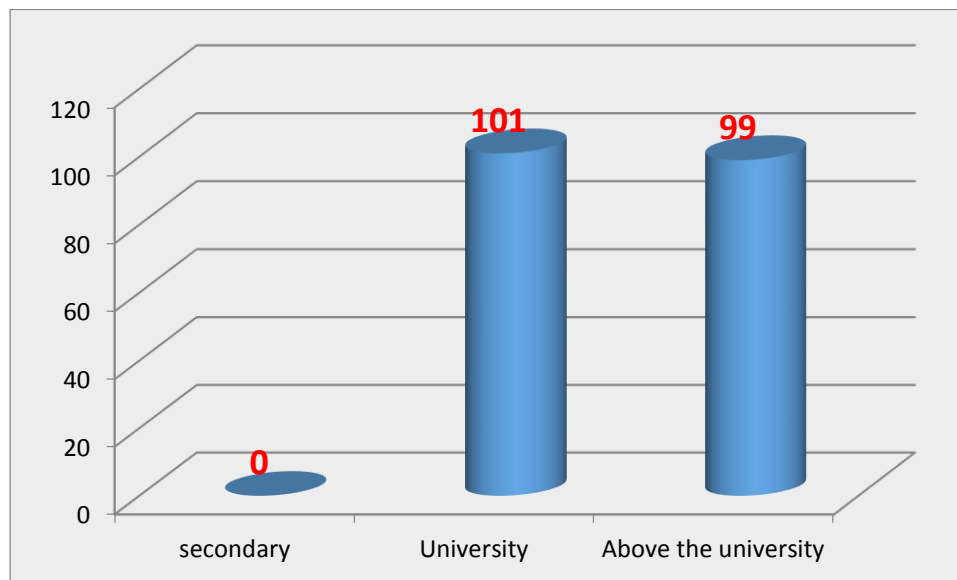
Figure (4.1.2) show that 78% of the members of the sample of the study are fall in the age group (22-35), and 22% are in the age group (35-45)

### 4.1.3 Educational Level

**Table (4.1.3) Educational Level of customers**

<b>Educational Level</b>	<b>Frequency</b>	<b>Percentage</b>
Secondary	0	0 %
University	101	%50.5
Above the University	99	%49.5
Total	200	%100

**Source:** Researcher, 2020.



**Figure (4.1.3) Educational Level of customers**

The Table (4.1.3) and Figure (4.1.3) shows frequency distribution to members of the study sample according to the variable of the educational level.

The Table (4.1.3) and Figure (4.1.3) show that 49.5% of the members of the study sample are above the university, while 50.5% are University educational level.

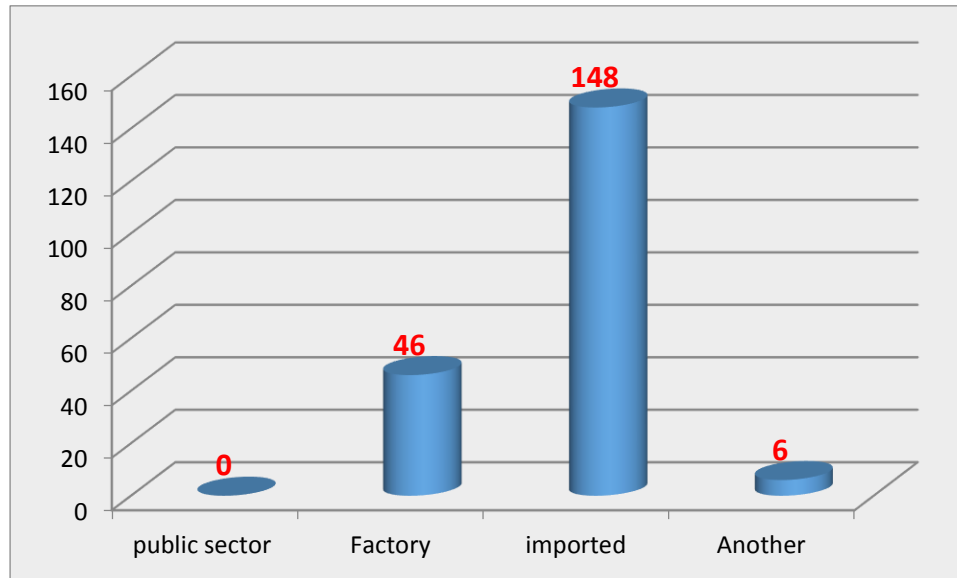
### 4.1.4 Customer Type:

**Table (4.1.4) Customer Type**

<b>Type of customer</b>	<b>Frequency</b>	<b>Percentage%</b>
public sector	0	%0

Factory	46	%23.0
imported	148	%74.0
Another	6	%3.0
Total	200	%100

**Source:** Researcher, 2020.



**Figure (4.1.4) Customer Type:**

The Table (4.1.4) and Figure (4.1.4) shows Frequency distribution of the members of the study sample variable according to the type of customer.

It is shown table (4.1.4) and Figure (4.1.4) that 46 customers (23.0%) of the members of the sample of the study are factory, 148 customers (74.0% are imported, while 6 customers (3.0%) are another.

## 4.2 Basic Data

To answer the study's questions and verify its hypotheses, the median will be calculated for each of the questionnaire phrases that show the opinions of the study sample, where the degree (1) was given as a weight for each answer "I strongly agree", and the degree (2) as a weight for each answer "I agree". And grade (3) weight for each answer is "neutral", and grade (4) for each answer "I do not agree", and the degree (5) as weight for each answer "strongly disagree." To know the direction of the response, the median is calculated.

All of the aforementioned and according to the requirements of the statistical analysis is the conversion of the nominal variables into quantitative variables, after which the chi square test will be used to find out the significance of the differences

in the answers of the individuals of the study sample to the statements of each hypothesis.

**Table (4.2) Weight for Answer**

<b>Choice</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Moderate</b>	<b>Agree</b>	<b>strongly agree</b>
<b>Weight</b>	1	2	3	4	5

#### **4.2.1 The Tangible Dimension of the Service**

Table (4.2.1.1) Frequency distribution of the responses of the study sample individuals to the first hypothesis phrases (Tangible).

Table (4.2.1.1) Frequency distribution of tangible dimension of service

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	neutral	Disagree	Strongly disagree
1	Parking is available	9 %4.5	5 %2.5	6 %3.0	75 %37.5	105 %52.5
2	Work environment in Services area is clean.	84 % 42.0	8 4.0 %	44 % 22.0	40 % 20.0	24 % 12.0
3	NMPB easy to access at any time	99 % 49.5	8 4.0 %	27 % 13.5	57 % 28.5	9 % 4.5
4	Building's indicative boards clear	69 % 34.5	17 % 8.5	42 % 21.0	37 % 18.5	35 % 17.5
5	Employees neat in appearance	102 % 51.0	14 % 7.0	58 %29.0	26 % 13.0	0 0 %
6	Easy to access information through the website adequately	91 %45.5	41 %7.0	42 %21.0	38 %19.0	15 %7.5
7	The complaints and suggestions box is clearly located	42 %21.0	8 4.0 %	72 %36.0	32 %16.0	46 %23

To test for the presence of statistical significant differences between the numbers of respondents, a chi square test was used to indicate the differences between the

answers to each phrase of the first hypothesis; Table (4.2.1.2) summarizes the test results for these phrases:

**Table (4.2.1.2) Chi Square test of Tangible Dimension**

#	Phrase	The value of the Chi Square	Degree of Freedom	Sig	Mean	Interpretation of the Direction of the Respondents
1	Parking is available	219.8	4	0.0	4.31	Strongly Disagree
2	Work environment in Services area is clean.	80.8	4	0.0	2.56	I agree
3	NMPB easy to access at any time	148.1	4	0.0	2.35	I agree
4	Building's indicative boards clear	35.2	4	0.0	2.76	I agree
5	Employees neat in appearance	92.8	3	0.0	2.04	I agree
6	Easy to access information through the website adequately	97.8	4	0.0	2.36	I agree
7	The complaints and suggestions box is clearly located	53.8	4	0.0	3.16	neutral
All phrases		328.4	4	0.0	2.8	I agree

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the first phrase (219.8) and the value of sig (00.0) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2) this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of strongly disagree that the Parking is available.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the second phrase (80.8) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2) This indicates that there are statistically

significant differences at the level of (5%) between the responses of the sample members and in favor of agreeing that the work environment in Services area is clean.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (148.1) and the value of sig (0.00), which is the lowest level of significance, was 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2) ,this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree to NMPB easy to access at any time.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (35.2) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree that the building's indicative boards clear.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fifth phrase (92.8) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree that the employees neat in appearance.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the sixth phrase (97.8) and the value of sig (0.000) which is less than

the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of those who agree that the easy to access information through the website adequately.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the seventh statement (53.8) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.1.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of the neutrals, that the complaints and suggestions box is clearly located.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with all the phrases of the hypothesis (328.4) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was stated in the table (4-12) This indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree with what was stated in all phrases of the first hypothesis.

From the foregoing, we conclude that the first study hypothesis, which stipulated the "Tangible dimension", has been fulfilled in favor of those who agree.

#### **4.2.2 The Reliability Dimension of the Service**

Table(4.2.2.1) Frequency distribution of the responses of the study sample individuals to the second hypothesis phrases (Reliability)



Table (4.2.2.1) Frequency distribution of Reliability Dimension

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	Neutral	Disagree	Strongly Disagree
1	NMPB provide services as promised	51 25.5%	3 1.5%	36 18.0%	80 40.0%	30 15.0%
2	I can reach NMPB services any time I need	57 28.5%	3 1.5%	27 13.5%	70 35.0%	43 21.5%
3	The service is provided on time as promised by the customer without delay	11 5.5%	0 0%	36 18.0%	63 31.5%	90 45.0%
4	The procedures of the transaction are clear	63 31.5%	8 4%	54 27.0%	37 18.5%	38 19.0%
5	When I have a problem with any service, NMPB employees shows interest in solving	30 15.0%	3 1.5%	66 33.0%	53 26.5%	48 24.0%

To test for the presence of statistically significant differences between the numbers of the respondents, a chi square test was used to indicate the differences between the answers to each of the two phrases of the second hypothesis. Table (4.2.2.2) summarizes the test results for these phrases:

Table (4.2.2.2) Chi square test of Reliability dimension

#	Phrase	The value of the Chi Square	Degree of Freedom	Sig	Mean	Interpretation of the direction of the respondents
1	NMPB provide services as promised	80.2	4	0.0	3.7	Disagree
2	I can reach NMPB services any time I need	68.4	4	0.0	3.8	Disagree
3	The service is provided on time as promised by the customer without delay	69.7	3	0.0	4.11	Strongly Disagree
4	The procedures of the transaction are clear	44.1	4	0.0	2.90	I agree
5	When I have a problem with	59.5	4	0.0	3.6	Disagree

	any service, NMPB employee shows interest in solving					
All phrases		235.0	4	0.0	3.8	Disagree

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the first phrase (80.2) and the value of sig (0.00) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.2.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who don't agree that the NMPB provide services as promised.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the second phrase (68.4) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.2.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of don't agreeing that customers can reach NMPB services any time they need.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (69.7) and the value of sig (0.00), which is the lowest level of significance 0.05 at the degree of freedom (3) and depending on what was mentioned in Table (4.2.2.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample individuals and in favor of strongly disagree that The service is provided on time as promised by the customer without delay.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (44.1) and the value of sig (0.00), which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.2.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of agreeing that The procedures of the transaction are clear.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fifth phrase (59.5) and the value of sig (0.00), which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.2.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of don't agreeing that When I have a problem with any service, NMPB employee shows interest in solving.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with all the phrases of the second hypothesis (235.0) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was stated in the Table (4.2.2.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of others who disagree with what was stated in all phrases of the second hypothesis.

From the foregoing we conclude that the second hypothesis of the study, which stipulated "reliability ,"has been fulfilled in favor of those who disagree.

### **4.2.3 Responsiveness Dimension of Services**

Table (4.2.3.1) Frequency distribution of the responses of the study sample individuals to the third hypothesis phrases (Responsiveness)

**Table (4.2.3.1)** Frequency distribution of Responsiveness dimension

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	neutral	Disagree	Strongly disagree
1	Employees in NMPB take action immediately when I make complain	81 %40.5	3 %1.5	70 %35.0	32 %16.0	14 %7.0
2	Employees in NMPB tell me exactly when services will be performed	79 %39.5	8 4.0 %	43 %21.5	51 %25.5	19 %9.5
3	Employees in NMPB give prompt services	0 0 %	23 %11.5	58 %29.0	67 %33.5	52 %26.0
4	Employees in NMPB are always willing to help me if I have problems with services provided	30 %15.0	6 %3.0	62 %31.0	70 %35.0	32 %16.0
5	Employees in NMPB are never too busy to respond to my request	0 0 %	30 %15.0	42 %21.0	84 %42.0	44 %22.0

To test for the presence of statistically significant differences between the numbers of respondents, a Chi square test was used to indicate the differences between the answers to each of the three hypothesis phrases, Table (4.2.3.2) summarizes the test results for these phrases:

**Table (4.2.3.2)** Chi square test of Responsiveness dimension

#	Phrase	The value of the Chi square	Degree of freedom	Sig	Mean	Interpretation of the direction of the respondents
1	Employees in NMPB take action immediately when I make complain	117.3	4	0.0	2.5	I agree

2	Employees in NMPB tell me exactly when services will be performed	77.9	4	0.0	2.6	I agree
3	Employees in NMPB give prompt services	21.7	3	0.0	3.6	Disagree
4	Employees in NMPB are always willing to help me if I have problems with services provided	67.6	4	0.0	3.5	Disagree
5	Employees in NMPB are never too busy to respond to my request	33.1	3	0.0	3.6	Disagree
All phrases		266.5	4	0.0	3.7	Disagree

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the First phrase (117.3) and the value of sig (0.00) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.3.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree that the employees in NMPB take action immediately when I make complain.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the second phrase (77.9) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.3.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those agreeing that Employees in NMPB tell me exactly when services will be performed.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (21.7) and the value of sig (0.00), which is less than the level of significance 0.05 at the degree of freedom (3) and depending on what was mentioned in Table (4.2.3.2), this indicates that there are statistically

significant differences at the level of (5%) between the responses of the sample members and in favor of others who disagree that the employees in NMPB give prompt services.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (67.6) and the value of sig (0.00), which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.3.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of those who disagree that Employees in NMPB are always willing to help me if I have problems with services provided.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fifth phrase (33.1) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.3.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of those who disagree that Employees in NMPB are never too busy to respond to my request.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with all the phrases of the third hypothesis (266.5) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was stated in the Table (4.2.3.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of others who disagree with what was stated in all phrases of the third hypothesis.

From the foregoing we conclude that the second hypothesis of the study, which stipulated that the "response" was fulfilled, was in favor of those who disagree.

#### **4.2.4 Assurance Dimension of Services**

Table (4.2.4.1) Frequency distribution of the responses of the study sample individuals to the third hypothesis phrases (Assurance)

**Table (4.2.4.1) Frequency distribution of Assurance dimension**

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	neutral	I do not agree	Strongly disagree
1	Employees in NMPB are knowledgeable about all the procedural steps for services (SOPs)	93 %46.5	14 %7.0	60 %30.0	24 %12.0	9 %4.5
2	Employees in NMPB are able to solve my problem satisfactorily	45 %22.5	8 4.0 %	40 %20.0	74 %37.0	33 %16.5
3	NMPB Board Working Hours (8 hours) enough to provided service	113 %56.5	9 %4.5	36 %18.0	21 %10.5	21 %10.5
4	Employees in NMPB pharmacy instills confidence in me	42 %21.0	5 %2.5	78 %39.0	44 %22.0	31 %15.5
5	Employees in NMPB are consistently courteous to me	38 19.0%	3 1.5%	93 46.5%	27 13.5%	39 19.5%

To test for the presence of statistically significant differences between the numbers of respondents, a chi square test was used to indicate the differences between the answers to each of the three hypothesis phrases, Table (4.2.4.2) summarizes the test results for these phrases:

**Table (4.2.4.2) Chi square test of Assurance dimension**

#	Phrase	The value of the Chi square	Degree of freedom	Sig	Mean	Interpretation of the direction of the respondents
1	Employees in NMPB are knowledgeable about all the procedural steps for services (SOPs)	127.6	4	0.0	2.2	I agree
2	Employees in NMPB are able to solve my problem satisfactorily	56.4	4	0.0	3.6	Disagree
3	NMPB Working Hours (8 hours) enough to provided service	175.7	4	0.0	2.1	I agree
4	Employees in NMPB instills	69.3	4	0.0	3.1	neutral

	confidence in me					
5	Employees in NMPB are consistently courteous to me	108.8	4	0.0	3.1	neutral
All phrases		295.6	4	0.0	2.8	I agree

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the first phrase (127.6) and the value of sig (0.00) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.4.2) this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and for the benefit of those who agree that employees in NMPB are knowledge about all the procedural steps for services (SOPs).
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state in the second phrase (56.4) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.4.2) this indicates that there are statistically significant differences at the level (5%) between the responses of the respondents and in favor of don't agree that the employees in NMPB are able to solve my problem satisfactorily.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (175.7) and the value of sig (0.00), which is the lowest level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.4.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of agreeing that the NMPB Board Working Hours (8 hours) enough to provided service.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (69.3) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in table (4.2.4.2), this indicates that there are statistically significant differences at the level (5%) between the responses of the sample



members and in favor of the neutrals that the employees in NMPB pharmacy instills confidence in customer.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fifth phrase (108.8) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.4.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of the neutrals that the employees in NMPB pharmacy are consistently courteous to customer.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with all the fourth hypothesis statements (295.6) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in the table (4.2.4.2), this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree with what came in all statements of the fourth hypothesis.

From the foregoing we conclude that the hypothesis of the fourth study, which stipulated that "Assurance" has been fulfilled, is in favor of those who agree.

#### 4.2.5 Empathy Dimension of Services

Table (4.2.5.1) Frequency distribution of the responses of the study sample individuals to the fifth hypothesis phrases (Empathy).

**Table (4.2.5.1)** Frequency distribution of Empathy dimension

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	neutral	I do not agree	Strongly disagree
1	The employees listens with great attention to the customer's needs	62 31.0%	8 4.0 %	43 %21.5	0 6 0 3 % 0.	27 %13.5
2	Employees in NMPB greeted	15	3	99	43	40

	me warmly with smile and polite	7.5	1.5	49.5	21.5	20.0
3	The employee of the NMPB board interacts with the client and gives him individual care	50	0	63	52	35
		25.0	0 %	31.5	26.0	17.5
4	The employees at NMPB are very helpful to customers with special needs	27	8	129	9	27
		13.5	4.0 %	64.5	4.5	13.5

To test for the presence of statistically significant differences between the numbers of respondents, a chi square test was used to indicate the differences between the answers to each of the three hypothesis phrases, Table (4.2.5.2) summarizes the test results for these phrases:

**Table (4.2.5.2) Chi square test of Empathy dimension**

#	Phrase	The value of the Chi square	Degree of freedom	Sig	Mean	Interpretation of the direction of the respondents
1	The employees listens with great attention to the customer's needs	52.2	4	0.0	2.9	I agree
2	Employees in NMPB greeted me warmly with smile and polite	137.1	4	0.0	3.5	Neutrals
3	The employees of the NMPB board interacts with the client and gives him individual care	8.0	3	0.0	3.1	Neutrals
4	The employee at NMPB are very helpful to customers with special needs	256.1	4	0.0	3.0	Neutrals
All phrases		320.1	4	0.0	3.1	Neutrals

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state in the first phrase (52.2) and the value of sig (0.00) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in Table (4.2.5) This indicates that there are statistically

significant differences at the level of (5%) between the responses of the sample members and in favor of those who agree that the employee listens with great attention to the client's needs.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state in the second phrase (137.1) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.5) this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of the neutrals that the employees in NMPB greeted customer warmly with smile and polite.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (8.0) and the value of sig (0.00) which is the lowest level of significance was 0.05 at the degree of freedom (3) and depending on what was mentioned in Table (4.2.5) then This indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of the neutrals that the employee of the NMPB board interacts with the client and gives him individual care.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (256.1) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in table (4-10) this indicates that there are statistically significant differences at the level of (5%) between the responses of the sample members and in favor of the neutrals that the employee at NMPB are very helpful to customers with special needs.
- The value of the Chi square calculated to indicate the differences between the numbers of the members of the study sample according to what state with all statements of the fifth hypothesis (320.1) and the value of sig (0.00) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in the table (4-10) This indicates that there are statistically significant differences at the level of (5%) between the

responses of the sample members and in favor of the neutrals, according to all the statements.

From the foregoing we conclude that the hypothesis of the fifth study, which stipulated "Empathy" was fulfilled in favor of the neutrals.

#### 4.2.6 Customer Satisfaction

Table (4.2.6.1) Frequency distribution of the responses of the study sample individuals to the fifth hypothesis phrases (Customer Satisfaction)

**Table (4.2.6.1) Frequency distribution of Customer Satisfaction**

#	Phrase	Repetition And the percentage				
		I agree	Strongly agree	neutral	I do not agree	Strongly disagree
1	I am satisfied with the service?	42 21.0%	5 2.5%	41 20.5%	61 30.5%	51 25.5%
2	I am satisfied rate my experience with service provider?	36 18.0%	5 2.5%	44 22.0%	61 30.5%	54 27.0%
3	The NMPB made service purchase easy.	49 24.5%	8 4.0%	41 20.5%	58 29.0%	44 22.0%
4	Easily were the issues regarding my request handled?	33 16.5%	0 0%	46 23.0%	62 31.0%	59 29.5%
5	I will recommended NMPB to others?	42 21.0%	5 2.5%	55 27.5%	30 30.0%	68 34.0%

To test for the presence of statistically significant differences between the numbers of respondents, a chi square test was used to indicate the differences between the answers to each of the three hypothesis phrases, Table (4.2.6.2) summarizes the test results for these phrases:

**Table (4.2.6.2) Chi square test of Customer Satisfaction**

#	Customer Satisfaction	The value of the Chi square	Degree of freedom	Sig	Mean	Interpretation of the direction of the respondents
1	I am satisfied with the service?	44.8	4	0.0	3.6	Disagree
2	I am satisfied rate my experience with service provider?	47.4	4	0.0	3.8	Disagree
3	The NMPB made service purchase easy.	36.2	4	0.0	3.7	Disagree
4	Easily were the issues regarding my request handled?	10.6	3	0.0	3.8	Disagree
5	I will recommended NMPB to others?	58.6	4	0.0	4.1	Strongly Disagree
All phrases		215.1	4	0.0	3.9	Disagree

The results of the above table can be explained as follows:

- The value of the Chi square calculated for the indication of the differences between the numbers of the members of the study sample according to what state with the first phrase (44.8) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was mentioned in table (4.2.6) this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of others who don't agree that customer satisfied with the service.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the second phrase (47.4) and the value of sig (0.000) which is less than the level of significance 0.05 at the degree of freedom (4) and depending

on what was mentioned in Table (4.2.6) then this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of others who don't agreeing that customers satisfied rate their experience with service provider.

- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the third phrase (36.2) and the value of sig (0.00), which is the lowest level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.6) then this indicates that there are statistically significant differences at the level (5%) between the responses of the respondents and in favor of don't agreeing that the NMPB made service purchase easy.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fourth phrase (10.6) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (3) and depending on what was mentioned in Table (4.2.6) then this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of others who don't agree that easily were the issues regarding customer request handled.
- The value of the Chi square calculated for the significance of the differences between the numbers of the members of the study sample according to what state with the fifth phrase (58.6) and the value of sig (0.00) which is less than the level of significance 0.05 at the degree of freedom (4) and depending on what was mentioned in Table (4.2.6) then this indicates that there are statistically significant differences at the level (5%) between the responses of the sample members and in favor of others who strongly disagree that the customer will recommended NMPB to others.
- The value of the Chi square calculated to indicate the differences between the numbers of the members of the study sample according to what state with all phrases of the sixth hypothesis (215.1) and the value of sig (0.000) which is less than the level of significance (0.05) at the degree of freedom (4) and depending on what was stated in the table (4.2.6) This indicates that there are statistically significant differences at the level of (5%) between the responses of the sample

members and in favor of others who disagree with what was stated in all phrases of the sixth hypothesis.

From the foregoing, we conclude that the hypothesis of the sixth study, which stipulated "customer satisfaction", has been fulfilled in favor of others who don't agree.

### 4.3 Multiple linear regression coefficients

To examine effect of the independent variables (Tangible, Reliability, Responsiveness, Assurance, and Empathy) on dependent variable (Customer satisfaction).

#### 4.3.1 Model evaluation:

Table (4.3.1) Evaluation of the form:

Model	Correlation coefficient	Determination standard	Error standard	Significance level
1	0.742	0.524	0.981	0.00

From the table (4.3.1), we note that the model is significant because the probability value sig (P = 0.000) is less than the significance level 0.05, as well as the determination parameter that represents the percentage of the contribution of the independent variable in causing changes in the dependent variable is (0.524). It is a reasonable ratio and the standard error indicates that the model describes the data more accurately and the total changes in customer satisfaction 0.524, and its reason (tangible - reliability - response - assertion - empathy dimensions).

#### 4.3.2 Linear test:

Note that the value of the coefficient of determination is (0.524), so the data is linear.

### 4.3.3 Variance Analysis:

**Table (4.3.3) Variance Analysis**

Sources	Freedom degrees	Sum of squares	Average sum of squares	Value F	Probability value
Regression	5	839.8	167.9	174.5	0.000
The error	794	764.2	0.96		
Total	799	1604.0			

The value of F for the significance of the differences between the independent variable (tangible dimension - reliability (reliability) - responsiveness - assurance - empathy) and dependent variable (customer satisfaction) was (F=174.5) and the value of sig (0.000) was less than the level of significance (0.05) and depending According to what is mentioned in the table (4.3.2), this indicates the presence of statistically significant differences at the level (5%) between the independent variable (the concrete dimension - reliability - response - assertion - empathy) and the dependent variable (customer satisfaction).

### 4.3.4 Significance of the regression coefficients test:

**Table (4.3.4) Significance of the regression coefficients test**

The variables	Regression coefficients	Test value t	Probability value
Tangible	0.11	4.8	0.00
Reliability	0.15	4.8	0.08
Responsiveness	0.11	3.7	0.10
Assurance	0.31	11.4	0.00
Empathy	0.39	12.2	0.06

We note that the probability value of the independent variable (Tangible dimension) is (0.00) and is less than (0.05), which indicates the significance of the regression coefficient of the independent variable (Tangible dimension) and this means that the independent variable (Tangible dimension) has an impact on the dependent variable (customer satisfaction) and also The probability value of the independent variable (Assurance) is (0.00) which is less than (0.05), which indicates the significance of the regression coefficient of the independent variable (Assurance) and this means that the independent variable (Assurance) has an impact on the dependent variable (customer satisfaction).



The probability value of each of the independent variables (reliability - responsiveness - empathy) was greater than the level of significance (0.05), which indicates that the regression coefficients of the independent variables (reliability - responsiveness - empathy) this means that the independent variables (reliability - responsiveness - Empathy) has no effect on the dependent variable (customer satisfaction).

#### 4.4 DISCUSSION Testing Hypotheses

**Table (4.4)** Testing hypothesis

#	Dimensions	The value of the Chi square	Degree of freedom	Sig	Mean	Interpretation of the direction of the respondents
1	Tangibility	328.4	4	0.0	2.8	Agree
2	Reliability	235.0	4	0.0	3.8	Disagree
3	Responsiveness	266.5	4	0.0	3.7	Disagree
4	Assurance	295.6	4	0.0	2.8	Agree
5	Empathy	320.1	4	0.0	3.1	Neutrals
6	Customer satisfaction	215.1	4	0.0	3.9	Disagree

**4.4.1 The First Hypothesis: H1** There is a positive relationship between the well-equipped National Medicines and poisons Board facilities and service quality.

From Table (4.4) the results of analysis we find that most of the respondents agree on the phrases in the table, meaning that they agree that there is a statistically significant direct relation between the tangibility and service quality. And we find the mean of the expressions in analysis (2.5 to 3), this indicates that the answers of the respondents tend to agree. In the same table, we find that the value of the chi square test (328.4) and the value of sig (0.00) was less than the level of significance at the degree of freedom (4), this is evidence of the presence of statistically significant differences between the respondents 'answers and in favor of those who agree that there is a statistically significant relationship between the tangibility and service quality in NMPB.

From the above, we confirm the validity of the hypothesis that there is a direct relation between the well-equipped National Medicines and Poisons Board tangibility and service quality.

**4.4.2 The Second Hypothesis: H2** There is a positive relationship between the reliability of providing services in the National Medicines and Poisons Board and the service quality.

From Table (4.4) the results of analysis we find that most of the respondents disagree on the phrases in the table, meaning that they disagree that there is a statistically significant direct relation between the Reliability and service quality. And we find the mean of the expressions in analysis (3.5 to 4), this indicates that the answers of the respondents tend to disagree. In the same table, we find that the value of the chi square test (235.0) and the value of sig (0.00) was less than the level of significance at the degree of freedom (4), this is evidence of statistically significant differences between the respondents' answers and in favor of those who disagree that there is a statistically significant relationship between the reliability and service quality in NMPB.

From the above, we deny the validity of the hypothesis that there is a direct relation between the reliability of providing services in the National Medicines and Poisons Board and the service quality.

**4.4.3 The Third Hypothesis: H3** Service quality increases when National Medicines and Poisons Board employee responsiveness to the customer needs and complain.

From Table (4.4) the results of analysis we find that most of the respondents disagree on the phrases in the table, meaning that they disagree that there is responsiveness. In the same table, we find the mean of the expressions in analysis (3.5 to 4), this indicates that the answers of the respondents tend to disagree. In the same table, we find that the value of the chi square test (266.5) and the value of sig (0.00) at the degree of freedom (4), this is evidence of statistically significant differences between the respondents answers and in favor of those who disagree that there is responsiveness in NMPB.

From the above, we deny the validity of the hypothesis that Service quality increases when National Medicines and Poisons Board employee responsiveness to the customer needs and complain.

**4.4.4 The Fourth Hypothesis: H4** There is a positive relationship between the assurance in providing service to National Medicines and Poisons Board customer and service quality

From Table (4.4) the results of analysis we find that most of the respondents agree on the phrases in the table, meaning that they agree that there is a statistically significant relation between the assurance and service quality. And we find the mean of the expressions in analysis (2.5 to 3), this indicates that the answers of the respondents tend to disagree. In the same table, we find that the value of the chi square test (295.6) and the value of sig (0.00) at the degree of freedom (4), this is evidence of statistically significant differences between the respondents answers and in favor of those who agree that there is assurance in NMPB.

From the above, we confirm the validity of the hypothesis that there is a relation between the assurance in providing service to National Medicines and Poisons Board customer and service quality.

**4.4.5 The Fifth Hypothesis: H5** There is a positive relationship between National Medicines and Poisons Board provider's empathy towards National Medicines and Poisons Board customers and service quality

From Table (4.4) the results of analysis we find that most of the respondents neutral on the phrases in the table, meaning that they neutral that there is a statistically significant relation between the empathy and service quality. And we find the mean of the expressions in analysis (3 to 3.5), this indicates that the answers of the respondents tend to neutral. In the same table, we find that the value of the chi square test (320.1) and the value of sig (0.00) at the degree of freedom (4), this is evidence of statistically significant differences between the respondents answers and in favor of those who neutral that there is empathy in NMPB.

From the above, we deny the validity of the hypothesis that there is a direct relation between National Medicines and Poisons Board provider's empathy towards National Medicines and Poisons Board customers and service quality.

**4.4.6 The Sixth Hypothesis: H6** There is a positive relationship between customer satisfaction and the quality of service.

From Table (4.4) the results of analysis we find that most of the respondents disagree on the phrases in the table, meaning that they are disagree that there is a customer satisfaction and we find the mean of the expressions in analysis (3.5 to 4), this indicates that the answers of the respondents tend to disagree. In the same table, we find that the value of the chi square test (215.1) and the value of sig (0.00) at the degree of freedom (4), this is evidence of statistically significant

differences between the respondents answers and in favor of those who disagree that there is a customer satisfaction toward NMPB service.

From the above, we deny the validity of the hypothesis that there is a positive relationship between customer satisfaction and the quality of service in National Medicines and Poisons Board.

The regression analysis shows that Tangible and assurance has an impact on satisfaction of the customer. All the other independent variables (reliability - responsiveness - Empathy) don't show any impact on the dependent variable.

### 4.5 Summary of the Hypotheses Testing

**Table (4.5)** Summaries the Findings on the Hypotheses Testing

<b>Hypotheses</b>	<b>Chi Square</b>	<b>df</b>	<b>Sig</b>	<b>Decision on Hypothesis</b>
<b>H1</b> There is a positive relationship between the well-equipped National Medicines and poisons Board facilities and service quality.	328.4	4	0.00	confirmed
<b>H2</b> There is a positive relationship between the reliability of providing services in the National Medicines and Poisons Board and the service quality.	235.0	4	0.00	Rejected
<b>H3</b> Service quality increases when National Medicines and Poisons Board employee responsiveness to the customer needs and complain.	266.5	4	0.00	Rejected
<b>H4</b> There is a positive relationship between the assurance in providing service to National Medicines and Poisons Board customer and service quality	295.6	4	0.00	confirmed
<b>H5</b> There is a positive relationship between National Medicines and Poisons Board provider's empathy towards National Medicines and Poisons Board customers and service quality	320.1	4	0.00	Rejected

<b>H6</b> There is a positive relationship between customer satisfaction and the quality of service.	215.1	4	0.00	Rejected
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#### **4.6 Summary of Results**

- 1- The "Tangible dimension", has been fulfilled in favor of those who agree, but the most important factor (52.0%) customers dissatisfied about the parking which mean poor quality service.
- 2- In the responsiveness dimension, the study showed that (42.0%) of customers suffer of employees NMPB as they too busy to response to their request.
- 3- The reliability dimension" ( 45.0%) of customers dissatisfied with the service that is not provided on time as promised, this indicate that there is a delay in the service provided in NMPB.
- 4- In assurance dimension the customers of NMPB are more satisfied because they fulfill (56.5%) which indicate that good service quality.
- 5- In Empathy dimension" was fulfilled in favor of the neutrals highest in (64.5%).
- 6- Customers are dissatisfied because they are not recommended deal with NMPB to others (34.0%).

# CHAPTER FIVE

## CONCLOUSIONS AND RECOMEDATIONS

### 5.1 CONCLOUSIONS

In this research, to assess service quality, the customer satisfaction questionnaire was used.

The study investigated the influence of tangible, assurance, reliability, responsiveness and empathy dimensions of services quality and its impact in quality of services as reflected in customer satisfaction. Despite the changes in the Economic in local and international markets, the NMPB was providing service to its customers which have a negative impact on customer satisfaction as stated in reliability dimension.

The study also concluded that there is some factors influences the NMPB customers satisfaction which appeared in the assurance dimension such as providers are knowledge about all the procedural steps for services (SOPs) , instill confidence, greetings and courteous, but are not able to solve customers' problem satisfactorily. The study proved that statistically there is a positive relationship between service quality and customer satisfaction in the National Medicines and Poisons Board.

The study deny that statistically there is no relation between the reliability of providing services in the National Medicines and Poisons Board and the service quality.

The study deny that statistically the service quality increases when National Medicines and Poisons Board employee responsiveness to the customer needs and

complain. The study proved that statistically there is a relation between the assurance in providing service to National Medicines and Poisons Board customer and service quality. The study deny that statistically there is a direct relation between National Medicines and Poisons Board provider's empathy towards National Medicines and Poisons Board customers and service quality.

In summary the study concluded that the service quality in NMPB was not improved based on SERVQUAL dimensions that appeared in customer dissatisfaction besides that the study deny a positive relationship between customer satisfaction and their quality of service in National Medicines and Poisons Board.

## **5.2 RECOMEDATIONS**

1. The variables like reliability, responsiveness and Empathy need to be given special attention in National Medicines and Poisons Board, and provide a suitable parking for NMPB customers.
2. Reinforce a services quality culture by continuing development of the provider skills so insure to an acquisition of a positive behavior and attitude through specialized training programs.
3. Classifying customer's specific needs in order to be understood and so be as standard operation procedure of how provider deals with the customers' specific needs.
4. Encourage the positive behavior and attitude of employee which stated by customer as a positive signed when NMPB providers deal with customer.
5. For NMPB its better to take into account the not recommendation of customer to others to use the NMPB services that mean this may lead to a lack of investment in the field of medical and health supplies.
6. Encouraging investment and expansion in the manufacture of local drugs and medical and health consumables by facilitating procedures and services by the National Medicine and Poisons Board, and this falls under the pursuit of change and development and the advancement of national industries.

7. Building a framework to improve the level of services for the beneficiary and enhance the level of satisfaction by providing services to all categories of service recipients with efficiency and distinction, taking into account efficiency through the optimal use of available resources and strengthening capabilities, and providing high-quality service in accordance with international best practices.

### **5.3 Limitations and suggestions for future research**

Due to time and budget constraints, the samples used in this study are limited to some customers who are on the National Medicine and Poisons Board at various times. This study focused on the customer's evaluation of the NMPB's service quality.

There is need for further research because the study did not consider employees who provide the services to customers; further research could be to study relationship among customer satisfaction, service quality and job satisfaction, to see if satisfaction level of employees is related to their services and/or customer satisfaction, measuring provider performance based on behavior and attitude towards customers during providing services, and comparative study in service quality between Sudanese National Medicine and Poisons Board and other similar organization.



## References

- 1- Abdelmoniem Bashir Ahmed Hassaballa (2016), impact of pharmaceutical service quality on customer satisfaction: National Health Insurance Fund at White Nile State, Sudan University of Science and Technology, March.
- 2- Abdelmutalab Ibrahim Abdelrasul Adam (2015), Service Quality Measurement In Higher Education: The Case of Sudan University of Science and Technology, Journal of Total Quality Management Vol 16(2).
- 3- Abdelsalam Adam Hamid, Siddig Balal Ibrahim, Abdelmonim Shawgi Seesy, Abdel Hafiez Ali Hasaballah (2015), Interaction effect of perceived service quality and brand image on customer satisfaction, Asian Journal of Management Sciences, 03(10).
- 4- Anthony Twum (2015), The Mediating Effect of Employee Commitment on Service Quality and Client Satisfaction among selected Hospitals in Ghana.
- 5- A. Prakash and R.P. Mohanty (2011), Understanding service quality, India.
- 6- Asya Archakova (2013), Service Quality and Customer Satisfaction. Case study: Company X, 39 pages, Saimaa University of Applied Sciences - Faculty of Business Administration, Lappeenranta, Degree Program in International Business.
- 7- Azman Ismail, afizah Omar Zaki, Ilyani Ranlan Rose (2016), GEOGRAFIA Online©, ISSN 2180-2491, Malaysian Journal of Society and Space 12 issue 7(47 - 59).
- 8- Bhaskar Mazumder, Sanjib Bhattacharya and Abhishek Yadav (2011), Total Quality Management in Pharmaceuticals P A Review, International Journal of PharmTech Research Coden (USA): IJPRIF ISSN: 0974-4304 Vol.3, No.1, pp 365-375.
- 9- Chih-Tung Hsiao and Jie-Shin Lin (2008), A Study of Service Quality in Puplic Sector, International Journal of Electronic Business Management, Vol. 6, No. 1, pp. 29-37.
- 10- Dr. Arash Shahin (2004), Department of Management, University of Isfahan, Iran, SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors in Delivering Quality Services.
- 11- Drug and Toxicology Act 2009 Article.

- 12- Galib Mohammed Al.Bostanji (2013), The Impact of Service Quality on Customers Loyalty: A Study on five stars hotel's customers in Riyadh, KSA, Vol 5, No 31.
- 13- Hamadnalla Mohamed Ali (2016), Impact of Customer Satisfaction on Performance of Sudanese Construction Companies, Sudan University of Science and Technology.
- 14- Helenita Rodrigues da Silva Tamashiro (2012), Quality Service and Customer Satisfaction: A Study in the Retail Pharmaceutical, Universidad de São Paulo.
- 15- Irina Nicolina Hădărean ȃomlea, Liviu Marian, Illes Sandor Ferencz (2014), Customer Satisfaction analysis by the Implementation of Quality Management System in a public institution, Science Direct.
- 16- Jos van Iwaarden and Ton van der Wiel (2002), a study on the applicability of SERVQUAL dimensions for web sites.
- 17- Kabu Khadka and Soniya Maharjan, Centria, (November 2017) Customer Satisfaction and Customer Loyalty, Thesis Centria University of Applied Science Business Management.
- 18- Kalidas. M.G (2007) "Financial services marketing: A study on marketing practices of banks in Kerala on service quality dimensions" Thesis. Department of Commerce and Management Studies, University of Calicut.
- 19- Khairi Mohamed Omar and Ahmed Mohammed Arbab (2018), The Effect of Service Quality Dimensions on Students' Satisfaction in University of Medical Sciences and Technology (UMST) Hostel Accommodation (Sudan), Asian Social Science; Vol. 14, No. 10.
- 20- M.A. Abujarad Alhuwitat and F. SH. Salem<sup>2</sup>, IJPSR, (2017); the Impact of Pharmaceutical Service Quality on Building a Strong Relationship between Pharmacists and their Customers, International Journal of Pharmaceutical Sciences and Research, Vol.8 (7): 3138-3145.
- 21- Mohamed OA Bushara, Samah ME Ahmed and Selwa AMA Elzebair (2015), Perceived Service Quality and Customer Satisfaction in Banking Performance: An Empirical Study in Sudanese Agricultural Bank, Wad Medani Branch, Sudan, GSL Journal of Banking and Finance.
- 22- Olgun Kitapcia\*, Ceylan Akdoganb, İbrahim Taylan Dortyolb ( 2014 ) , the Impact of Service Quality Dimensions on Patient Satisfaction,

Repurchase Intentions and Word-of-Mouth Communication in the Public Healthcare Industry, Science Direct, Procedia - Social and Behavioral Sciences.

- 23- Prabha Ramseook -Munhurrun, Soolakshna D. Lukea-Bhiwajee, Perunjodi Naidoo (2010), University of Technology, Mauritius (Service Quality in the Public Service), International Journal of Management and Marketing Research ,Volume 3, Number 1.
- 24- Rael K. Irungu (2017), Perceived Quality Service Delivery and Performance of Pharmaceutical Retail businesses in CBD of Nairobi City County Kenya, Management of the university of Nairobi, December.
- 25- Rama Koteswara Rao Kondasani and Rajeev Kumar Panda (2015), Customer Perceived Service Quality, Satisfaction and Customer Loyalty: An Empirical Test of Mediation in Private Hospital.
- 26- Rehaman B and Husnain (2018), The Impact of Service Quality Dimensions on Patient Satisfaction in the Private Healthcare Industry in Pakistan, Journal of Hospital and Medical Management.
- 27- Sarmin Sultana and Shohel Rana (2010), Gotland University, Service Quality (Service Gap Analysis) A case study- “Komvux”.
- 28- Sudan pharmaceutical profile  
[http://www.who.int/medicines/areas/coordination/sudan\\_pharmaceuticalprofile\\_december\\_2010.pdf](http://www.who.int/medicines/areas/coordination/sudan_pharmaceuticalprofile_december_2010.pdf)
- 29- Tibebe Zeleke (January 2012), Impact of service quality on Customer Satisfaction at the public owned National Alcohol and Liquor Factory.
- 30- Tlfebook, Quality-Management-Systems.pdf, Page 266.
- 31- Wassim Farouq Tawfiq Masroujeh, (2009), Critical Factors for Customer Satisfaction and Delight in the Palestinian Pharmaceutical Market, Islamic University – Gaza, June.

# APPENDIX A

## Survey Questionnaire

Sudan University of Science and Technology

College of Graduate Studies

Deanship of Quality and Development

### Research Questionnaire

The researcher is preparing a study as a supplementary requirement to obtain a master's degree in Quality Management and Excellence entitled: **The Role of Service Quality Implementation on Customers Satisfaction, Case Study: National Medicines and Poisons Board NMPB (Sudan)**

Please fill in this research form carefully and your statements will remain highly confidential and thank you for your participation in this research.

#### Basic information:

- **Gender**

Male  Female

- **Age**

Less than 30  from 30 to 40  from 40 to 50  50 and above

- **Qualification:**

Secondary  Graduate  Post Graduate

- **Type of customer**

General sectors  Importers  Manufacturers  Others

## I Tangible

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	Parking is available in NMPB.					
2	Work environment in Services area (NMPB) is clean.					
3	NMPB easy to access at any time					
4	NMPB building's indicative boards clear					
5	Employee in NMPB neat in appearance.					
6	Easy to access information through the website adequately.					
7	The complaints and suggestions box is clearly located					

## II Reliability

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	NMPB provide services as promised					
2	I can reach NMPB services any time I need					
3	The service is provided on time as promised by the customer without delay					
4	The procedures of the transaction are clear					
5	When I have a problem with any service, NMPB employee shows interest in solving					

### III Responsiveness

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	Employees in NMPB take action immediately when I make complain					
2	Employees in NMPB tell me exactly when services will be performed					
3	Employees in NMPB give prompt services					
4	Employees in NMPB are always willing to help me if I have problems with services provided					
5	Employees in NMPB are never too busy to respond to my request					

## IV Assurance

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	Employees in NMPB are knowledge about allthe procedural steps forservices (SOPs)					
2	Employees in NMPB are able to solve my problem satisfactorily					
3	NMPB Board Working Hours (8 hours) enough to provided service					
4	Employees in NMPB pharmacy instills confidence in me					
5	Employees in NMPB pharmacy are consistently courteous to me					

## V Empathy

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	The employee listens with great attention to the client's needs					
2	Employees in NMPB greeted me warmly with smile and polite					
3	The employee of the NMPB board interacts with the client and gives him individual care					
4	The employee at NMPB are very helpful to clients with special needs					

## VI Customer Satisfaction

#	Description	Strongly disagree	Disagree	Moderate	Agree	strongly agree
1	I am satisfied with the service?					
2	I am satisfied rate my experience with service provider?					
3	The NMPB made service purchase easy.					
4	Easily were the issues regarding my request handled?					
5	I will recommended NMPB to others?					



# APPENDIX B

## Survey Questionnaire (Arabic Version)

جامعة السودان للعلوم والتكنولوجيا  
كلية الدراسات العليا  
عمادة التطوير والجودة

### استبانة

..... السيد /

تقوم الباحثة باعداد دراسة كمتطلب تكميلي لنيل درجة الماجستير في ادارة الجودة الشاملة والامتياز بعنوان :  
دور تطبيق جودة الخدمة علي رضا العملاء. دراسة حالة:المجلس القومي للصيدلة والسموم (NMPB)  
يرجي ملء استمارة هذا البحث بعناية وستظل البيانات التي تدلي بيها في غاية السرية ولكم الشكر والتقدير  
علي مشاركتكم في هذا البحث .

### البيانات الاساسية :

#### • النوع:

ذكر  انثي

#### • العمر:

اقل من 22  من 22 الي 35  من 35 الي 45  45 فاكثر

#### • المؤهل العلمي:

ثانوي  جامعي  فوق الجامعي

#### • نوع العمل:

قطاع عام  مُصنّع  مستورد  اخري

• المحور الاول: البعد الملموس

الرقم	البيان	اوافق	اوافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	تتوفر مواقف السيارات في المجلس القومي للصيدلة والسموم					
2	بيئة العمل في صالة الخدمات بالمجلس نظيفة					
3	يسهل الوصول إلي المجلس في أي وقت بالمبني اللوحات الإرشادية واضحة					
4	يعتبر المظهر العام لموظفي المجلس NMPB لائق					
5	سهولة الوصول إلى المعلومات من خلال موقع الويب بشكل كاف					
6	صندوق الشكاوي والاقتراحات موجود بمكان واضح					

• المحور الثاني: الموثوقية (الاعتمادية)

الرقم	البيان	اوافق	اوافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	المجلس NMPB يقدم الخدمة كما وعد بها					
2	يمكنني الوصول إلى خدمات NMPB في أي وقت أحتاج إليه					
3	يتم توفير الخدمة في الوقت المحدد الذي وعد به العميل دون تأخير					
4	تتصف إجراءات سير المعاملة بالوضوح (بصالة الخدمة)					
5	عندما تكون لدي مشكلة في خدمة ما، الموظف يظهر الاهتمام المخلص في حل المشكلة					

• المحور الثالث: الاستجابة

الرقم	البيان	وافق	وافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	يقوم موظفي المجلس NMPB فوراً بتقديم النصح والتوجيه عندما أقدم شكوى					
2	يقوم الموظفون بإخبار العملاء متى سيتم تقديم الخدمات					
3	يقوم الموظف بتقديم خدمة سريعة للعميل					
4	الموظفون في المجلس NMPB مستعدون دائماً لمساعدتي إذا كنت أواجه مشكلات مع الخدمات المقدمة					
5	الموظفون غير مشغولين ابداً عن الاستجابة مباشرة لطلبات العملاء					

• المحور الرابع: التوكيد

الرقم	البيان	وافق	وافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	هناك معرفة لموظف المجلس بالخطوات الاجرائية الخاصة بالخدمات المقدمة (SOPs)					
2	الموظفون في NMPB قادرين على حل مشكلتي بشكل مرض					
3	ساعات عمل المجلس NMPB كافية لتقديم الخدمة (8 ساعات)					
4	موظفي المجلس NMPB يبعث الثقة بالعمل من خلال سلوكه					
5	الموظفون مهذبين باستمرار للعملاء					

• المحور الخامس: التعاطف

الرقم	البيان	وافق	وافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	يستمتع الموظف باهتمام فائقا لاحتياجات العميل					
2	يستقبل الموظف العميل بسلوك ذو حرارة وابتسامة وتهذيب باستمرار					
3	يتفاعل الموظف في المجلس NMPB مع العميل ويعطيه العناية الفردية					
4	الموظفين في المجلس NMPB مساعدين للغاية للعملاء ذوي الاحتياجات الخاصة					

• رضا العميل

الرقم	البيان	وافق	وافق بشدة	محايد	لا اوافق	لا اوافق بشدة
1	أنا راض عن الخدمة؟					
2	أنا راض عن تجربتي مع مقدم الخدمة؟					
3	المجلس NMPB جعل شراء الخدمة سهلة.					
4	بسهولة يتم التعامل مع المشاكل المتعلقة بطلباتي؟					
5	سوف أوصي بالتعامل مع المجلس NMPB للآخرين؟					