CHAPTER ONE

INTRODUCTION

1.1 Research background

National Health Insurance Fund (NHIF) is an organization concerned with the provision of medical services to the insured people, through a national insurance card, with equity and sustainability, at an affordable cost, conforms with quality standards, inspiring from the values of social solidarity and social cooperation and adopting the theory of large numbers taking into account community participation and clients satisfaction. One of the most important states through which health insurance services are provided is the White Nile State (WNS), which has joined the health insurance services in 1996.This state is bordered in the north by Khartoum state, in the south by the republic of South Sudan and in the east by the Gazira state, in the west by Kordofan state. It occupies a total area of (25,549) $Km^2$with total number of population (1,795,888) individuals according to the census center bureau of statistic for the year 2008.The WNS is distributed to seven localities in 1997. The rate of the covered participants by the NHIF services which represents 37% of total population. The National Health Insurance fund in White Nile State has been providing the medical services through 67hospitals, direct and indirect medical centers (National Health Insurance Fund report, 2013).All these units are working with the

framework of the NHIF –WNS organization policy to meet its customer needs and to satisfy their aspiration.

Customer satisfaction is a measure of how product or services supplied by accompany organization meet or surpass customer expectation also, customer satisfaction is the degree to which believes that his expectations are met or exceeded by the benefits received. Satisfaction depend on many factors it recommended that focusing on moment of truth accordingly the time during which customer come in contact with the company or its products and thereby forming either positive or negative impression, these moment of truth can occur before during or after the purchase of products. Also customer satisfaction can be defined as state of affairs in which anyone that is affected by the product feature or by processed used to produce the product. Feel that their expectations have been met by the product features. Satisfaction &dissatisfaction are not opposites. Customer satisfaction comes from those features which include customer to buy the product, but dissatisfaction has its origin in decencies and is why customers complain. Some product gives little or no dissatisfaction they do what the producer said they would do. Yet they are not salable because some competing product has features that provide greater customer satisfaction (Carlzon, 1978, pp. 25-32).

1.2Statement of the research problem

Recent management philosophy has shown increasing confidences of the importance of customer care and customer satisfaction in any business. The National Health Funds customers were not satisfied; they will eventually look for another provider that will meet their needs. Poor

performance from this perspective is thus representing a leading indicator of future decline. Although the National Health Insurance Fund (NHIF-WNS) has been spending more than 45%of its total budget annually to the pharmaceutical service, there has been increasing customer complain.

1.3 Research objectives

1.3.1 General objective

The main objective of this research is to improve pharmaceutical service quality in NHIF-WNS and provide an academic library with distinguished field research in an important area.

1.3.2 Specific objectives

The specific objectives of this study are:

1. To assess service pharmaceutical quality in NHIF-WNS as reflected in customer satisfaction.
2. To understand and determine the most important set of dimensions which affect the pharmaceutical service quality in NHIF-WNS.
3. To investigate the influences and impacts of factors that lead to the customer satisfaction in NHIF-WNS.

1.4 The significance of the research

The importance of this research is derived from the role of quality of the pharmaceutical service which provided by the National Health Insurance

Fund among its different medical services as reflected in customer satisfaction and the progress in providing this services.

1.5 Research Hypotheses

The main hypothesis of this study is "There is a positive relationship (or direct proportion) between customer satisfaction and the quality of pharmaceutical service", so many sub hypothesis were set as below:

H1: There is a direct relation between NHIF-WNS provider's attitude, sympathy towards NIHF-WNS customers and pharmaceutical service quality.

H2: There is a direct relation between the reliability of providing drug services in the NHIF-WNS pharmacies and the pharmaceutical service quality.

H3: There is a relation between the assurance in providing pharmaceutical service to NHIF-WNS customer and pharmaceutical service quality.

H4: There is a direct relation between the well-equipped NHIF-WNS pharmacies facilities and drugs service quality.

H5: pharmaceutical service quality level is improved by NHIF-WNS employees responsiveness and achievement of the customer needs and expectations.

1.6 Thesis layout

1. Chapter one: consist of introduction, research objective, research problem, and research question &thesis hypotheses.

2.Chapter two: consist of literature reviewof this study which include,service quality concepts, importance ofservice quality to firm and customer,service quality and customer satisfaction,importance of customer satsifaction in measuring quality,measurement of services qualityhealth/medical service quality concepts andServqual model applications inhealth/medical services.

3. Chapter three: research materials and methodology.

4. Chapter four: results of the study and analysis.

5. Discussions of the thesis results, conclusions, recommendations and suggestion.

CHAPTER TWO

SERVICE QUALITY ITS CONCEPT, IMPORTANCE TO FIRM & CUSTOMER AND MEASUREMENT OF SERVICES

2.1 Service quality concepts

With the increasing competition, service quality has become a popular issue in present academic research area and has been acknowledged as an observant competitive advantage and supporting satisfying relationships with customers. According to Niveen & Nathan (2013, pp. 1-13) "Service quality is a concept that has aroused substantial interest and arguments in research". There are difficulties in defining and measuring Service quality with no overall consensus emerging on either. Service quality has been defined as the overall assessment of a service by the customers; also services quality can be defined as "the extent to which a service meets customer's needs or expectations". And therefore Service is assumed to be in a higher quality level when it consistently conforms to customer expectations" (Eshghi et al., 2008, pp. 119-144). Also Niveen &Nathan (2013,pp. 1-13) added that several practitioners' defined and argues that" service quality is the measure of service delivered as against expected service performance". Also several practitioners like Munusamy et al., (2010, pp. 398-404) defined Service quality as customer perception of how does a service meets or exceed their expectations. Also (Oliver, 1980, pp. 460-469) defined it as the difference between customer's expectations for the service encounter and the perceptions of the service received, and therefore Customer

expectation and perception are the two main ingredients in service quality. Customers judge quality as “low” if performance (perception) does not meet up their expectation and quality as “high” when performance exceeds expectations. Another research study on service quality is presented by Grönroos (1994, pp. 5-20) who focuses on a model that is a comparison between customer expectations of the service and their experience of the service they have received before. This model is named “total perceived service quality”. As he emphasizes on what customer is really looking for and what they evaluate, the service quality is based on two dimensions. The first dimension is the technical quality and this dimension refers to the outcome, what is delivered or what the customer gets from the service. The next dimension is the functional quality which refers to the manner in which the service is delivered or how it is delivered. Both dimensions affect the corporate image and the perception of quality in various ways. According to total perceived service quality model, perceived quality of a service is not only affected by the experiences of the quality dimensions that the consumer used for evaluating whether quality is perceived as good, neutral, or bad. It is also affected by the perceived quality of given service as well as the outcome of the evaluation process. Thus Perceived quality has been defined as a form of attitude, related but not equal to satisfaction and fallout from a consumption of expectations with perceptions of performance.

According to Kabir and Carlson (2010, pp. 14-20), “companies can get their competitive advantage by using the technology for the purpose of enhancing service quality and gathering market demand”. For decades,

many researchers like Zeithaml (2009, 67-85), Ramsaran and Fowdar (2007, pp. 19-27) have developed a service perspective, describes that "the concept of service quality should be generally approached from the customer's point of view because they may have different values, different ground of assessment, and different circumstances". Also other researchers mentioned that "service quality is an extrinsically perceived attribution based on the customer's experience about the service that the customer perceived through the service encounter" (Parasuraman et al., 1988, pp. 12-40). Also service quality is not only involved in the final product and service, but also involved in the production and delivery process, thus employee involvement in process redesign and commitment is important to produce final products or services. In addition to that Kabir and Carlsson (2010, pp.14-25) stated that "there is a comparison between customer expectations of the service and their experience of the service they have received before. This is named "total perceived service quality" model. As they emphasizes on what customer is really looking for and what they evaluate, the service quality is based on two dimensions. The first dimension is the technical quality and this dimension refers to the outcome, what is delivered or what the customer gets from the service. The next dimension is the functional quality which refers to the manner in which the service is delivered or how it is delivered. Both dimensions affect the corporate image and the perception of quality in various ways. According to total perceived service quality model, perceived quality of a service is not only affected by the experiences of the quality dimensions that the consumer used for evaluating whether quality is perceived as good, neutral, or bad. It is also

affected by the perceived quality of given service as well as the outcome of the evaluation process.

Quality can be defined as “consistency with fixed specifications” and also can be defined as “anything that accords with the characteristics of the product to meet the external clients' needs”. In addition, the product quality differs from that of a service as the earlier is tangible, whereas the latter is intangible. In addition to that Anber at el. (2001, pp. 60-72) argued that service is also defined differently: The American Society for Marketing, for example, defines service as” activities or benefits that are offered for sale or that are offered for being related to a particular product”, and also service can be defined as “"any behavior or act based on a contact between two parties: the provider and the receiver, and the essence of this reciprocal process in intangible. In addition to that they mentioned that service is “a set of economic activities that provide time, location form and psychological benefits”. Also service is a “set of characteristics and overall properties of the service which aim to satisfy the clients and meet their needs. Anber et al. (2001, pp. 60-72) emphasized quality is considered the essence or core of strategic competition, and a set of characteristics that meet the clients' needs, strengthen the links between the organization, and enhance the clients' value as well. From these definitions quality service is an integrative assessment of the services offered to the external client, for clients are considered to be independent individuals with various requirements on the basis of which services are provided, based on certain specification. Therefore from above mentioned and from comparing between Kabir & Carlsson (2010, pp. 14-25) and Anber et al. (2001, pp. 60-72) ten

dimension &criteria in assessing and defining services quality were stated as follow as:

1. Reliability: That is connected to the consistency of performance and dependability. Here it is determined if the company give the service in the right way the first time and keeps to its promises.

2. Responsiveness: This factor concerns to what extent the employees are prepared to provide service. This involves factors such as mailing a transaction slip immediately, calling a customer back in short time and giving prompt service.

3. Competence: Competence is connected the knowledge and skills of contact personnel, operational support personnel (and also research capability) that are needed for delivering the service.

4. Access: This factor is connected to the approachability which means for example if the operating hours are convenient, the location of the facilities are convenient, the waiting times are short and also easy access by telephone.

5. Courtesy: This factor involves politeness, respect, consideration, friendliness of contact personnel (including receptionists, telephone operators and so on).

6. Communication: This is about keeping the customer informed in a language they can understand and also listen to the customer. The company may have to make some adjustments in order to include foreign customers.

7. Credibility: Factors such as trust worthiness, believability and honesty are included. It means to the level the company has the customer's best interest at heart. Factors that affect the credibility are the company name, reputation, personal characteristics and the degree to which the hard sell is connected to interactions with customers.

8. Security: Security means freedom from danger, risk or doubt. Factors included are: physical safety, financial security and confidentiality.

9. Understanding the customer: This is about making an effort to understand the customer which involves learning about specific requirements, providing individualized attention and recognizing also the regular customer.

10. Tangibles: They include physical aspects of the service such as physical facilities, appearance of personnel, tools or equipment that is used to provide the service, physical representations or other customers in the service facility.

From above mentioned we can say there is agreed in the criteria and dimensions of services quality assessed as Anber et al. (2010, pp. 60-72) stated it as follow as:

- Reliability: The ability of an organization to accurately achieve its services in the proper time and according to the promises it has made to its clients.

- Responsiveness: The tendency and willingness of service providers to help clients and satisfy their needs, immediately reply to their inquiries, and solve their problems as quickly as possible.
- Competence: Having adequate skills and knowledge that enable the employees to perform their jobs properly.
- Accessibility: Providing easy access to a service in terms of location and time concerned to perform the services through services provided via the telephone, the internet, or any other means of communication.
- Courtesy: Treating clients respectfully in a polite friendly manner, understanding their feelings, and answering their phone calls gently.
- Communication: This occurs through gentlemanly listening to the client conveying information to them clearly and facilitating external communication with workers.
- Credibility: This can be achieved through full trust and confidence in the service provider as well as his honesty and straight forwardness.
- Security: This depends on whether the service is free from risks and hazards, defects or doubts so that it provides bodily safety, financial security as well as privacy.
- Understanding/ knowing the customer: This can be made achievable through the ability to pinpoint the customers' needs as well as understanding their individual problems.
- Tangibility: This includes physical aspects connected with service such as instruments and equipment, persons, physical facilities

like buildings and nice decoration and other observable service facilities.

The above ten dimensions have been integrated into only five. They agreed on the fact that these dimensions are appropriate ones which help reveal the customers' expectations and perception. This new model is called 'Servqual'. This compound word consists of the two words 'Service' and 'Quality', these five dimensions include:

1. Tangibility: This includes physical facilities, equipment, and the physical appearance of on employee.

2. Reliability: This refers to the ability to provide the exact required service according to given specifications and conditions.

3. Responsiveness: The inclination and willingness of the employees to serve customers quickly and properly.

4. Assurance: Feelings of trust and confidence in dealing with the organization. This reflects the workers' knowledge and experience and their ability to build self-confidence as well as confidence in the customers themselves.

5. Empathy: Understanding the customers' personal needs, taking care of them individually and showing them all sorts of sympathy and affection, looking at them as close friends and distinguished clients.

From above it can be argued that services quality because of its subjective nature and intangible characteristics is difficult to define. Definitions vary depending on whose perspective is taken and within

which context it is considered no single universally accepted definition exists. Quality therefore, has been defined as value, excellence, conformance to specifications, conformance to requirements, fitness for use, meeting and/or exceeding customers' expectations and 'consistently delighting the customer by providing products and services according to the latest functional specifications which meet and exceed the customer's explicit and implicit needs and satisfy producer/provider (Ali, 2014, pp. 77-89).

2.1.1 Services quality its importance to firm & customer

According to Kima et al. (2006, pp. 39-58), "the importance of service quality has obtained a significant amount of attention by many managers and academic scholars in a variety of fields. Identifying the nature of the relationship between service quality and relevant constructs appears to be advantageous as it assists in the development of better managerial decisions". This is reflected by the increasing number of publications about customer satisfaction, service quality, customer service, and service marketing. Prior to discussing the concept of service quality and its relationships with other constructs, it is necessary to be start with the definition and fundamental characteristics of a service product as such as "Service quality is an abstract and elusive construct because of three features unique to services": intangibility, heterogeneity, and inseparability of production and consumption. Therefore, services are different from goods which are tangible products in terms of how they are produced, consumed, and evaluated. Accordingly providing services requires high heterogeneity in employment because the performance often varies from producer to producer, from customer to customer, and

from day to day. In addition to that production and consumption of most services are adhesiveness. In other words, quality of service is often seen during service delivery, usually in an interaction between the customer and the provider, rather than being engineered at the manufacturing plant, and delivered intact to the customer. In addition to that Kima et al. (2006, pp. 39-58)added that the "services are dominated by experience qualities, attributes that can be meaningfully evaluated only after purchase and during production - consumption, then customers do not evaluate service quality solely on the outcome of a service. They also consider the process of the service delivered whenever the event is completed. In addition to that Nde et al.(2010, pp. 32-40) argued that service quality is considered an important tool for a firm's struggle to differentiate itself from its competitors. The relevance of service quality to companies is emphasized here especially the fact that it offers a competitive advantage to companies that strive to improve it and hence bring customer satisfaction". Again Service quality has received a great deal of attention from both academicians and practitioners, and in services marketing literature service quality is defined as the overall assessment of a service by the customer, by defining service quality, companies will be able to deliver services with higher quality level presumably resulting in increased customer satisfaction. Understanding service quality must involve acknowledging the characteristics of service which are intangibility, disparity and inseparability. In that way, service quality would be easily measured. In addition to that Eshghi et al. (2008, pp. 119-144) stated that Service quality has received a great deal of attention from both academicians and practitioners and services marketing literature service quality is defined as the overall assessment

of a service by the customer. Also the same source there is a pointed out that, by defining service quality, companies will be able to deliver services with higher quality level presumably resulting in increased customer satisfaction. Then Understanding service quality must involve acknowledging the characteristics of service which are intangibility, heterogeneity and inseparability (Parasuraman et al., 1985, pp. 41-50).The importance of service has obtained a significant amount of attention by many managers and academic scholars in a variety of fields." Identifying the nature of the relationship between service quality and relevant constructs appears to be advantageous as it assists in the development of better managerial decisions. This realization is reflected by the increasing number of publications devoted to such topics as customer satisfaction, service quality, customer service, and service marketing (Kima et al. (2006, pp. 39-58).

Parasuraman et al. (1988, pp.12-40)defined service quality as an abstract and elusive construct because of three features unique to services: intangibility, heterogeneity, and inseparability of production and consumption, services are different from goods in terms of how they are produced, consumed, and evaluated. First of all, consumers can judge or experience the quality of tangible goods such as a new set of golf clubs and golf balls prior to purchasing those tangible products. However, they are not able to judge the quality of intangible service products such as acquiring the experience in a stadium, new golf resort, hotel, or amusement park. Secondly, services which involving high labor are heterogeneous: their performance often varies from producer to

producer, from customer to customer, and from day to day (Parasuraman et al., 1988, pp. 12-40: Kima et al., 2006, pp. 39-58).

According to Parasuraman et al. (1988, pp. 12-40), services are dominated by experience qualities, attributes that can be meaningfully evaluated only after purchase and during production-consumption In addition, customers do not evaluate service quality solely on the outcome of a service. They also consider the process of the service delivered whenever the event is completed. Also mentioned that quality of service is often seen during service delivery, usually in an interaction between the customer and the provider, rather than being engineered at the manufacturing plant (Zeithamlet al.1990).

2.1.2 Service quality and customer satisfaction

Satisfaction as a person's feelings of happiness or displeasure as a result of comparing a product's outcome in relation to his or her expectations. Stemming from this review, customer satisfaction is described as the result of a cognitive and affective evaluation, where some comparison standard are determined and compared to the actually perceived performance. If it happens that the expected performance exceeds perceived performance then, customers become dissatisfied. On the other hand, if the expectation is more than perceived performance, customers turn to be happy and satisfied. Otherwise, when the perceived performance equals to expectations, customers are neither satisfied nor dissatisfied creating what he termed as indifferent or neutral stagePhilip Kotler (2003, pp.197-200).

According to Ingy (2008, pp. 18-35) one of the earliest concepts of consumer satisfaction literature is the confirmation/disconfirmation concept. The confirmation/disconfirmation paradigm is widely accepted as a view of the process by which consumers develop feelings of satisfaction/dissatisfaction (Cadotte et al., 1987, pp. 305-314). A choice is made for a particular brand at a certain time. This choice is based on the usual process involving expectations or brand attribute beliefs, attitudes and intentions (Oliver, 1980, pp.460-469). At some subsequent time, this focal brand is used as a perception of the brand's performance is triggered and the consumer evaluates the experience of using the brand. Evaluation usually implies comparison of the actual performance of the brand with some standard in the consumer's mind. Thus there are three outcomes to this experience**:**

 Confirmation: Occurs when performance matches the standard. The patient experiences a neutral feeling.

 Positive Disconfirmation: Occurs when performance is better than the standard and this leads to satisfaction.

 Negative Disconfirmation: Occurs when performance is worse than the standard and this leads to dissatisfaction.

While Biljana et al. (2011, pp. 232-258) focused on quality and customer satisfaction with the competitive pressure. According to him in today's competitive environment delivering high quality service is the key for a sustainable competitive advantage. Customer satisfaction does have a positive effect on an organization's profitability. Satisfied customers form the foundation of any successful business because

customer satisfaction leads to repeat purchases, brand loyalty, and positive word of mouth. There are numerous studies that have looked at the impact of customer satisfaction on repeat purchases, loyalty and retention. Several researchers pointed out` to the fact that satisfied customers share their experiences with other people to the order of perhaps five or six people. On the contrary, dissatisfied customers are more likely to tell another ten people of their experience with product or service.In addition to that to Dogbe (2011, pp. 26-30) added that the customer satisfaction is a multi-dimensional construct as in quality. Also he stated that "Service quality and customer satisfaction are separate constructs, whilst satisfaction indicates the state of a customer's psyche, quality refers to the state of a business" resources and efforts.Therefore, differentiated product and service quality by defining the former as "What you get" and the latter as "How you get it". This is in agreement with Grönroos (1990, pp. 6-14). A two-dimensional aspect of service quality (technical quality – the quality of what is delivered; and the functional quality – the quality of how the service is delivered), whereas customer satisfaction could be seen as the outcome of the difference between customer's perception and expectation of service quality, it should not be forgotten that factors such as price, packaging and situational factors such as the service encounter, would also influence satisfaction.

According Markovic (2014, pp. 155-170), customer satisfaction is a short-term transaction-specific measure, whereas service quality is an attitude formed by long-term, overall evaluation of performance (Without a doubt, the two concepts of customer satisfaction and service

quality are intertwined some believe that customer satisfaction leads to perceived service quality, while others believe that service quality leads to customer satisfaction. In addition, the relationship between customer satisfaction and service quality and the way these two concepts relate to purchasing behavior remains largely unexplained. The foundation for true loyalty lies in customer satisfaction, for which service quality is a key input. Highly satisfied or even delighted customers are more likely to become loyal apostles of a firm, consolidate their buying with one suppler, and spread positive word of mouth. Many researchers and academicians highlight the importance of customer satisfaction. They argued that customer satisfaction has a positive effect on organization's profitability, and that there is a positive connection between customer satisfaction, loyalty and retention. Nowadays all companies are realizing the significance of delivering and managing service quality, which leads to customer satisfaction. Service quality that is delivered can meet or exceed customers' expectations are mainly influenced by customer's prior expectations. In the same source "satisfaction can be define as "an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some needs, goals or desire" .it is observed that customer satisfaction, service quality, customer perception, customer loyalty, all represent the main concerns of the nowadays service companies, which related to improvement of organization's performance and translated into more profits. Many factors that affect customer satisfaction such factors include friendly employees, courteous employees, knowledgeable employees, helpful employees, accuracy of billing, billing timeliness, competitive pricing,

service quality, good value, billing clarity and quick service ”Biljana (2011, pp. 232-258).Also argued that customer Satisfaction has been a central concept in marketing literature and is an important goal of all business activities. Today, companies face their toughest competition, because they move from a product and sales philosophy to a marketing philosophy, which gives a company a better chance of outperforming competition. Overall customer satisfaction translates to more profits for companies and market share increase. The principal concern of marketing is to connect with customers by building a strong customer relationship in order to meet their expectations. In the same source mentioned that there are many definition of customer satisfaction such as it “as a summary of psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience, and also satisfaction as: “a person’s feelings of pleasure or disappointment resulting from comparing a product perceived performance (or outcome) in relation to his or her expectations”. Also “satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some need, goal or desire”. Customer satisfaction as an attitude is like a judgment following a purchase act or based on series of consumer-product interactions. So and According to Biljana (2011, pp. 232-258), “Customer satisfaction has a positive effect on an organization’s profitability”. The more customers are satisfied with products or services offered the more chances for any successful business as customer satisfaction leads to repeat purchase, brand loyalty, and positive word of mouth marketing. Customer satisfaction leads to

repeat purchases, loyalty and to customer retention .Satisfied customers are more likely to repeat buying products or services. They will also tend to say good things and to recommend the product or service to others. On the other hand dissatisfied customers respond differently and dissatisfied customers may try to reduce the dissonance by abandoning or returning the product, or they may try to reduce the dissonance by seeking information that might confirm its high value. Accordingly, Companies need to develop strategies of how to handle dissatisfied customers. Businesses cannot afford under any condition to lose customers, because the cost of replacing the lost customer with a new customer is bigger. Therefore, companies must find ways of winning back the unsatisfied customers by designing special programs for service recovery. Companies should handle customer complaints with care and not seeing them as a time consuming. In addition to that Niveen& Nathan (2013, pp.1-13) argued that continued customer satisfaction is a key to long-term business success to protect/gain market shares; organizations need to outperform competitors by offering high quality product or service to ensure satisfaction of customers." They showed in their studies Banks need to understand customers‟ service requirements and how it impact on service delivery and customers‟ attitudes. In addition to that they stated that "better understanding of customers' perceptions; companies can determine the actions required to meet the customers' needs. So they can identify their own strengths and weaknesses, where they stand in comparison to their competitors, chart out paths for future progress and improvement". Also Niveen& Nathan (2013, pp.1-13) mentioned in their studies, a key element of customer satisfaction is the nature of the relationship between the customer and

the provider of the products and services. Thus, both product and service quality are commonly noted as a critical prerequisite for satisfying and retaining valued customers. It is indeed true that delivery of high-service quality to customers offers firms an opportunity to differentiate themselves in competitive markets.

Again Biljana et al. (2013, pp. 232-258), showed that the "Customer expectations play an important role in the satisfaction formation. The extent to which a product or service fulfills a customer's need and desire may play an important role in forming feelings of satisfaction because of the impact of confirmation or disconfirmation that have on satisfaction. Consumers expect to be delivered quality products and services; therefore companies try to offer quality products and services". The term expectations really matters to companies because they want to know what customers' expectations are. The term "expectations" has different uses, in the satisfaction literature, it is viewed as a prediction made by a consumer about what is likely to happen during an exchange or transaction. Also Biljana et al. (2013, pp. 232-258) added that the expectations are consumer-defined probabilities of the occurrence of positive and negative events if the consumer engages in some behavior. In the contrast, in the service quality literature it is defined as desires and wants, what a service provider should offer rather than would offer. Customers form their expectations from their past experience, friends' advice, and marketers' and competitors' information and promises. Therefore, perceived service quality is viewed as the difference between consumers' perceptions and expectations for the service provided. Organizations in order to keep expectations from rising, they have to

perform services properly from the first time. Thus, customer expectations for the service are likely to rise when the service is not performed as promised. Expectations serve as reference points in customer's assessment of performance. Thus, retailers can increase customer satisfaction by decreasing customer expectations. Kima et al, (2006, pp. 39-58) said that understanding how satisfaction is generated has important implications for management (e.g., product design, service delivery, and marketing mix allocations) indicated that: "A full 90% of top managers from over 200 of the largest corporations in America were convinced that "maximizing customer satisfaction maximized profitability and market share. Thus most researchers acknowledge "satisfaction" is a major outcome of marketing activity and serves to link processes culminating in purchase and consumption with post purchase phenomena such as attitude change, repeat purchase, and loyalty. So customer satisfaction is described as "a post consumption evaluation of perceived quality relative to expected quality).In this regard, expectation and perceived quality of a product or a service provides a baseline or anchor for the evaluation of a customer's level of satisfaction in terms of the expectancy-disconfirmation paradigm. Also Kima et al. (2006, pp. 39-58) mentioned, "If managers or administrators working in service-based organizations are able to identify how components of a product or service affect customer satisfaction of their customers, they may be able to provide their customers with a better customer experience to maximize customers' satisfaction. Accordingly they conceptualized consumer satisfaction as a cognitive appraisal of the degree to which a product or service performs relative to a subjective standard, bedside that they indicated that "satisfaction is a judgment that a product or service

feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under or over-fulfillment. Again Kima et al.(2006, pp. 39-58) added that "one simple approach to the concept of customer satisfaction is to understand it as a perceived value. Also they pointed out that that "satisfaction itself is a desirable end state of consumption or patronization; it is a reinforcing, pleasurable experience) with regard to the fundamental concept of satisfaction with their noted, that satisfaction has direct effects on profit through its influence on customer retention. In contrast, dissatisfaction has the effect of increasing the search for alternatives, resulting in a larger brand consideration set than would have existed previously. And therefore from a managerial perspective, it seems reasonable to be concerned with such questions as, "When a customer is dissatisfied, how he or she can be retained?" In accordance with the question, they suggested that firms should encourage customers who are dissatisfied with their products or services to complain and then management should respond to complaints in order to retain the customers Thus, while preventing dissatisfaction is a worthy and necessary goal, management should be more interested in what it can do to foster satisfaction). Form above Kima et al. (2006, pp. 39-58) attempted to identify relationship between service quality and customer satisfaction of spectators in professional sports. They found that all five factors of service quality, including:

(1) Access, (2) reliability, (3) responsiveness, (4) tangibles, and (5) security were positively correlated with satisfaction of the spectators.

2.1.3 Importance of customer satisfaction in measuring quality

According to Jinsoo & Zhao (2010, pp. 93-110) Customer satisfaction is the most important factors affecting service management. In fact; many researchers have applied customer satisfaction to the service industry. This is reflected in the number of previous studies carried out in this field, furthermore, due to the influence of customer satisfaction on repeat purchases and word-of-mouth recommendations, customer satisfaction is deemed to be critical for all businesses. Many scholars have defined customer satisfaction differently. Then based on Jinsoo & Zhao (2010, pp. 93-110) "customer satisfaction is the leading criterion for determining the quality actually delivered to customers through the product/service and by the accompanying servicing". Also Jinsoo & Zhao (2010, pp. 93-110) mentioned that the focal point in customer satisfaction, customers are used to buying a product or service with expectations based on previous experience. In other words, before they buy the product or service, customers already have a certain level of expectation. And then, once they buy the product or service, they compare the new one with the previous product or service. Again Jinsoo & Zhao (2010, pp. 93-110) emphasized that the confirmation or disconfirmation occurs, if the customer can accept the outcome compared with his or her expectations, confirmation will occur. On the other hand, if the customer cannot accept the outcome, disconfirmation will occur. There are two kinds of disconfirmation, which are positive disconfirmation and negative disconfirmation. When the outcome of the product or service is less than the customer expects, negative disconfirmation will occur. On the other hand, when the customer feels

better about the outcome than the expectation, positive disconfirmation will occur. In summary, customer satisfaction occurs by confirmation or positive disconfirmation of consumer expectations, and dissatisfaction occurs by negative disconfirmation of consumer expectations. Therefore Jinsoo & Zhao (2010, pp. 93-110) confirmed that there is a close link between service quality and customer satisfaction. As service quality is deemed a significant factor in increasing customer satisfaction and loyalty, the significance of service quality has been studied by academics and practitioners. In addition, service quality has been well recognized for playing a crucial role in improving organizational profits because it is directly related to customer satisfaction, and customer loyalty.

Kabir (2010, pp. 21-30) quoted many definitions deployed different researchers to the customer satisfaction as such as, customer satisfaction: "a judgment that a product or service feature, or the product or service itself, provides pleasurable consumption related fulfillment. Also "customer satisfaction is an overall emotional response to an entire service experience for a specific service encountered after purchasing consumption". Other definition "customer Satisfaction can be understood as the discrepancy between expectations and perceptions. Differences are to be expected between importance attributes but also segments". "Customer satisfaction can be described as a comparison between performance and expectations". Kabir (2010, pp. 21-30) identified five different types of satisfaction which are pleasure, relief, novelty and surprise or pleasure. There are many definitions one consensus that can be found is that the construct includes either cognitive or affective responses and customer satisfaction can be either

product or service focused. Satisfied customers become repeat purchasers of a product or service and provide positive word of mouth. That means that it is important to understand what factors those influence customer satisfaction in order to create good products or services. Satisfied customers may also give positive word of mouth and for that reason attract new customers and create long term business profit. And therefore in order to create customer satisfaction it is important for the company managers to identify which product or service attributes that can enhance customer satisfaction or delightfulness, then the performance can be improved and it will also be possible to find out which attributes that are expected by the customers (expected attributes can create dissatisfaction by their absence).

In addition to that Sharareh et al. (2012, pp. 219-223)mentioned that "the service quality theory is considered one of the most debated subjects in service literature since it lacks agreement when it comes to describing and defining service quality. Service quality is a focused evaluation reflecting the customer's perception of specific service dimensions including reliability, responsiveness, assurance, empathy, and tangibility. Furthermore, Customer satisfaction is one of the main areas of interest in marketing, business and the academic world, customer satisfaction is "the degree to which a consumer's repurchase expectations are fulfilled or surpassed by a product or service." According to Sharareh et al. (2012, pp. 219-223), which stated that customer satisfaction is known to be one of the most important and serious issues towards success in today's competitive business environment, as it affects company market shares and customer retention. In today's changing world, he suggested

developed economies are becoming service oriented, meaning that customer impressions play a critical role in this field. A company delivers services to customers, while overall customer attitude towards the company is defined in the relationship between service quality and customer satisfaction. Also Sharareh et al. (2012, pp. 219-223) added that there is a research was done on the positive relationship between service quality and customer satisfaction. In the other words, if service quality decreases quickly, customer satisfaction declines dramatically and if service quality grows radically, customer satisfaction rises rapidly. Sharareh et al. (2012, pp. 219-223), added that some researchers have tested the inspiration of service quality and customer satisfaction. They mentioned an assessment model which emphasized on the relationship between perceived service quality, customer satisfaction and interest in purchasing. This research shows that customer satisfaction is an intervening variable of service quality and repurchases interest. In other words, service quality influences customer satisfaction, and customer satisfaction affects repurchase interest. Thus from above mentioned &according to the previously mentioned findings, service quality results in customer satisfaction.

Munusamy et.al (2010, pp. 398-404) argued that “Customer satisfaction is actually a term most widely used in the business and commerce industry. It is a business term related about a measurement of the kind of products and services provided by a company to meet its customer’s expectation, to some this may be seen as the company’s key performance indicator (KPI). In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key

differentiator and increasingly has become a key element of business strategy". There is a substantial body of empirical literature that establishes the benefits of customer satisfaction for firms. It also defined as a global issue that affects all organizations, regardless of their size, whether profit or non-profit, local or multi-national. Companies that have a more sat customer base also experience higher economic returns. Again Munusamy et al. continued that "higher customer satisfaction leads to greater customer loyalty. And they have been rewarded with high revenue and customer retention as well. For that matter, organizations in the same market sector are compelled to assess the quality of the services that they provide in order to attract and retain their customers". Apparently, many researchers conceptualize customer satisfaction as an individual's feeling of pleasure (or disappointment) resulting from comparing the perceived performance or outcome in relation to the expectation. Munusamy et al. (2010, pp. 398-404) mentioned there are two general conceptualizations of satisfaction, namely, the transaction-specific satisfaction and the cumulative satisfaction. Transaction-specific satisfaction is the customer's very own evaluation of his or her experience and reaction towards a particular service encounter. This reaction is expressed by the customer who experiences a product or service for the first time. Meanwhile, cumulative satisfaction refers to the customer's overall evaluation of the consumption experience to date an own accumulation of contacts with services provided them from day-to-day. It is from this accumulation that customers establish a personal standard which is used to gauge service quality. However, in general, it is agreed that customer

satisfaction measurement is a post-consumption assessment by the user, about the products or services gained.

Form above mentioned and according to Peprah & Atarah (2014, pp. 133-143), explained satisfaction in relation to service quality, they argued that service quality is defined as the gap between predicted or expected service (customer expectations) and perceived service (customer perceptions). If customers' expectation is greater than performance, then perceived quality is regarded less than satisfactory and a service quality gap arises. This in effect does not necessarily mean that the service is of low quality but rather customer expectations have not been met and therefore customer dissatisfaction occurs and this present opportunities for improving service to meet customer expectations.

2.1.4 Measurement services quality

Measuring service quality has been one of the most recurrent topics in management literature (Parasuraman et al., 1988; Gronroos, 1984), this is because of the need to develop valid instruments for the systematic evaluation of firms' performance from the customer point of view; and the association between perceived service quality and other key organizational outcomes, which has led to the development of models for measuring service quality and reviewed various ways service quality can be measured, they include;

1. The expectancy-disconfirmation approach which is associated with the identifying of customer expectation versus what they actually

experienced. It focuses on the comparison of the service performance with the customer's expectations. The customer's expectations could be assessed after the service encounter by asking him/her to recall them.

2. Performance-only approach merely assesses service quality by merely asking customers about their level of satisfaction with various service features following a service encounter.

3. Technical and functional dichotomy approaches identify two service components that lead to customer satisfaction namely, the technical quality of the product which is based on product characteristics such as durability, security, physical features while functional quality is concerned with the relationships between service provider and customer such as courtesy, speed of delivery and helpfulness. Service quality versus service satisfaction approach which, mainly focuses on two service components that are interrelated; the transition-specific assessment which evaluates specific features of quality and the overall assessment which evaluates overall quality. This approach links perceived quality at the time of the service encounter or immediately after it and overall satisfaction with the service. Perceived quality is based on attributes of the service over which the company has control and it is a measure of the consumer's assessments of the service's value without comparison to consumer's expectation.

4. Attribute importance approach focuses on the relative weight on the importance the consumer places on attributes found to be linked with service satisfaction. 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 (Dogbe 2011, pp. 38-42). Such aspect shows in many models of service quality, among them (Parasuraman et al., 1985, pp. 41-50). The consumers' perception regarding the services levels, according to Zeithmail et al. (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. Based on Helenita et al. (2012, pp. 39-47) the most popular definition is the one that conceives it as a comparison of the clients' expectations to its perceptions about the meeting of the real service. But Grönroos (1994, pp. 5-20), Parasuraman et al. (1985, pp. 41-50) and Zenithal et al. (1990, pp. 67-85) share the same idea when they affirm that the quality is determined by the difference between the quality expected and the quality noticed. Thus from this perspective satisfaction takes customers to repeat the purchase, as well as the company's favorable publicity.

Interest in the measurement of service quality is high, however, continuous, as highlighted by several researchers, service quality is an elusive and abstract concept that is difficult to define and measure. For several years, academic researchers measured service qualities by employing uni-dimensional scales, however, are inappropriate to measure a multi-dimensional concept like quality, Teamur (2012, pp. 78-85). Service quality as mentioned before is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either. According to Mizenur et al. (2011, pp. 1-12) firms with high service quality poses a challenge to other firms. In addition to

that they mentioned many scholars and service marketers have explored consumers' cognitive and affective responses to the perception of service attributes in order to benefit by providing what consumers need in an effective and efficient manner. Then Organizations can achieve business excellence through quality control in services. Again service quality considered as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs.

There is general agreement that the aforementioned constructs are important aspects of service quality, but many scholars have been skeptical about whether these dimensions are applicable when evaluating service quality in other service industries.

Parasuraman, Zeithaml, and Berry developed a generic instrument called SERVQUAL to measure service quality based on input from focus groups. Although SERVQUAL was developed within the marketing sector, it also is used in a variety of organizational settings. Since 1988 Parasuraman, Zeithaml, and Berry have made numerous changes to SERVQUAL, some in response to problems identified by other researchers. For instance, in 1994 they reported on three different SERVQUAL formats; they recommended that researchers use a format that separated customer expectation scores into tolerance zones. Parasuraman et al. (1988, pp.12-37) stated that since service quality depends on the relationship of customer expectations with customer perceptions, it is appropriate to calculate service quality by subtracting expected from perceived service. One then achieves an overall measure

of service quality by averaging the scores of all items (Brown et al., 1992, pp.467-479). However, this procedure gives also rise to two issues: the first is disagreement over what really is being measured in SERVQUAL with expectations and the second is the problematic nature of the resulting difference scores. According to Akbar et al. (2013, pp. 77-92), many literature of quality of services conceived that service quality is the difference between customers' expectation and their perceived performance of a service. Based on this concept SERVQUAL model was developed by some authors it include five dimensions, namely tangible, responsiveness, reliability, assurance, and empathy to measure service quality. This model has drawn attention from the academic and the practical circles. The SERVQUAL has been one of the most widely used and applied scales for the measurement of perceived service quality in recent years. However, many scholars have questioned about the conceptual framework and measurement method of this model. Some of them using service quality performance to measure service quality produce better results of reliability, validity, and predictive power than using SERVQUAL. In addition, there is argued that SERVQUAL focuses more on the service delivery process than on other attributes of service, such as service-encounter outcomes (i.e. technical dimensions). While there have been efforts to study service quality, there has been no general agreement on the measurement of the concept. The majority of the work to date has attempted to use the SERVQUAL methodology in an effort to measure service quality.

In addition Munhurrun et al. (2010, pp.37-50) argued that the SERVQUAL model proposes that customers evaluate the quality of a

service on five distinct dimensions: reliability, responsiveness, assurance, empathy, and tangibles. The SERVQUAL instrument consists of 22 statements for assessing consumer perceptions and expectations regarding the quality of a service. Perceived service quality results from comparisons by consumers of expectations with their perceptions of service delivered by the service providers (Zeithaml et al., 1990, pp.12-37). It can be argued that the factor underpinning the delivering of good perceived service quality is actually meeting the expectations of the customers. Thus, excellent service quality is exceeding the customers' expectations.

Customer expectations are beliefs about a service that serve as standards against which service performance is judged, Parasuraman et al. (1988, pp. 12-40) suggested that customer expectations are what the customers think a service should offer rather than what might be on offer. Zeithaml et al. (1990) identified four factors that influence customers' expectations: word-of-mouth communications; personal needs; past experience; and external communications. A gap is created when the perceptions of the delivered service is not as per the expectations of the customer. This gap is addressed by identifying and implementing strategies that affect perceptions, or expectations, or both (Parasuraman et al., 1985, pp. 41-50); Zeithaml et al., 1990). Parasuraman et al. (1988, pp. 12-40) stated that SERVQUAL had been designed to be "applicable across a broad spectrum of services" and the format could be adapted to fit specific needs, and that it would be most valuable when used to track service quality trends periodically. They proposed that the SERVQUAL model could be extended to measure gaps in quality and could therefore

be used as a diagnostic tool to enable management to identify service quality shortfalls. The gap score is calculated by the perception statements being deducted from the expectation statements. If any gap scores turn out to be positive then this implies that expectations are actually being exceeded. This allows service managers to review whether they need to re-deploy resources to areas of underperformance. The SERVQUAL instrument ascertains the level of service quality based on the five key dimensions and also identifies where gaps in service exist. Also Krishna et al. (2010, pp. 231-243), mentioned that "many studies confirm that it is difficult to measure the quality of services due to the nature and unique characteristics of the services: Intangibility, heterogeneity, inseparability and perish ability". Since the Service quality is linked to the concepts of perceptions and expectations, surely Customers' perceptions of service quality result from a comparison of their before-service expectations with their actual service experience. Therefore service will be considered excellent, if perceptions exceed expectations; it will be regarded as good or adequate, if it only equals the expectations; the service will be classed as bad, poor or deficient, if it does not meet them. According to Krishna et al. (2010, pp. 231-243), based on this perspective, Parasuraman et al. (1988, pp.12-40) developed a scale for measuring service quality, which is mostly popular known as SERVQUAL. This scale operationalize service quality by calculating the difference between expectations and perceptions, evaluating both in relation to the 22 items that represent five service quality dimensions known as 'tangibility', 'reliability', 'responsiveness', 'assurance' and 'empathy'. The SERVQUAL scale has been tested and/or adapted in a great number of studies conducted in various service settings, cultural

contexts and geographic locations like the quality of service offered. The universality of the scale and its dimensions has also been the subject of criticisms and it is suggested that they require customization to the specific service sector in which they are applied.

Ramez (2012, pp. 131-141), said that “Service quality has become an important topic in view of its significant relationship to profit, cost saving and market share Researchers of Service marketing have developed nineteen service quality models during the period 1984-2003.These models share a single primary goal - to offer managers insight into the components of service quality for improving organizational offerings. The service quality model "SERVQUAL"' ranks as the most important of these models. It is based on the assumption that service quality is a function of differences (gaps) between customers' expectations and perceptions along five quality dimensions: reliability, responsiveness, tangibles, assurance and empathy. In addition, favorable customer perception of service quality will have a positive relationship with overall customer satisfaction and in turn their behavioral intention; repeat purchases and willingness to recommend the service to others consequently, providing high service quality to customers, offers a firm an opportunity to differentiate it and gain a competitive advantage in the market. Gunawardane (2011, pp. 91-99) stated that the initial investigations into dimensions of service quality conducted by Norwegian marketing researchers argued that service quality is based on either two dimensions, namely physical quality and interactive quality or three dimensions: technical dimension, functional dimensions and firm’s image and physical quality, interactive

quality and corporate quality. This area of research was revolutionized in the late 1980s by the landmark research of Parasuraman et al. (1988, pp. 12-40). Based on a survey of a large number of customers from five nationally known appliance repair, retail banking, long distance telephone service, securities brokerage and credit card companies, they claimed that the five dimensions of service quality customers focus on are Reliability, Responsiveness, Assurance, Empathy and Tangibles, each of which was defined earlier. They would then operationalize it with the well-known SERVQUAL method of measuring service quality. In this method, two questionnaires, each with 22 statements, based on these five dimensions are used. The first questionnaire is given to customers before the service to record "expectations" and the second is given after the service to record "perceptions". Central to the SERVQUAL method is the view that service quality, from the customer's perspective, is the difference between their post-service perceptions and pre-service expectations. If the numerical score, on Likert scale, for perceptions exceeded the score for expectations, the customer satisfaction was deemed to be positive. Although there have been criticisms of this perceptions versus expectations model, Gunawardane (2011, pp. 91-99) added that customer's cognitive process of evaluating service quality has been used to measure service quality in a variety of service contexts such as professional services, public recreation programs, retail settings, public services, food services, hair salons, information systems, higher education, university computer labs, hotels, transport services, tourist industry and banking. In addition to that the perceptions v. expectations model also has been used extensively in health care settings such as hospital services physician perceptions and

outpatient clinics. Also Gunawardane (2011, pp. 91-99) continued some researchers have questioned the validity of the five dimensions and highlighted their overlapping nature. Other researchers have found new dimensions applicable to specific industries.

Also Sadiq Sohail (2003, pp. 197-206) added Service quality has become an important research topic in view of its significant relationship to costs and, customer satisfaction, customer retention, and service guarantee. Service quality has also become recognized as a driver of corporate marketing and financial performance. Service quality also affects customer satisfaction.

2.2 Previous studies in health services quality

Health care service sector is the one that also requires and gets a lot of attention when analyzing service quality issues. Some authors analyze health care service quality from marketing management perspective, treating patients as consumers and emphasizing patient perceived service quality definition. Other studies involve service providers' point of view to health care service quality (Piligrimiene, 2013, pp. 112-124). There is also a substantial amount of literature that compares patient and health care professional views to service quality. Still, the biggest number of studies involve analysis of health care service quality as perceived by service receivers, i.e., by patients. Healthcare quality is an important factor in improving patient satisfaction. Also Good quality cares are much vital for reaching Millennium Development Goals (MDGs). Healthcare managers need to have a thorough understanding of the practical enhancement of the cares Semnani et al. (2015, pp. 88-97).

Also Lee et al. (2007, pp. 39-58) suggest that quality of service measurement is first and most important factor in improvement of healthcare quality. Hospitals are organizations established in order to respond people's health needs. Paying attention to people's expectations in order to continue the optimized correlation between suppliers and demanders of services will result in hospital activities' quality improvement. Also they argued that patient satisfaction is increasingly considered as one of the important factors in measuring healthcare quality, then satisfaction is customer's respond to fulfilling his needs.

Bulajeva (2009, pp. 20-28) stated that various organizations and researchers have defined in more abstract terms the meaning of quality of health care. The World Health Organization (WHO) defines quality of health care as: "The extent, to which the care provided, within a given economic framework, achieves the most favorable outcome when balancing risks and benefits. Donabedian (1980, pp. 247-25l) stated that "The quality of care consists of the application of medical science and technology in a way that maximizes benefits without correspondingly increasing risks". The degree of quality is, therefore, the extent to which care provided is expected to achieve the most favorable balance between risks and benefits. Health care services should be of good quality for achieving the desired outcomes. These principles were extended to the community pharmacy services via the philosophy of pharmaceutical care in the beginning of 1990s.Health care service sector is the one that also requires and gets a lot of attention when analyzing service quality issues.

Ingy (2008, pp. 17-29) argued that" Because of increasing competition and more demanding consumers, service quality has become a watch

word for virtually all businesses and in the medical field in particular due to the high importance of excellent service quality in a field where poor service quality could ultimately lead to morbidity. However, quality is difficult to measure for service providers in the medical field. Healthcare service quality has been regarded as a multi-dimensional construct. It has been envisioned to be composed of two main parts: quality as perceived by the consumer and quality in fact". Although many researchers argue the point that the 'real' quality of a service cannot be accurately portrayed in patient's perceptions, however patients will always continue to draw their own conclusions about the quality of the service. In healthcare especially, perception for the patient is the reality and it is the perceived quality as opposed to the actual or absolute quality that is important for healthcare professionals to manage. This is the basis on which consumers make purchase, repurchase and recommendation decisions in addition Donabedien (1992, pp. 247-25l) stated that, health care is conceived as consisting mainly of two parts, a technical task and an interpersonal exchange and envisaged an ideal whereby practitioner and patient together engage in a search for the most appropriate solution (thus jointly engaging in the production of care). Also (Grönross 1984, pp. 36-44) point out that the Quality in health care can be understood as technical or outcome quality is primarily focuses on what consumers actually receive from the service and functional or process quality, is focused on the process of service delivery. Thus, technical or clinical quality is considered as the accuracy of diagnoses and procedures according to the professionals' specifications and functional quality as the way in which the service is delivered to the patient (Markovic 2014, pp. 155-170). Again Markova point out that in

health care, quality is not defined in terms of clinical quality, but rather in terms of service-delivery quality. Therefore, a hospital should not focus only on clinical quality. Clinical quality is expected. In fact, who would come to the hospital in which one doesn't expect excellent medical care and in whose physicians one doesn't trust? Instead, special attention should be paid to delivering service quality. That means that in addition to providing excellent medical care, attention should be given to ensuring the appropriate communication between staff and patients or in general to the relationship with patients. Since there is consensus among scientists that the evaluation of service quality is based on the subjective judgment, it is considered as appropriate to define service quality as the difference between customer expectations of service and perceived service. Thus, from the patient's perspective, service quality includes perceptions of medical care, but also such seemingly peripheral concerns as physical facilities, and interactions with both medical and paramedical staff. Mosadeghrad (2014, pp. 77-89) also stated that "Healthcare service quality is even more difficult to define and measure than in other sectors. Distinct healthcare industry characteristics such as intangibility, heterogeneity and simultaneity make it difficult to define and measure quality. Healthcare service is an intangible product and cannot physically be touched, felt, viewed, counted, or measured like manufactured goods. Producing tangible goods allows quantitative measures of quality, since they can be sampled and tested for quality throughout the production process and in later use. However, healthcare service quality depends on service process and customer and service provider interactions". Also Mosadeghrad added some healthcare quality attributes such as timeliness, consistency, and accuracy are hard to

measure beyond a subjective assessment by the customer. It is often difficult to reproduce consistent healthcare services. Healthcare services can differ between producers, customers, places, and daily.

This ‘disparity can occur because different professionals (e.g. physicians, nurses, etc.) deliver the service to patients with varying needs. Quality standards are more difficult to establish in service operations. Healthcare professionals provide services differently because factors vary, such as experience, individual abilities, and personalities. Also Mosadeghrad (2014, pp.77-89) argued that, healthcare services are simultaneously produced and consumed and cannot be stored for later consumption. This makes quality control difficult because the customer cannot judge ‘quality’ prior to purchase and consumption. Unlike manufactured goods, it is less likely to have a final quality check. Therefore, healthcare outcomes cannot be guaranteed. Beside that Zaneta & Ausra (2013, pp. 112-123)said “Some authors analyze health care service quality from marketing management perspective, treating patients as consumers and emphasizing patient perceived service quality definition”. Also he mentioned that there is a substantial amount of literature that compares patient and health care professional views to service quality. Still, the biggest number of studies involve analysis of health care service quality as perceived by service receivers, i.e., by patients. Zaneta & Ausra (2013, pp. 112-123) stated that one of the most known approaches used in measuring services quality is the American school approach, which refers to SERVQUAL model. It has to be noted that the operationalization of both concepts in health care service sector generally covers functional quality aspects, because it has been found

that health care recipients have difficulty in evaluating technical quality. Also according to him health care service quality aspects can be easily evaluated by patients: service environment or tangible aspects where the service is provided and interpersonal aspects how the service is provided. In addition to that he added that Zaneta & Ausra (2013, pp. 112-123) stated that Inability of patients to evaluate properly technical quality called to turn to other, more operational conceptualization of service quality – SERVQUAL, when evaluating service receiver's perception of quality. The SERVQUAL instrument distinguishes five service quality dimensions: reliability, assurance, tangibility, responsiveness and empathy, which generally cover functional and tangible environmental aspects of services. SERVQUAL has been widely applied in health care industry, but the empirical results rarely showed the consensus on the number of quality dimensions. Still, SERVQUAL has been recognized as highly valuable tool for measuring service receiver's opinion about quality.

Elhakem (2013, pp. 12-25) convinced about measuring the level of satisfaction of both internal and external customer regarding the preference of public and private x-ray sector centers working in Khartoum state that it was the first study of this kind in field based on the serviqul model with in health care institution practicing in Sudanese medical services. The procedures of the study revealed the success of the speciation or of the model and paved the way for further a speciation within the services branches. In this matter he argued that the world witnesses currently the age of assessment &accountability in healthcare field. In USA, this is considered as the third revolution in this field,

whereas the first one was represented in the phase of booming in Medical services, drugs, and technology, followed by the second revolution, which was called the age of containment, reduction, and rationalization of the cost. A similar trend was developing also in the UK, as Government efforts were oriented towards limitation of the escalating wages of practitioners in the medical field, besides influencing physician prescription to focus in the commonly-used medication rather than the highly differentiated ones. Such attempts could be regarded as attempts for cost reduction. at the same time, government's efforts to radically restructure the health services country-wise makes General Physicians (GPs) accountable for managing their budgets, allowances, and specializations, within the relevant guidelines, such as (Working for patients) and (Patients Charter) that require service providers to be more responsive to customer's needs. Also according to Elhakem(2013, pp. 12-25), practitioners and managers in health care field shall start improving the services they carry out, as Muller's studies has revealed that offering excellent services in health care field is representing the most important factor, which couldn't be measured neither by inability, faultiness, nor by health control, as the measurement should be based on patient's satisfaction (the customer), whose importance is expected to increase, especially after GPs in the UK were allowed – as per the recent reforms-to purchase the relevant services from any relevant hospital capable of offering quality services to their patients, whereas the patients would report to their GPs about their impressions about what the care they received. Based on this feedback, referring physician would decide, whether to continue to cooperate with that hospital or not. This requires hospital's sections and departments

not only to focus on offering good medical care from a technical perspective, but also from a functional perspective of the care, including quality communication between patients and practitioners, good treatment, and sympathy. In addition to that Elhakem (2013, pp. 12-25) emphasized that there is a need to focus on the patient as a customer, since we seek to communicate and identify his needs. If and only if we are successful in this, then we could be able to improve the quality of the service, as quality means continuously fulfillment of patient's needs, and this is only possible through acquiring the reactions from the patients' themselves (through feedback), by developing measurements that allow patients to assess quality of the care. Also Elhakem (2013, pp. 12-25) mentioned that there are two aspects of quality in service organizations; Technical Quality and Functional Quality, whereas Technical Quality represents practitioners' ability to perform their routine jobs, including, for instance technical quality within hospital, such as healthcare providers technical & operational skills, medications management by pharmaceutical staff. As for lab technicians, this would include technical knowledge in sample collection and performing of tests, whereas for imaging radiology center technical quality may include skills of operating equipment and tools and skills of managing final outputs as per upper line of reporting (Physicians), beside diagnostic capabilities of radiological specialists. Surely, such technical aspects could be revised and assured through various procedures, indicators, or internal criteria, followed by conducting improvements, where deemed necessary. However such internal revisions or audits don't constitute a sufficient proof for patients, as radiological equipment are usually continuously calibrated to ensure their safety and that they operate

according the set specifications, but this - as previously mentioned - constitute a material evidence for patients, as they cannot judge the technical capability of the health center or the practitioners inside, but he can build his opinion based on the functional quality received e.g. the way of offering health care, including practitioners' communication skills and their sympathy towards patients. Although the patient should able to judge the technical competency of the practitioners, but he could be able to judge the method and way according to which relevant procedures are achieved. Also Elhakem (2013, pp. 13-25) said that in this respect, various writers have designed measures for measuring and standardize quality of the service offered by a hospital or a health care center. Most of these measures were direct ones, for measuring satisfaction degree, arranged in questionnaire forms, to be filled by patients, after being released from the hospital or medical care units. Expectations are individual’s thoughts and beliefs, and what he considers or whishes in respect to the future of performance of quality of a service. Hence, it measures expected performance. These expectations are influenced by the following:

- Customer's personal experience and his previous experience about this product item or service, beside his relation with it, or his frequent demand to it.
- Outer- organization communications.
- Customer's personal need for the availability of some aspects like functions or features in that product or service,

- What is promised by the providing organization (explicitly or implicitly) to provide customers with needed improvement as per the required standards.
- The effects of others' impressions and perceptions of what should be included in the service or what should be improved. Effects of service provider and his way in treatment, care, and fulfilling of patient's needs. On the other side, perceptions are individual opinions on his experience about a specific good.
- Then according to Elhakem, it can be said that an individual has some expectations about the outcome of the service offered by all organizations known to him, and well informed about their performance, whereas perceptions are only acquired after actual experience of a certain service, hence, when customers' expectations are very high, perceptions would be lower than what they were expecting from the service offered to them, leading them to be disappointed and vice versa. Thus, expectations represent the standard according which quality of service is measured.
- In addition to that Elhakem (2013, pp. 12-25) suggested that in the implementation of quality of health care services there are various considerations that lead efforts of establishing systems & methods to evolve, in order to ensure sufficient level of health care. There are also some researchers in service quality generally view expectations as standards for measuring beliefs of customers and beneficiaries, about what should be offered by service providers. This model puts service expectations on two different levels, namely:

1. Desired service: whereas the level of service represents here a mix as believed by beneficiaries to be provided by the respective offering party (organization – center – department).
2. Actual: the minimum level of service to be accepted by the customer.

Also there are two main dimensions of healthcare service quality come into focus and they are technical quality (or outcome) and functional quality (or process) quality. Technical quality is described as the technical accuracy of the medical diagnosis and procedures or conformity with professional specifications. The functional quality is described as the way in which healthcare services are delivered to patients. For the technical quality of the service outcome, there are objective measurement tool while there are few objective measures for the functional (or process) part of the service thus mainly subjective evaluation is used in judgment of this section. Consumers find difficulty in the evaluation of healthcare services as they lack of knowledge in features of the health service on which they could be their judgments on or how best to evaluate those features they chose to evaluate since healthcare by nature in a multi-service options that involves many encounters and facets. This is exactly true when patients try to evaluate the higher technical features of the healthcare service such as the qualifications of the medical staff (or the outcome) or improvement of the patient's condition (De Man et al., 2002, pp. 1109-1117).

2.3 National Health Insurance Fund

The Public Corporation for Health Insurance has been established under the Act of 1994, as an independent corporation under the supervision of the Ministry of welfare and social security to assume the management of the national system for health insurance, and providing the services to the insured persons so as to contribute to the alleviation of the medical treatment burden which was shouldered by the health utilities, and the financial burden of the State. It endeavor to promote the medical service so as to keep pace with the international development with the aim of reducing the treatment abroad through a reserve investment and the surplus of the corporation funds so as to increase the resources for the provision of better medical services in addition to the attraction of the qualified medical staff. NHIF has a headquarter office based in Khartoum with the main objectives of Planning, Training and Supervision. In each state there is an Executive Administration responsible for management of all administrative and technical and functional procedures at the state level. In each locality at the state there is an administrative unit for close to service.

The NHIF depends in its management system on an administrative structure through which, it regulated the technical and functional in managing process and hence, the form, mode and the quality of the service shall be determined in accordance with the vision and the mission of the NHIF. Perhaps the salient directorates in the health service are the General Directorate for the Medical service which assumed the task of laying down the plans and programs which meet the

health polices of the Fund; likewise, it assumes the laying down of the principles and controls of the requirements of health frameworks and it set out programs for their development. The directorate for Medical Services is the backbone of the health insurance , as it undertakes the supply and procurement and provision of the medical service to the insured in addition of the laying down and up-dating of the geographical map of the health utilities in the states, in addition of laying down and regulation of the standards and specifications which regulate the provision of the health service (in coordination with the competent authorities inside and outside the Sudan) besides, the reassurance of the quality of the medical services of the health staff which were provided by the other medical corporations, together with the laying down of the guidelines of the contraction through the purchase of the service from the other medical corporations, besides the supervision of the provision of the health staff, medical instruments and equipment and the consumables of the health service according to the need.

- **Pharmaceutical service supply in NHIF- WNS**

As this mechanism includes the Directorate of Pharmaceutical services which is entrusted with the provision of the medicines to the insured persons, for its most important tasks and functions are represented in the laying down of the detailed plans and programs, in addition to supply medication to all NHIF pharmacies in all states through cross docking system by establishing where house to each state, this system was started before 2002, Medicines used to be purchased directly from suppliers by each state with different methods. In 2003, a limited bidding system has been implemented to purchase medicines for all states by the directorate

of pharmacy at the headquarters office. In 2004, the Limited tender system has been adopted and it contributed to reduce the cost to 30%. In 2005, Open Tenders for Purchasing medicines (37% discounts). In 2010, partially decentralized drug supply system where suppliers send the purchased medicines directly to the states. Beside its authority of development of the drug service supervision of the implementation of the drugs quality and to strife for strengthening of the health insurance relations with the various drug corporations and the drug supply authorities and supervision over the preparation of the list of essential medicines and reviewing it in a regular manner. Also the Directorate of drug services work on identifies the actual drug needs through the review of all pharmacies form needs which regularly accumulates monthly.

Table (1.2) Frequency of patients to pharmacies &cost of drugs service

pharmacies	**75%**	**25%**	**Frequency**	**Total in SDG**
Kosti –central	2,937,515.53	979171.8433	89212	3,916,687.37
Rabak	1,071,149	357049.6633	39705	1,428,198.65
Eduiem	1,286,900.75	428966.9167	47482	1,715,867.67
Elkitaina	1,428,565.95	476188.65	51908	1,904,754.60
Bahar abyad	2,712,178.70	904059.5667	73980	3,616,238.27
Sekahadeed	30357.25	10119.08333	2599	40,476.33
Ubu baker sati	568,199	189399.5567	27001	757,598.23
Tanadalty	142,932.75	47644.25	7819	190,577.00
Tgani .m.khair	122,070	40690	6780	162,760.00
Mrabaa28	639,005.05	213001.6833	32242	852,006.73

ELtaweela	474,523.28	158174.4267	22907	632,697.71
Elmegayinss	26,885.97	8961.99	1286	35,847.96
Elgamaa	192,439.50	64146.5	4556	256,586.00
Aymantaha	70,249	23416.25	5515	93,665.00
Elnaeem	108,096	36031.86333	7953	144,127.45
Tandaltihadeetha	130,480.24	43493.41333	4487	173,973.65
Elskan center	87097.5	29032.5	2627	116,130.00
Enaer center –kosti	3562.75	1187.583333	262	4,750.33
Elrawat center	92,590.75	30863.58333	5387	123,454.33
Cement Rabak	8,293.25	2764.416667	693	11,057.67
Elsekahadeed	8528.75	2842.916667	42	11,371.67
Elamara	88,828.83	29609.61	5941	118,438.44
Mawlanatahir	198,776.10	66258.7	10801	265,034.80
Jaziraabab	21,742.70	7247.566667	1635	28,990.27
Elgazira aba 2	126,300	42099.83333	4959	168,399.33
Elgabalane	235,666.95	78555.65	13712	314,222.60
RabakElhadeetha	278,276	92758.68333	10598	371,034.73
Rabak. m.27	1,217,253.13	405751.0433	31314	1,623,004.17
HijraKenana	13,193.50	4397.833333	1150	17,591.33
ElduiemEhadeetha	28,030	9343.25	1322	37,373.00
Bakhtelrida	1,484,895.75	494965.25	32585	1,979,861.00
Ubugabra	141,394.45	47131.48333	7123	188,525.93
Um Gar	177,129.75	59043.25	10874	236,173.00
Eldiuem	225,271.10	75090.36667	5972	300,361.47
Shabasha .m. center	52982	17660.66667	11708	70,642.67
Shabashacenter	504,186	168062.1	21271	672,248.40
Shakhsideeg	64,025	21341.81667	1554	85,367.27

Kumbomohmmed	58718.64	19572.88	4235	78,291.52
Eldaradir	47659.8	15886.6	3322	63,546.40
Neama	104951.64	34983.88	4993	139,935.52
Shurta center	52000.25	17333.41667	2654	69,333.67
Shurta center	25699.25	8566.416667	1159	34,265.67
Total	17288600.86	5762866.953	623325	23,051,467.81

Source: Compiled by the researcher from the actual data of the field study, 2015

- **NHIF in White Nile State**

One of the most important states through which health insurance services are provided is the White Nile State, which witnessed the take-of the health insurance in late 1996, where work had started with the propagation of the concept of the health insurance and its importance for the citizen and the state. Subsequently this was followed by the inclusion of the employees of the state, the governmental departments and some semi-private corporations such as Rabak cement factory. The national health insurance fund has been providing its medical servicessince1996 is the white Nile state, which bordered to the north by Khartoum state, southern Sudan, and eastward Gezira state to the west of the Kordofan state, in a total area of 25,549.20Km^2.With total number of population (579,014) people were insured, according to the Census Central Bureau of Statistics for the year 2008) distributed in four administrative units. From the date of 1996 to now the number of participants (insured person) in the system until the end of the first quarter 2014 has been increased to (577,520) which represent (28%) from the population of the state (2,086,650). The actual application of the service for the insured began in the early 1997. The experiment started to grow and expand in a

greater manner and the health insurance started to spread very quickly and it embraced all the government institutions and the organized private sector under the Act which was issued in 2003, providing for the mandatory health insurance with the expansion of the insurance coverage it was inevitable that an expansion must be achieved in the medical service through the establishment of centers for the provision of the drug service with the health insurance covering all the towns in the state . It has direct and indirect service provider centers with a number of centers were established in the state and their number amounted to (67) centers for the provision of direct and indirect service in the state. These centers are distributed in the towns and villages of the state, to provide drug service starting from the doctor visit through the laboratory tests and ending with the surgical operations and the drug service. where the health insurance continued in this aspect, to provide its drug service through (70) pharmacies in the state, where (34) of them are owned by the insurance and (36) are indirect ones, all these units are working in two shifts morning shift from 8 AM to 2 PM and evening shift from 6 PM to 10 PM in each of these centers there is a pharmacy with a professional providers (pharmacist and assistance pharmacist) working on it these centers are classifying into direct and indirect centers and it depends on a drug supply system for all the pharmacies so as to ensure the timely arrival of the medicines and in a sound manner. Provided that the service should cover the essential list of drugs which is an approved and registered list and it was prepared by a specialized technical committee and it was subjected every two years to revision, with supervision from the Headquarters of the Health Insurance Fund in order to ensure the arrival of the drug service in the require form, pharmacies

in NHIF-WNS are classified into first line(primary)pharmacies which provide the drug service inside the centers and in a direct form, then comes the second line (secondary) pharmacies which makes up for the cases of shortage in the first line, then the third line (tertiary)pharmacy which is owned by the private sector where the services are purchased in case of their non- availability in the first line and the second line and the beneficiary shall bear the value of 25% only from the prescription in accordance with the health insurance statute. However, in case of non-availability of the service due to the drug shortage such as in all the lines, an amount equal to 75% of the drug value shall be paid to the patient. All this is performed through an administrative system which takes into consideration all the technical and functional administrative aspects which ensure the soundness of all the technical procedures in respect of the drug, starting from the determination of the requirements and orders and hence, the transportation, storage and distribution to the pharmacies up to the stage of follow-up and control. The following table shows the distribution of centers per executive units & providing services direct & indirect centers in (NHIF - WNS).

Table (2.2) Centers providing services in NHIF-WNS (direct & indirect)

Locality	**No. of centers**	**Medical centers**		**No. of Hospital**	**Hospitals**		**Total**
		Indirect	**Direct**		**Indirect**	**Direct**	
Kosti	10	2	8	2	2	-	12
Rabak	11	6	4	2	2	-	13
Edeium	5	1	4	4	4	-	9
ElKitaina	5	2	3	7	7	-	12

Tandalty	1	0	1	1	1	-	2
Elsalam	1	1	0	2	1	1	3
Elgabalane	2	1	1	1	1	-	3
Umrimta	0	0	0	3	3	-	3
Total	35	13	21	22	21	1	57

Source: Compiled by the researcher from the actual data of the field study, 2015

2.4 Serviqul in health services

Assessing and measuring patient's satisfaction and perceived service quality is an important issue for a healthcare provider to understand what is cherished by patients, and to know where, when and how service can be altered or possible improvement can be made as well as how the scarce resources of the healthcare service would be distributed.

Peprah & Atarah (2014, pp. 133-143) argued that the Servqual model is a tool used for measuring service quality and consequently the satisfaction of clients. It begins with the assumption that service quality is a function of customer's expectation of a service and their perceptions of the service actually rendered. To ascertain satisfaction, the difference between these variables (customers' expectations and perceived service actually delivered) is determined. Zeithaml et al. (1990) asserts that Servqual is a reliable instrument for determining service quality and satisfaction of customers and have been applied in different studies in different service industries. Sadiq sohail (2003, pp. 197-206) mentioned that the quality of service—both technical and functional is a key ingredient in the success of service organizations. Technical quality in health care is defined primarily on the basis of the technical accuracy of

the diagnosis and procedures. Also he mentioned there is a several techniques for measuring technical quality have been proposed and are currently in use in health-care organizations. Information relating to this is not generally available to the public, and remains within the purview of health-care professionals and administrators. Functional quality, in contrast, relates to the manner of delivery of health-care services.

According to Sadiq sohail (2003, pp. 197-206) several studies of health-care quality measurement have also used the SERVQUAL method of analysis. The SERVQUAL instrument has been extensively adopted in various industries, and its validity and reliability have been confirmed in addition to that SERVQUAL was superior in validity and reliability for evaluating patient satisfaction in medical care. According to Ramez (2012, pp. 131-141), service quality to which the health sector is no exception, is divided into two main components; namely they are technical and functional quality. Technical quality (clinical quality) is defined as the technical diagnosis and procedures (surgical skills), while functional quality refers to the manner of delivering the services to the patients (attitudes of doctors and nurses toward the patients, cleanliness of the facilities, quality of hospital food). Most patients lack medical expertise for evaluating the technical attributes, the service marketing approach, which focuses on functional quality perceived by patients, has been widely used to evaluate the health services. In addition to that several tools have been developed for measurement of patient's perception and expectations. These tools vary in terms of definition, context, and measurement, but the SERVQUAL instrument developed by Parasuman et al. (1988, pp. 12-40), remains the most widely used to

determine the relative importance of the five dimensions and influencing customer perceptions; and track quality trends over time (Sohail, 2003, pp. 197-206). Also According to Ebru (2007)argued that health service managers should be encouraged to test the dimensions in their own business environments rather than autocratically adopt SERVQUAL factor structure. Ramez (2012, pp. 131-141) stated some studies carried out in health services and adopted the SERVQUAL instrument to assess the health services quality and patients satisfaction in deferent countries such as the study which is carried out in hospital services in Bangladesh, measure patient's satisfaction India, measuring health care system in south Korea, measuring patient perception in National Health system (NHS) in Macedonia& Greece. All of these studies tested a five dimensional instrument for assessing perception of patients, the results in such studies showed that there is significant relationship between service quality dimensions and patient satisfaction. There for the success of health care organizations, accurate measurement of health care's quality is as important as understanding the nature of delivery system. Without a valid measure, it would be difficult to establish and implement appropriate tactics and strategies for service quality management (Ebru, 2007).Thus from the above mention there is no doubt that the term quality in the service sector seems to be different from the term in the goods market. Since the production in the service sector is generally an abstract term, evaluating service quality becomes more difficult than evaluating the quality of goods. Therefore, service quality measurements are, in general, made by means of using consumers' (patients) perception about the quality of the services.

2.5 Rational of serviqul in pharmaceutical services

According to Bulajeva (2010) “service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus. There are a number of different "definitions" as to what is meant by service quality. One that is commonly used defines service quality as the extent to which a service meets customers’ needs or expectations in addition to that he added that always there exists an important question: why should service quality be measured? Measurement allows for comparison before and after changes, for the location of quality related problems and for the establishment of clear standards for service delivery. Also in similar area the starting point in developing quality in services is analysis and measurement. While there have been efforts to study service quality, there has been no general agreement on the measurement of the concept. Therefore we can say measuring health services quality is needed in all heath sector areas especially in drugs services area. According to Wathoni et al. (2014, pp. 84-90) efforts to improve public health can be performed by a pharmacist in a pharmacy by applying the concept of pharmaceutical services. Although pharmacy services are an integral part of health care system, there is limited research regarding service quality in this field .also the important of the pharmacy in social as well as a functional role within an integrated health care system. In addition to that Anna Bulajeva (2010) mentioned that “the Pharmacists’ services and involvement in patient-centered care have been associated with improved health and economic outcomes, a reduction in medicine-

related adverse events, improved quality of life, and reduced morbidity and mortality. Also he added that a recent review investigated the effectiveness of professional pharmacist services in terms of consumer outcomes, and where possible, the economic benefits.

Then according to Wathoni et al. (2014, pp. 84-90), development of the pharmacy system and service is not only important from the viewpoint of the pharmacist as an entrepreneur, but also from the viewpoint of the whole society. Thus from the above mentioned "The implementation and practice of pharmaceutical care must be supported and improved by measuring, assessing and improving pharmacy practice activities, utilizing the conceptual framework of continuous quality improvement". A key lesson is that in many cases quality of pharmacy services can be improved by making changes to the health care system or pharmacy system without necessarily increasing resources. Improving the processes of pharmacy practice not only creates better outcomes but also reduces cost through eliminating waste, unnecessary work and repetition of work already done. Thus quality improvement must address both the resources (structures) and activities carried out (processes) to ensure or improve the quality of pharmaceutical care (outcomes).

Therefore and according to Bulajeva (2010) 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, 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. It has five generic dimensions or factors and is stated as follows (van Iwaarden et al., 2003, pp. 919-935):

(1) Tangibles: Physical facilities, equipment and appearance of personnel.

(2) Reliability: Ability to perform the promised service dependably and accurately.

(3) Responsiveness: Willingness to help customers and provide prompt service.

(4) Assurance: including competence, courtesy, credibility and security& also means knowledge and courtesy of employees and their ability to inspire trust and confidence.

(5) Empathy: including access, communication, understanding the customer caring and individualized attention that the firm provides to its customers. It is important to note that without adequate information on both the quality of services expected and perceptions of services received then feedback from customer surveys can be highly misleading from both a policy and an operational perspective. The research on

measuring service quality has focused primarily on how to meet or exceed the external customer's expectations, and has viewed service quality as a measure of how the delivered service level matches consumer's expectations. These perspectives can also be applied to the employees of a firm and in this case, other major gaps could be closed in the service quality gaps model.

CHAPTER THREE

MATERIALS & METHODS

As stated evidence this study is concerned is the study for this purpose.

The researcher identified the main statistical source of his 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 pharmaceutical services in White Nile State- National Health Insurance Fund. In the light of this approach, a multi-faceted service quality measurement tool with a bunch of appropriate measures and indicators will be used.

In order to test its convenience for use, a questionnaire will be designed and administer to survey the White Nile State National Health Insurance Fund customers.

3.1 Service quality measurement tool (serviqul model)

A comprehensive review of existing literature was previously carried out in order to identify the service quality measures to measure the gap between White Nile state health insurance fund (NHIF-WNS) customer expectation and perception. In order to test its convenience for use, a questionnaire form designed, administered through the White Nile State National Health Insurance Fund (NHIF-WNS) pharmacies.

For the use of a serviqul model, five quality dimensions is defined based on the literature review to identify & 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 WNS-NHIF customers' expectations and perceptions.

A questionnaire survey was then 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 insured persons who are currently registered in the lists of beneficiaries of National Health Insurance fund in White Nile State (NHIF-WNS) and are carrying a health insurance card. White Nile State has "579,014" insured persons, distributed in four operational units. For the purpose of this a study "210" person were randomly chosen to represent the research sample and below equation was used:

$$\mathrm{n} = \frac{z^2 * p \quad * q}{d^2}$$

Where;

z = (1.96) level of tendency,

p = percentage of coverage in White Nile State,

q = (1-p) UN coverage, and

d = marginal error.

The sample that selected was distributed as cluster stratified as follow: “109 in Kosti unit”, “in 37 Rabak unit”, “42Elduiem units”,Elduiem health insured persons and “22 in Elgitaina unit”. This distribution based on the unit’s population density, then (206) questionnaire forms were received, while (4) forms of questionnaire were damaged which represent 2%.

3.4 Data collection procedure

The questionnaire was administered through the insured persons who registered in the lists of NHIF-WNS and have a health insurance card, this tool described the objective of the study and asked customer requested to participate in this study.

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 completed, and administered by well-trained data collectors.

3.5 Reliability and validity

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.

3.6 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

IMPLEMENTATION OF SEVQUAL MODEL, RESULTS AND ANLYSIS

In this section of the study data tabulated from the questionnaire that was distributed to the respondents' customer of the National Health Insurance Fund – White Nile State (NHIF-WNS) these are her by displayed together with the evaluation of the measurements tool and indicators of the Serviqul dimension analysis.

4.1 Personal data

4.1.1 Gender

Table (4.1.1) Gender

Sex	Frequency	%
Male	112	54
Female	94	46
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

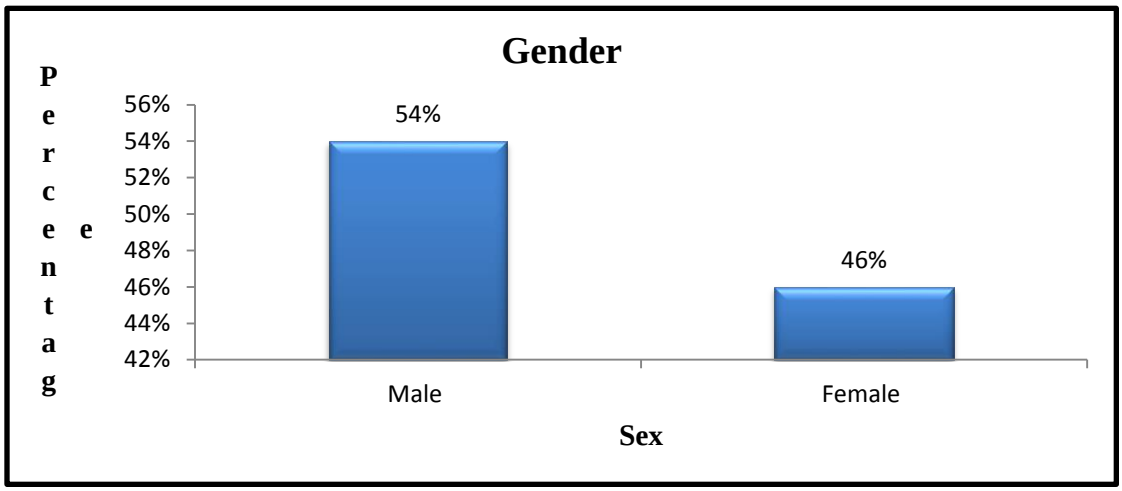

Figure (4.1.1) Gender

It appears from Figure (4.1.1) that 54% of the members of the sample of the study are males, while 46% are females.

4.1.2 Age group

Table (4.1.2) Age group

Age group	Frequency	Percentage
< 20	6	2.9
21-25	23	11.2
26-30	36	17.5
31-35	32	15.5
36-40	42	20.4
>40	64	31.1
Abstentions	3	1.5
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

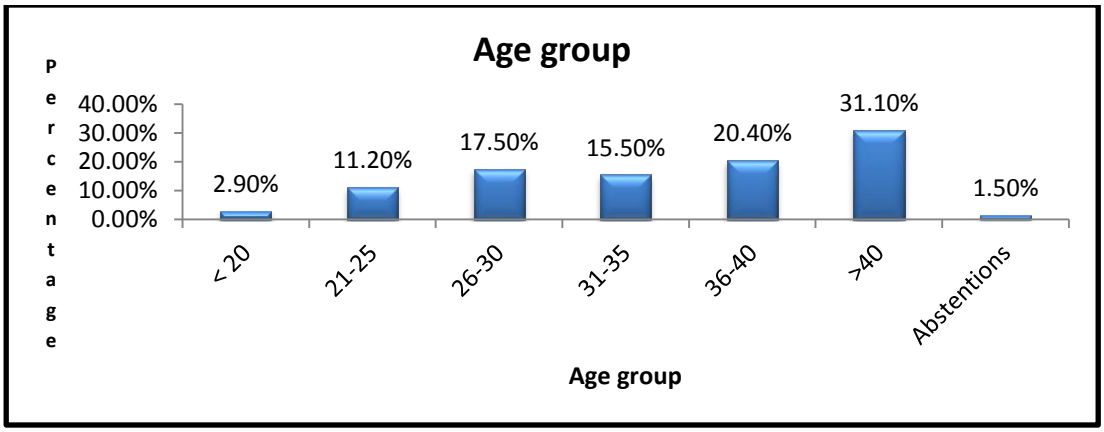

Figure (4.1.2) Age group

Figure (4.1.2) show that 2.9%of the members of the sample of the study are under (20)years of age, 11.2% their ages fall in the age group (25-21), 17.5% are in the age group (30-26), 15.5% their ages fall in the age group (35-31), 20.4% their ages are in the age group (40-36) and 31.3% their ages are 40 years and more ,while 1.5% are abstaining.

4.1.3 Marital status

Table (4.1.3) Marital status

Marital status	Frequency	Percentage
Married	133	64.6
Single	63	30.6
Others specify	8	3.9
Abstentions	2	1
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

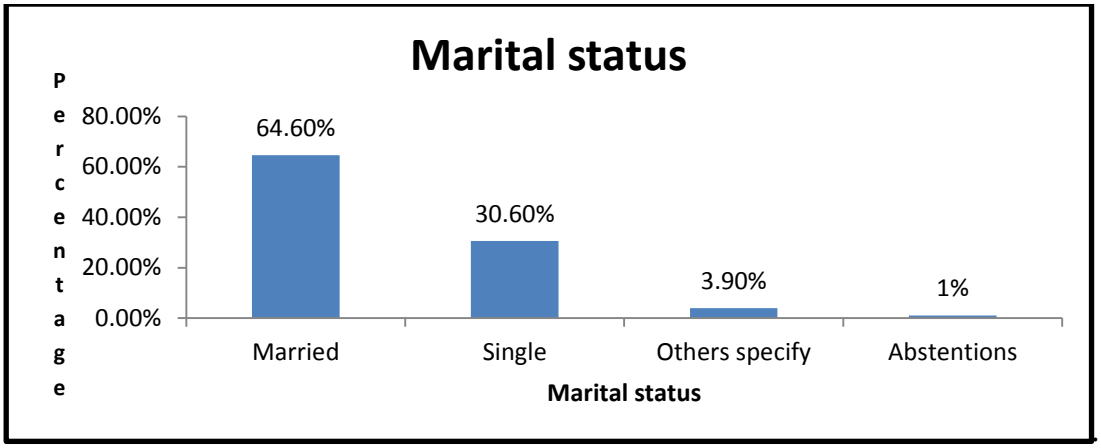

Figure (4.1.3) Marital status

Figure (4.1.3) show that 64.4% of the member of the sample of the study is married, 30.6% are unmarried, 3.9% others, while 1% is abstaining.

4.1.4 Occupation

Table (4.1.4) Occupation

Occupation	Frequency	Percentage
Self-employed	14	6.8
Non-executive post	45	21.8
Executive post	74	35.9
Others specify	64	31.1
Abstentions	9	4.4
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

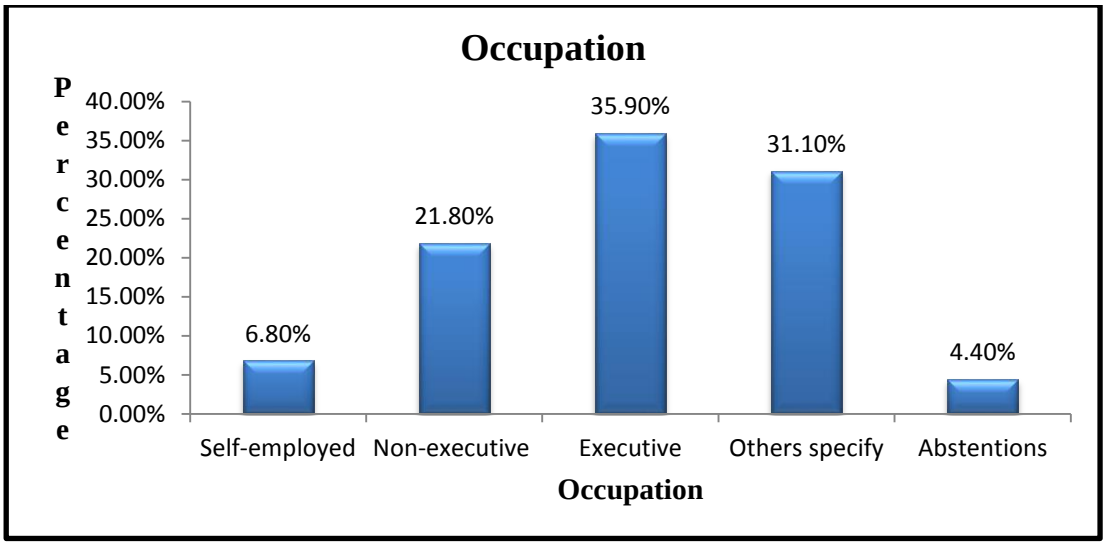

Figure (4.1.4) Occupation

Figure (4.1.4) that 6.8% of the members of the sample of the study are owners of liberal works, 21.8% are non-executives, 35.9% are executives, and 31.1% are other functions while 4.4% re abstaining.

4.1.5 Educational level

Table (4.1.5) Educational level

Educational level	Frequency	Percentage
Illiterate	13	6
Basic	26	13
Higher education	72	35
Graduated	95	46
Total	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

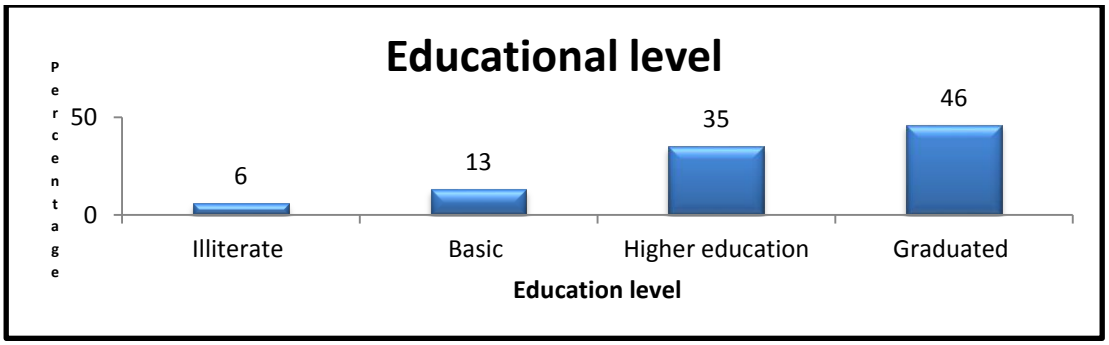

Figure (4.1.5) Educational level

Figure (4.1.5) show that 6% of the members of the study sample are illiterate, 13% basic, 35 % secondary, while 46% are graduated.

4.1.6 Employer sector

Table (4.1.6) Employer sector

Type of customer (Patient sector)	Frequency	Percentage
Private	13	6.3
Subsidized	48	23.3
Student	11	5.3
Public	100	48.5
Pension	23	11.2
Self-employee	6	2.9
Abstentions	5	2.4
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

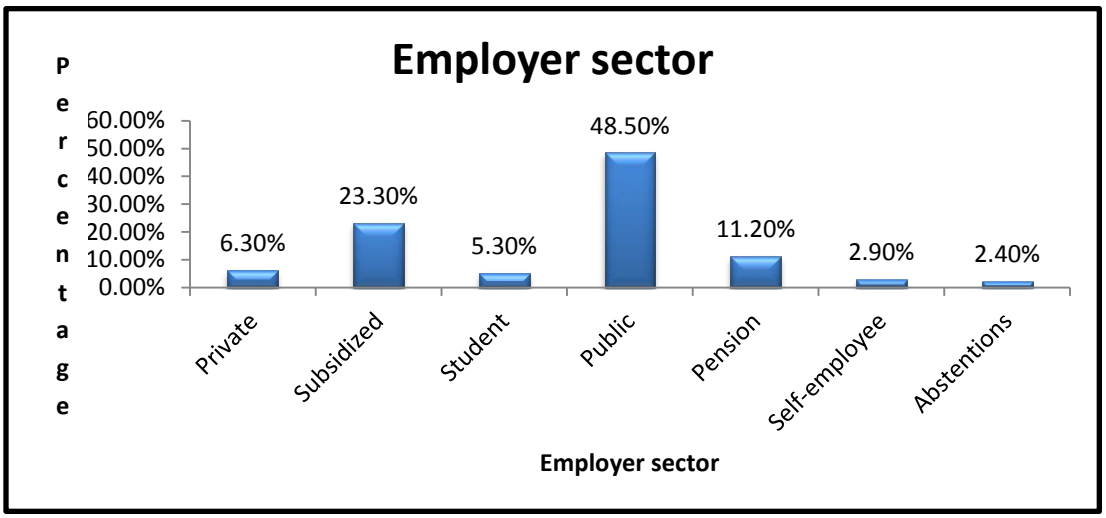

Figure (4.1.6) Employer sector

It is shown Figure (4.1.6) that 6.3% of the members of the sample of the study are private sector, 32.3% are subsidized, 5.3% are students, 48.5% are government sector, 11.2% are pensioners, and 2.9% are free sector while 2.4% are abstaining.

4.1.7 Existence of chronic diseases

Table (4.1.7) Existence of chronic diseases

Do you have a chronic disease	Frequency	Percentage
Yes	69	34
No	132	64
Abstentions	5	2
	206	100

Source: Compiled by the researcher from the actual data of the field study, 2015

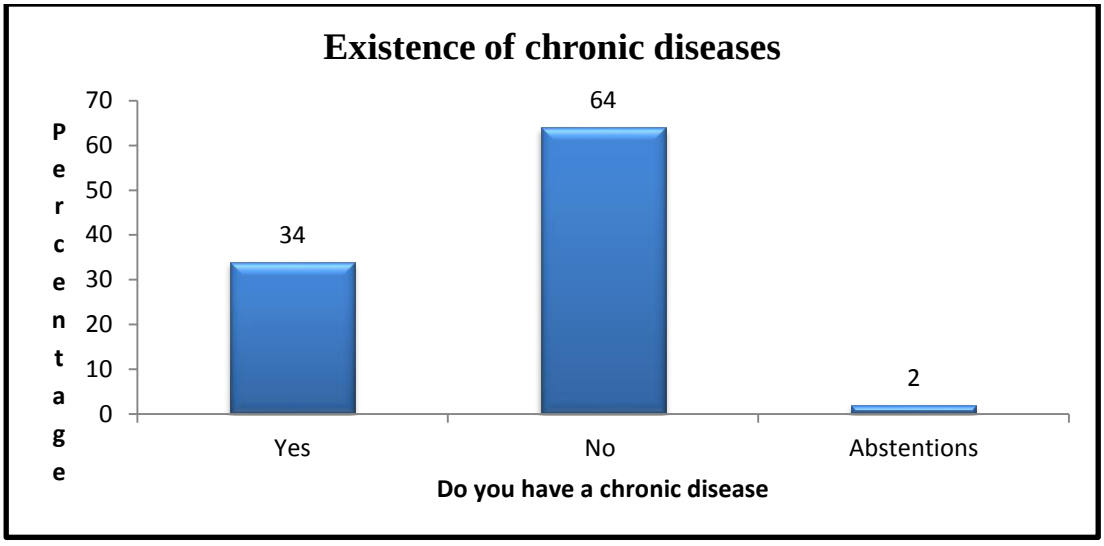

Figure (4.1.7) Existence of chronic diseases

It is showed from Figure (4.1.7) that 64% of the members of the study sample are not infected with chronic diseases, 34% are infected, while 2% are abstaining.

4.2 Basic data

4.2.1 The Tangible dimension of the service

Table (4.2) The weighted weigh and average of the research scale

Choice	Strongly disagree	Disagree	Moderate	Agree	strongly agree
Weight	1	2	3	4	5
Weighted average	0.1 - 1.79	1.8- 2.59	2.6 -3.39	3.4 – 4.19	4.2 -5

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (4.2.1) Tangible dimension of service

#	Code	Description	Mean
1	Q12	Services area (pharmacy) is clean	3.67
2	Q22	NHIF pharmacy has a good looking building & shape	3.60
3	Q32	Pharmacy shelves Classifieds &atmosphere ,decor appearance and appealing	3.61
4	Q42	Employee in NHIF neat in appearance	3.83
5	Q52	NHIF employee provide detail information about drug usage	3.89

Source: Compiled by the researcher from the actual data of the field study, 2015

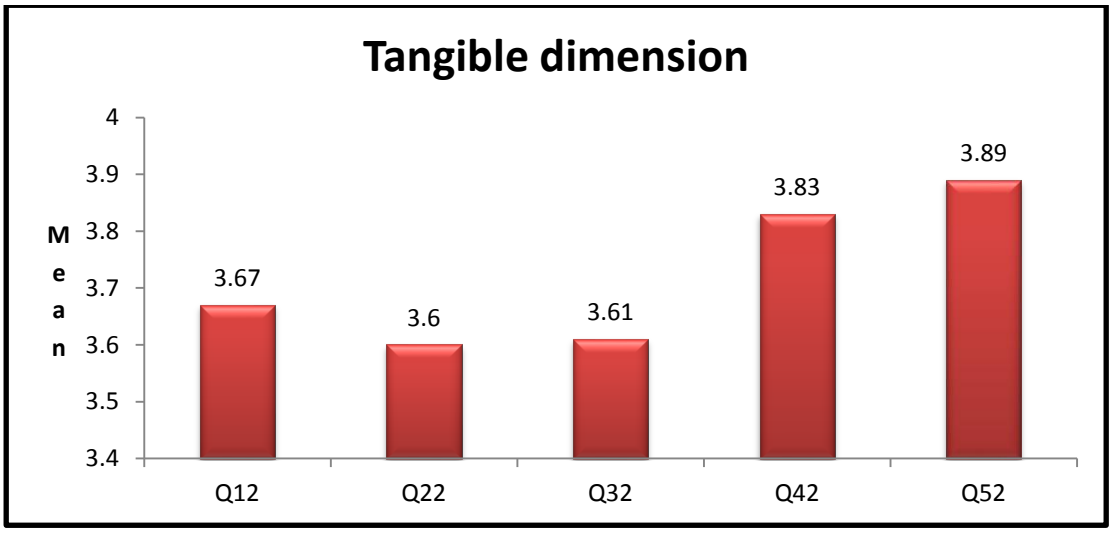

Figure (4.2.1) Tangible dimension

The highest value in the tangible dimension Q52 was 3.89 (table 4.2.1) which represent that the most respondent answer was agree to "NHIF–WNS employee provide detail information about drug usage".

4.2.2 The Reliability dimensions of the services

Table (4.2.2) Reliability dimension of the services

#	Code	Description	Mean
1	Q13	NHIF provide services promised	3.20
2	Q23	I can reach NHIF pharmacy any time I need	2.99
3	Q33	The NHIF pharmacy location well known when you have a drug prescription	3.74
4	Q43	I can access information about NHIF drug packages	3.19
5	Q53	When I have a problem with the drug NHIF employee shows interest in solving	3.51

Source: Compiled by the researcher from the actual data of the field study, 2015

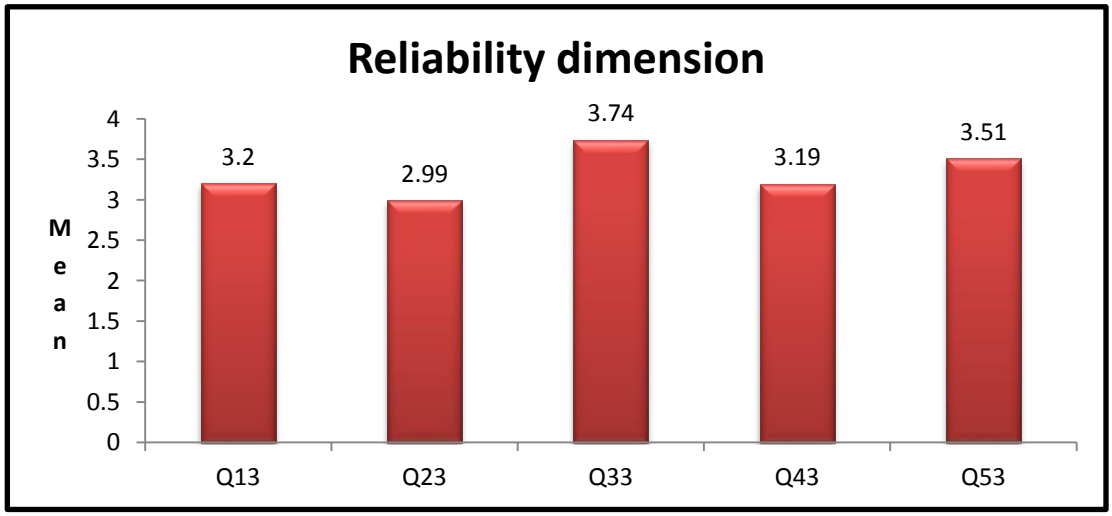

Figure (4.2.2) Reliability dimension of the services

The highest value in the reliability dimension Q33 was 3.74 (table 4.2.2) which represent that the most respondent answer was agree to "the

NHIF-WNS pharmacy location well known when you have a drug prescription".

4.2.3 Responsiveness dimension of services

Table (4.2.3) Responsiveness dimension of services

#	Code	Description	Mean
1	Q14	Employees in NHIF pharmacy take action immediately when I make complain	2.97
2	Q24	Employees in NHIF pharmacy tell me exactly when services will be performed	3.63
3	Q34	Employees in NHIF pharmacy give prompt services	3.47
4	Q44	Employees in NHIF pharmacy are always willing to help me if I have problems with drug services	3.53
5	Q54	Employees in NHIF pharmacy are never too busy to respond to my request	3.44

Source: Compiled by the researcher from the actual data of the field study, 2015

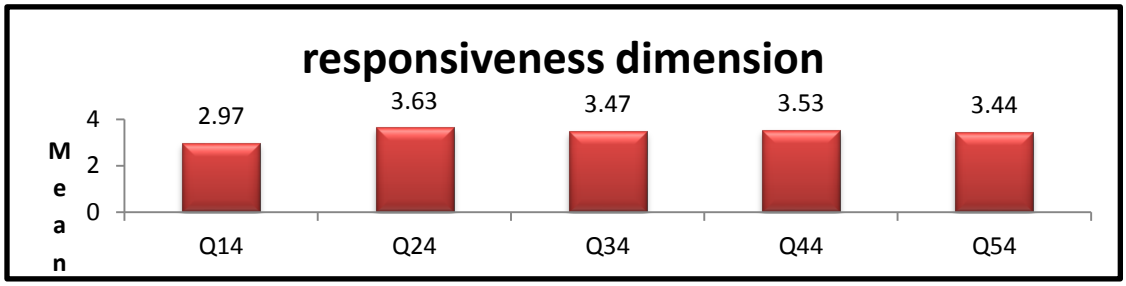

Figure (4.2.3) Responsiveness dimension

The highest value in the responsiveness dimension is Q24was 3.63 (table 4.2.3) which represent that the most respondent answer was agree to “the NHIF-WNS employee in NHIF-WNS pharmacy tell me exactly when services will be performed”.

4.2.4Assurance dimension of services

Table (4.2.4) Assurance dimension of services

#	Code	Description	Mean
1	Q15	Employees in NHIF pharmacy have knowledge about the drug	3.77
2	Q25	Employees in NHIF pharmacy are able to solve my problem satisfactorily	3.53
3	Q35	Employees in NHIF pharmacy are very helpful	3.51
4	Q45	Employees in NHIF pharmacy greeted me warmly with smile	3.37
5	Q55	Employees in NHIF pharmacy instills confidence in me	3.51
6	Q65	Employees in NHIF pharmacy are consistently courteous to me	3.30

Source: Compiled by the researcher from the actual data of the field study, 2015

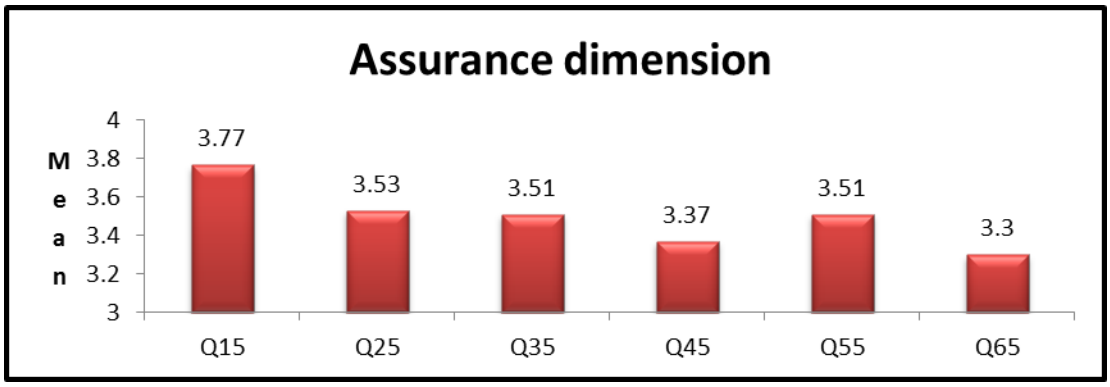

Figure (4.2.4) Assurance dimension

The highest value in the assurance dimension Q15 was 3.77 (table 4.2.4) which represent that the most respondent answer was agree to "the NHIF-WNS employees in NHIF-WNS pharmacy are knowledge about the drug".

4.2.5 Empathy dimension of services

Table (4.2.5) Empathy dimension of services

#	Code	Description	Mean
1	Q16	Employees of NHIF pharmacy listen carefully to my needs	3.62
2	Q26	Employees in NHIF pharmacy give me individual attention	3.11
3	Q36	NHIF has operating hours convenient to all its patients	3.03
4	Q46	NHIF has Employees who give me personal attention	3.10
5	Q56	NHIF has my best interest at heart	3.42
6	Q66	Employees in NHIF pharmacy understand my specific needs	3.65

Source: Compiled by the researcher from the actual data of the field study, 2015

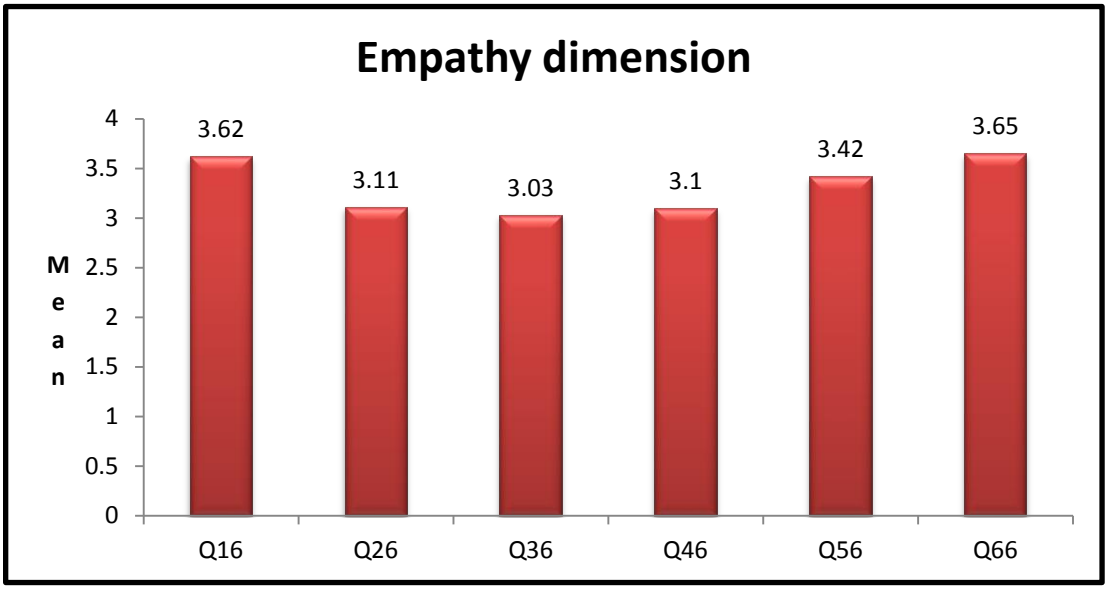

Figure (4.2.5)Empathy dimension

The highest value in the empathy dimension Q66 was 3.65 (table 4.2.5) which represent that the most respondent answer was agree to "the NHIF-WNS employees in NHIF-WNS pharmacy understand my specific needs".

4.2.6 Services quality

Table (4.2.6) Services quality

#	Code	Description	Mean
1	Q17	Over all NHIF provides good quality services to its customer (patients)	3.20
2	Q27	I am satisfied with NHIF services	3.29
3	Q37	I will continue using the provided services	3.82
4	Q47	I will recommend other people to use NHIF services	3.97

Source: Compiled by the researcher from the actual data of the field study, 2015

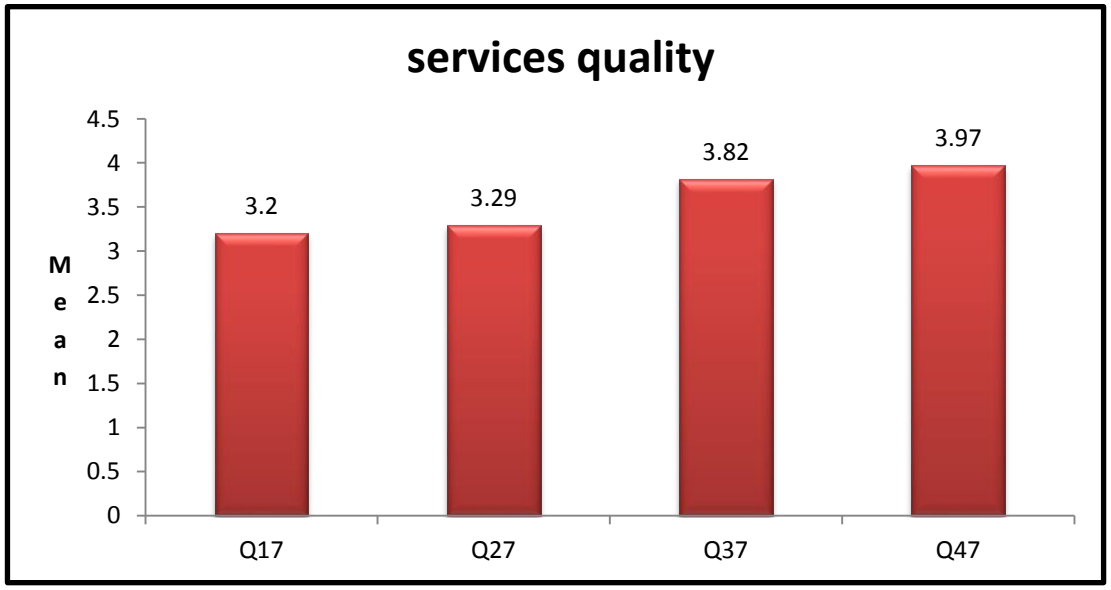

Figure (4.2.6) Service quality

The highest value in the service dimension Q47 was 3.65 (table 4.2.6) which represent that the most respondent answer was agree to recommend to other people to use NHIF-WNS services".

4.3 Evaluation of the measurements tool

4.3.1 Confidence of the measurement content

The content confidence tests of the measurements expressions are conducted through the evaluation of the validity of the concept and the validity of its questions in terms of the formulation and clarity which may be ascribed either to the difference of meanings according to the culture of the society or as a result of translation from one language to another where the researcher had presented the questionnaire form to the supervisor who is specialized in the field of the research so as to analyze the contents of the measurements expressions , and to determine

the extent of the conformity between the expressions of each measurement and hence the acceptance & amendment of some expressions. After the recovery of the questionnaire forms the suggested amendments were made thereon.

4.3.2 Reliability of the measurements content

For testing the reliability coefficient ,the researcher adopted the semi-partition method which is based on taking the event and odd questions ,and the correlation coefficient was 0.76, and the reliability coefficient calculated by the following law :

The reliability coefficient $=\frac{0.76\times2}{0.76+1}=0.86$

The self-confidence = $\sqrt{\text{the}}$ reliabilitycoefficient

The self-confidence $=\sqrt{0.86}=093$

4.4 Confirmatory factor analysis

For testing the nature of the respondents (the management and customer or beneficiaries) trends as reflected in their answers to questions raised by the researcher and hence the outcome of their agreement and/or disagreement there on, the researcher used the confirmatory fact analysis test, in this respect it is argued that:

- Factor loading are the correlation coefficients between the variables and factor. The squared factor heading in the percent of variance in that indicator variable explained by the factor

- Cronbach's alpha coefficient is commonly used measure testing the extent to which multiple indicators for a latent variable belong together. A common rule of thumb is that the indicators should have a Cronbach's alpha of 0.7 to judge the set reliable (Nunnally, 2010). Alpha may be low because of lack of homogeneity of variances among items for instances and it's also lower when there are fewer items in the factor. A higher alpha coefficient indicates higher reliability of the scale used to measure the latent variable.

4.4.1 Validity of measures

The data obtained from 206 items from population as a sample of study and was analyzed by SPSS software.

1. **Content validity testing**

Content validity tests rate the extent to which a constituent variable belongs to its corresponding construct. Since content validity cannot be tested by using statistical tools, an in-depth literature survey is necessary to keep the researcher's judgment on the right track. An extensive literature survey was conducted to specify the variables that define latent variables (Dunn et al., 1994).

2. **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 (4.3) Alpha Cronbach's coefficient for serviqul model

N of cases	N of items	Cronbach's alpha coefficient
206	31	0.94

Source: Compiled by the researcher from the actual data of the field study, 2015

Cronbach's alpha values were for 0.82 "tangibles dimension", 0.82 for "reliability dimension", for 0.84 "responsiveness dimension", 0.86 for "Assurance dimension", 0.85 for "empathy dimension" and 0.81 for "service quality" as in table (5.2). These reliability values are satisfactory since the Cronbach's alpha coefficients are all above 0.70, the minimum value recommended by Nunnally (2010).

Table (4.4) Cronbach's alpha of latent variables

Servqual dimensions	Cronbach's alpha
Tangibles dimension	0.82
Reliability dimension	0.82
Responsiveness dimension	0.84
Assurance dimension	0.86
Empathy dimension	0.85
Service quality	0.81

Source: Compiled by the researcher from the actual data of the field study, 2015

3. Convergent validity testing

Convergent validity is the extent to which the latent variable correlate to corresponding items designed to measure the same latent variable.

Ideally is tested by determining whether the items in a scale converge or load together on a single construct in the model.

The parameters were assessed and all factor loadings were found be significant at $\alpha = 0.01$ as in table (5.3).

Table (4.5) The (T) test for questionnaire data

T5	**T4**	**T3**	**T2**	**T1**			
.719	.795	.771	.762	1.000	Correlation Coefficient	**T1**	**Spearman's rho**
.000	.000	.000	.000	.	Sig. (2-tailed)		
206	206	206	206	206	N		
.839	.823	.865	1.000	.762	Correlation Coefficient	**T2**	
.000	.000	.000	.	.000	Sig. (2-tailed)		
206	206	206	206	206	N		
.832	.882	1.000	.865	.771	Correlation Coefficient	**T3**	
.000	.000	.	.000	.000	Sig. (2-tailed)		
203	206	206	206	206	N		
.888	1.000	.882	.823	.795	Correlation Coefficient	**T4**	
.000	.	.000	.000	.000	Sig. (2-tailed)		
206	206	206	206	206	N		
1.000	.888	.832	.839	.719	Correlation	**T5**	

					Coefficient
.	.000	.000	.000	.000	Sig. (2-tailed)
206	206	206	206	206	N

Source: Compiled by the researcher from the actual data of the field study, 2015

4. Discriminate validity testing

The discriminate validity is the extent to which the items representing a latent variable discriminate that construct from other items representing other latent variables. Low correlation between variables indicates the presence of discriminate validity. The correlation metric calculated for all construct shows that all intercorrelations are below 0.9 suggesting that there is no multi co linearity (Hair et al. 2009), but indicating that the constructs have discriminant validity and these correlation provide evidence that they are complementary.

4.4.2 Frequency distribution of the research questionnaire

Table (4.6) Tangible dimension frequency distribution

Structure	**criterion**	**Strongly disagree**	**Disagree**	**Moderate**	**Agree**	**strongly agree**
Services area (pharmacy) is clean	Frequency	13	8	63	73	49
	Percentage	6.3	3.9	30.6	35.4	23.8
NHIF pharmacy has a good looking building & shape	Frequency	17	14	51	75	48
	Percentage	8.3	6.8	24.8	36.4	23.3
Pharmacy shelves Classifieds & atmosphere ,decor appearance and appealing	Frequency	20	14	45	71	54
	Percentage	9.7	6.8	21.8	34.5	26.2
Employee in NHIF neat in appearance	Frequency	12	2	58	70	63
	Percentage	5.8	1	28.2	34	30.6
NHIF employee provide detail	Frequency	15	8	31	81	70

information about drug usage	Percentage	7.3	3.9	15	39.3	34

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (4.6) showed the following:

1. The highest percentage of the sample members who agreed to the cleanness of the area for the provision of the services (the pharmacy) amounted to (59.2%), while the percentage of those who do not agree to that is (10.2%), as to the sample members who did not give any specific answers ,their percentage is (30.6%).
2. The highest percentage of the sample members who agree that the Health Insurance pharmacy has a building of good look and form is (59.7%), while the percentage of those who do not agree to this is (15.1%),as to the members of the sample who did not express specific answers ,their percentage is (24.8%).
3. The highest percentage of the members of the sample who agree that pharmacy shelves are classified, its atmosphere, decor are appealing is (60.7%), while the percentage of those who do not agree to this is (16.5%), as to the members of the sample who did not give any specific answers, their percentage is (21.8%).
4. The highest percentage of the members of the sample who agree to that the employees of the Health Insurance pharmacy in white Nile state are of a neat and tidy appearance is (64.6%), while the percentage of those who do not agree to this is (6.8%), as to the members of the sample who did not expressed any specific answers, their percentage is (28.2%).
5. The highest percentage of the members of the sample who agree to that the employees in the Health Insurance pharmacy provide detailed

information about drug usage is (73.3%), while the percentage of those who do not agree to this is (11.2%), as to the members of the sample who did not give specific answers ,their percentage is (15%).

Table (4.7) Reliability dimension frequency distribution

Structure	**criterion**	**Strongly disagree**	**Disagree**	**Moderate**	**Agree**	**strongly agree**
NHIF provide services promised	Frequency	36	34	28	68	39
	Percentage	17.5	16.5	13.6	33	18.9
I can reach NHIF pharmacy any time I need	Frequency	42	50	21	49	42
	Percentage	20.4	24.3	10.2	23.8	20.4
The NHIF pharmacy location well known when you have a drug prescription	Frequency	20	12	32	76	63
	Percentage	9.7	5.8	15.5	36.9	30.6
I can access information about NHIF drug packages	Frequency	38	34	19	75	37
	Percentage	18.4	16.5	9.2	36.4	18
When I have a problem with the drug NHIF employee shows interest in solving	Frequency	23	34	20	69	57
	Percentage	11.2	16.5	9.7	33.5	27.7

Source: Compiled by the researcher from the actual data of the field study, 2015

The following is shown from Table (4.7):

1. The highest percentage of the members of the sample who agree to that the NHIF provides the promised drug services is (51.9%) ,while the percentage of those who do not agree to this is (34%), as to the members

of the sample who did not express specific answers ,their percentage is (13.6%) .

2. The percentage of the members of the sample who agree to the customer can reach the Health Insurance pharmacy in any time he wants for medicine is (44.2%), while the percentage of those who do not agree to this is (44.7%),as to the members of the sample who did not give specific answers ,their percentage is (10.2%).
3. The highest percentage of the members of the sample who agree to the knowledge of the location of the Health Insurance pharmacy is (67.5%), while the percentage of those who do not agree to this is (15.5%), as to the members of the sample who did not express specific answers their percentage is (15.5%).
4. The highest percentage of the members of the sample who agree for the possibility to access information about NHIF-WNS drugs packages is (54.4%),while the percentage of those who do not agree to this is (34.9%),as to the members of the sample who did not give specific answers their percentage is (9.2%).
5. The highest percentage of the members of the sample who agree to that the employee of the of the NHIF-WNS pharmacy shows interest to solve the problem of the customer is (61.2%), while the percentage of those who do not agree to this is (27.7%), as to the members of the sample who did not express specific answers, their percentage is (9.7%).

Table (4.8) Responsiveness dimension frequency distribution

Structure	criterion	Strongly disagree	Disagree	Moderate	Agree	strongly agree
Employees in NHIF pharmacy take action immediately when I make complain	Frequency	56	23	26	66	31
	Percentage	27.2	11.2	12.6	32	15
Employees in NHIF pharmacy tell me exactly when services will be performed	Frequency	15	23	34	80	50
	Percentage	7.3	11.2	16.5	38.8	24.3
Employees in NHIF pharmacy give prompt services	Frequency	36	23	14	74	59
	Percentage	17.5	11.2	6.8	35.9	28.6
Employees in NHIF pharmacy are always willing to help me if I have problems with drug services	Frequency	19	27	34	74	50
	Percentage	9.2	13.1	16.5	35.9	24.3
Employees in NHIF pharmacy are never too busy to respond to my request	Frequency	38	25	15	61	65
	Percentage	18.4	12.1	7.3	29.6	31.6

Source: Compiled by the researcher from the actual data of the field study, 2015

The following is shown from Table (4.8):

1. The percentage of the members of the sample who agree that the employees in the Health insurance pharmacy take action immediately when I make a complaint Is (47%), while the percentage of those who do

not agree to this is (38.4%), as to the members of the sample who did not express specific answers their percentage is (12.6%).

2. The highest percentage of the members of the sample who agree to that the employees in the NHIF-WNS pharmacy tell the (customer) exactly when services will be performed is (63.1%), while the percentage of those who do not agree to this is (18.5%) ,as to the members of the sample who did not give specific answers ,their percentage is (16.5%).

3.The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacy give prompt drug service is (64.5%) while the percentage of those who do not agree is (28.7%), as to the members of the sample who did not give specific answers, their percentage is (6.8%) .

4. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacy are always willing to help the customer when he has a problem with the drug services is (60.2%), while the percentage of those who do not agree to this is (22.3%), as to the members of the sample who did not give specific answers their percentage is (16.5%).

5.The highest percentage of the members of the sample who agree to that the employees in the NHIF-WNS pharmacy are never too busy to respond to the is(61.2%) ,while the percentage of those who do not agree to this is (30.5%),as to the members of the sample who did not give specific answers their percentage is (7.3%).

Table (4.9) Assurance dimension frequency distribution

Structure	**criterion**	**Strongly disagree**	**Disagree**	**Moderate**	**Agree**	**Strongly agree**
Employees in NHIF pharmacy are knowledge about the drug	Frequency	15	17	42	57	74
	Percentage	7.3	8.3	20.4	27.7	35.9
Employees in NHIF pharmacy are able to solve my problem satisfactorily	Frequency	19	35	27	65	58
	Percentage	9.2	17	13.1	31.6	28.2
Employees in NHIF pharmacy are very help full	Frequency	26	29	23	62	61
	Percentage	12.6	14.1	11.2	30.1	29.6
Employees in NHIF pharmacy greeted me warmly with smile	Frequency	33	28	28	60	55
	Percentage	16	13.6	13.6	29.1	26.7
Employees in NHIF pharmacy instills confidence in me	Frequency	25	28	31	55	63
	Percentage	12.1	13.6	15	26.7	30.6
Employees in NHIF pharmacy are consistently courteous to me	Frequency	43	22	30	52	59
	Percentage	20.9	10.7	14.6	25.2	28.6

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (4.9) showed the following:

1. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacies are acquainted with the drug is (63.6%), while the percentage of those who do not agree to this is (15.6%),as to the members of the sample who did not express specific answers, their percentage is (20.4%).
2. The highest percentage of the members of the sample who agree to that the employees in the NHIF-WNS are able to solve the customer problem satisfactorily is (59.8%) ,while the percentage of those who do not agree to this is (26.2%),as to the members of the sample who did not express specific answers, their percentage is (13.1%).
3. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacies are very helpful is (59.7%), while the percentage of those who do not agree to this is (26.7%), as to the members of the sample who did not give specific answers, their percentage is (11.2%).
4. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS welcome the customer warmly with a smile is (55.8%),while the percentage of those who do not agree to this is (29.6%), as to the members of the sample who did not give specific answers their percentage is (13.6%).
5. The highest percentage of the members of the sample agree that the employees in the NHIF-WNS pharmacy instill confidence in the customer is (57.3%), while the percentage of those who do not agree is (25.7%), as to the members of the sample who did not give specific answers, their percentage is (15%).

6. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacy are always consistently courteous to the customer is (53.8%), while the percentage of those who do not agree is (31.6%), as to the members of the sample who did not give specific answers, their percentage is (14.6%).

Table: (4.10) Empathy dimension frequency distribution

Structure	**criterion**	**Strongly disagree**	**Disagree**	**Moderate**	**Agree**	**strongly agree**
Employees of NHIF pharmacy listen carefully to my needs	Frequency	14	20	42	81	46
	Percentage	6.8	9.7	20.4	39.3	22.3
Employees in NHIF pharmacy give me individual attention	Frequency	40	40	24	54	44
	Percentage	19.4	19.4	11.7	26.2	21.4
NHIF has operating hours convenient to all its patients	Frequency	55	25	21	61	40
	Percentage	26.7	12.1	10.2	29.6	19.4
NHIF has Employees who give me personal attention	Frequency	36	41	31	51	41
	Percentage	17.5	19.9	15	24.8	19.9
NHIF has my best interest at heart	Frequency	23	39	19	68	50
	Percentage	11.2	18.9	9.2	33	24.3
Employees in NHIF pharmacy understand my specific needs	Frequency	14	10	55	75	46
	Percentage	6.8	4.9	26.7	36.4	22.3

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (4.10) showed the following:

1. The highest percentage of the members of the sample agree that the employees in the NHIF-WNS pharmacy listen carefully to the customer needs is (61.6%), while the percentage of those who do not agree is (16.5%), as to the members of the sample who did not give specific answers their percentage is (20.4%)
2. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacies give the customer special personal attention is (47.6%), while the percentage of those who do not agree is (38.8%), as to the members of the sample who did not give specific answers ,their percentage is (11.7%).
3. The highest percentage of the members of the sample who agree that the working hours of the NHIF-WNS pharmacy are convenient to all its patients is (49%), while the percentage of those who do not agree to this is (38.3%) , as to the members of the sample who did not give specific answers ,their percentage is (10.2%).
4. The highest percentage of the members of the sample who agree that the employees in the NHIF-WNS pharmacy give the customer a personal attention is (44.7%), while the percentage of those who do not agree is (37.4%), as to the members of the sample who did not give specific answers ,their percentage is (15%).
5. The highest percentage of the members of the sample who agree that employees in the NHIF-WNS pharmacy direct their attention to the best interest of the customer is (57.3%), while the percentage of those who do not agree is (30.1%), as to the members of the sample who did not give specific answers ,their percentage is (9.2%).

6. The highest percentage of the members of the sample agree that the employees in the NHIF-WNS pharmacy understand very carefully the customer needs is (58.7%) , while the percentage of those who do not agree is (11.7%), as to the members of the sample who did not give specific answers, their percentage is (26.7%).

Table (4.11) Services quality frequency distribution

Structure	**criterion**	**Strongly disagree**	**Disagree**	**Moderate**	**Agree**	**Strongly agree**
Over all NHIF provides good quality services to its customer (patients)	Frequency	36	33	33	55	45
	Percentage	17.5	16	16	26.7	21.8
I am satisfied with NHIF services	Frequency	33	30	36	53	51
	Percentage	16	14.6	17.5	25.7	25.7
I will continue using the provided services	Frequency	11	7	48	77	58
	Percentage	5.3	3.4	23.3	37.4	28.2
I will recommend NHIF to other people	Frequency	17	4	36	57	89
	Percentage	8.3	1.9	17.5	27.7	43.2

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (4.11) showed the following:

1. The highest percentage of the members of the sample who agree that overall, the NHIF-WNS provides good quality services of its customer (the patients is (48.5%), while the percentage of those

who do not agree is (33.5%), as to the members of the sample who did not give specific answers, their percentage is (16%).

2. The highest percentage of the members of the sample who agree with the satisfaction of the customer with the NHIF –WNS drug services is (51.4%), while the percentage of those who do not agree to this is (30.6%), as to the members of the sample who did not give specific answers, their percentage is (17.5%).
3. The highest percentage of the members of the sample who agree with the continuation of the customer in using the provided drug services is (65.6%), while the percentage of those who do not agree with this is (8.7%), as to the members of the sample who did not give specific answers ,their percentage is (23.3%).
4. The highest percentage of the members of the sample who agree with the customer recommendation for others to subscribe in the NHIF-WNS is (70.9%), while the percentage of those who do not agree with this is (10.2%), as to the members of the sample who did not give specific answers, their percentage is (17.5%).

4.5 Servqual dimension analysis

4.5.1 Tangible dimension

More than 59% from respondents stated that the NHIF pharmacy is cleaned which give assign that NHIF-WNS customers are satisfied about the drug service which is of provided in a cleaned place ,in addition to that also the NHIF-WNS a good pharmacy (shape and buildings)that come from the opinions of the respondents answer may from (continuous maintenances and supervision) also that other thing

affecting customer satisfaction about drug is the employee appearance and neat more than 63,While the higher factor in this dimension is the awareness of provider about the usage of the drugs.

4.5.2 Reliability dimension

NHIF-NWS provide the promised service that come from the answer of the respondentS as (51.9%) despite the changes in the prices of the drug in a local& international market which is consistent with the NHIF-WNS mission and the pharmaceutical department effort in reviewing the drug list annually to insure the availability of the drugs in all NHIF-WNS pharmacy, which has appositive impact on customer satisfaction. In the same dimension the customers complain due to insufficient time of work in NHIF-WNS pharmacy due to work less than 24hours (44.2%), ,in addition to that despite a well knowing and good location of NHIF-WNS pharmacy which shows that the best distribution of the NHIF-WNS pharmacy according to the health map (more than 67%),then customer satisfied with NHIF drug services due to his accessibility of drug information (54.4%),and caring about him from NHIF-WNS employee which showed the interest of providers to solve the problem of the customer (61.2%).

4.5.3 Responsiveness dimension

Taking action immediately in this factor according to the respondents 47% shows that the provider deciding in solving customer problems beside 38.4 of respondents stated that the provider not decided, but in the factors of telling the (customer) exactly when services will be

performed is (63.1%) and give prompt drug service is (64.5%) which indicate that the provider might follow the regulation as it, is but in the same factor employee help people and they are not busy to respond to the customer which indicate that the provider concerned about satisfying the customer needs (61.2%).

4.5.4 Assurance dimension

This quality dimension concentrated in how provider doing his task, responsibility which must instill confidences in customer which clear in employees in NHIF-WNS pharmacies have knowledge about the drug 53%and 63% that goes with the ability of NHIF-WNS provider to solve the customer problem satisfactorily (59.8%), besides in this dimension the NHIF-WNS employee are very helpful with customer in addition to that they are welcoming and warmly with the smile.

4.5.5 Empathy dimension

NHIF-WNS providers concerned about the customer needs are appear in the answers of respondent's (61.6%), (provider listening to and give customer special attention and also NHIF-WNS provider give them a personal attention (44.7%) in addition to direct their attentions to the best interest ,of and understand carefully to customer needs (57.3%) and (58.7%).

4.5.6 Services quality

NHIF-WNS provide good quality drug services that satisfied its customer which appeared in the respondents answers (48.5%) and

(51.4%) that clear and consistence with recommendation of customer and to other continue in using NHIF-WNS services (65%) and subscribing in the NHIF-WNS as provider health organization (70.9%).

CHAPTER FIVE

DISCUSSION, CONCLOSION, RECOMMENDATIONA AND SUGGESTIONS

This chapter of the field study procedures of the research contains the statistical techniques which were used in the research, analysis of the research data in addition to the research hypotheses test

5.1 Servqual dimensions and hypotheses testing

The study tackled the discussion and interpretation of the field findings of the research through the information which are resulted from the analysis of the statistical data, in addition to the results of the results of the statistical analysis of the testing of the hypotheses. In the light of the problem and the objectives of the research and the investigation of the previous studies the researcher may formulate the research hypotheses as follows.

5.1.1 Research hypotheses testing

The main hypothesis of the study is "There is a positive relation between the drug service quality and the satisfaction of (NHIF-WNS) beneficiary". To test the validity of this hypothesis the statistical technique was used to prove the following sub hypotheses:

H1: There is a direct relation between provider's empathy towards NIHF-WNS customers and drug services quality.

To test the validity of this sub hypothesis the study adopted Spearman coefficient for the above relation.

Table (5.1) Relation between empathy dimension & services quality

Dimension	Statistics	Empathy dimension	Services quality
Empathy dimension	Correlation co-efficient	1.000	.86
	Significance	.	.000
Services quality	Correlation co-efficient	.86	1.000
	Significance	.000	.

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (5.1) showed that the value of the coefficient of correlation between the empathy dimension and the drug services quality is 0.86, and it shows that there is a positive and direct correlation, and it is also significant because the value of the statistical significance level= 0.000 at $\alpha = 0.005$.

H2: There is a direct relation between the reliability of providing drug services in the NHIF-WNS pharmacies and the drug services quality.

In order to test the validity of this hypothesis, the study adopted Spearman's coefficient for the above relation.

Table (5.2) Relation between reliability dimension & services quality

Dimension	Statistics	Reliability dimension	Services quality
Reliability dimension	Correlation co-efficient	1.000	.82
	Significance	.	.000
Services quality	Correlation co-efficient	.82	1.000
	Significance	.000	.

Source: Compiled by the researcher from the actual data of the field study, 2015

It is showed from Table (5.2) the following:

The value of the coefficient of correlation between the reliability dimension and the services quality is 0.82, and it shows that there is a positive and direct correlation, and it is also significant because the value of the statistical significance level= 0.000 at $\alpha = 0.005$.

H3: There is a relation between the assurance in providing drug services to NHIF-WNS customer and drug services quality.

For the testing of the validity of this hypothesis, the study adopted Spearman's coefficient for the above relation.

Table (5.3) relation between assurance dimension & services quality

Dimension	Statistics	Assurance dimension	Services quality
Assurance dimension	Correlation co-efficient	1.000	.82

	Significance	.	.000
Services quality	Correlation co-efficient	.82	1.000
	Significance	.000	.

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (5.3) showed that the value of the coefficient of the correlation between the assurance dimension and the services quality is 0.82, and it shows that there is a positive and direct correlation, and it is also significant because the value of the statistical significance at $\alpha = 0.005$.

H4: There is relation between the well-equipped NHIF-WNS pharmacies facilities and drug services quality.

For testing the validity of this hypothesis, the study adopted Spearman's coefficient between the tangible dimension and the services quality.

Table (5.4) relation between tangible dimension & services quality

Dimension	**Statistics**	**Tangible dimension**	**Services quality**
Tangible dimension	Correlation co-efficient	1.000	.73
	Significance	.	.000
Services quality	Correlation co-efficient	.73	1.000
	Significance	.000	.

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (5.4) showed that the value of the coefficient of the correlation between the tangible dimension and services quality is 0.73,and it shows that there is a positive and direct correlation, and it is also significant because the value of the statistical significance at $\alpha = 0.005$.

H5: Drug service quality increase when NHIF-WNS employee responsiveness to the customer needs & complain.

For testing the validity of these hypotheses, the study adopted Spearman's coefficient of correlation between the responsiveness dimension and the services quality.

Table (5.5) Relation between responsiveness dimension & services quality

Dimension	Statistics	Responsiveness dimension	Services dimension
Responsiveness dimension	Correlation co-efficient	1.000	.79
	Significance	.	.000
Services dimension	Correlation co-efficient	.79	1.000
	Significance	.000	.

Source: Compiled by the researcher from the actual data of the field study, 2015

Table (5.5) showed that the value of the coefficient of the correlation between the responsiveness dimension and services quality was found 0.79and it shows that there is a positive and direct relation, and it is also significant because the value of the statistical significance at $\alpha = 0.005$.

5.2 CONCLUSSIONS

- The study concluded that the customers of NHIF-WNS were satisfied about the drug services quality.
- The study demonstrate a set of dimensions which consistently ranked by NHIF-WNS customers and it has an effect on the drug services quality in WNS-NHIF which stated in tangible dimension such as pharmacy appearance, location, physical facilities, equipment, personnel, and ability to perform the promised services dependably with high accuracy.
- This study concluded that the NHIF-WNS provider deals with the customers in a good manner specifically in listening and giving individual personal attentions with understanding customer specific need as stated in empathy dimension.
- Despite the changes in the drug prices in local & international markets, the NHIF-WNS was providing drugs service to its customers which means availability of the drugs in all its pharmacies which consistent with the NHIF mission and the pharmaceutical department annually reviewing the drug list which has appositive impact on customer satisfaction as stated in reliability dimension.
- Also the study concluded that NHIF-WNS pharmacies are well known and they have good location which reflects the best distribution of the pharmacies according to the health map.
- The study concluded that the customers are not satisfied with the working hours as the service does not cover full day (24hrs) provision.

- The study also concluded that there is some factor influence the WNS-NHIF customers satisfaction which appeared in the assurance dimension such as providers knowledge about the drug, ability to solve customers' problems ,and instill confidence, greetings and courteous.
- NHIF-WNS employees concerned in responsiveness dimension about satisfying customer needs by taking action immediately which shows that the provider willing in solving customer problems in addition to that they tell the customer exactly when services will be performed and give prompt drug service which indicate that the provider might follow the regulation exactly or properly. Also NHIF -WNS employee helps people and they are not pretending that they are busy to respond to the customer needs.
- The study investigated the influence of tangibility, assurance, reliability, responsiveness and empathy dimensions of drug services and it is impact in quality of drug services as reflected in customer satisfaction.
- The study proved that statistically there is a direct relation between provider's empathy towards NIHF-WNS customers and drug services quality.
- The study proved that statistically there is a direct relation between the reliability of providing drug services in the NHIF-WNS pharmacies and the drug services quality.
- The study proved that statistically there is a relation between the assurance in providing drug services to NHIF-WNS customer and drug services quality.

- The study proved that statistically there is relation between the well-established NHIF-WNS pharmacies facilities and drug services quality.
- The study proved that statistically the drugs service quality increases when NHIF-WNS employee shows responsiveness to the customer needs & complain.
- In summary the study concluded that the drugs service quality in NHIF-WNS is improved based on serviqul dimensions that appeared in customer satisfaction, the study has proved a positive relationship between customer satisfaction and pharmaceutical of drugs service.

5.3 RECOMMENDATIONS

- Promotion of services quality culture by raising the capacity building and skills of the staff through continues intensive training program in order to improve their all attitude and behavior.
- Expansion or extension of working hours in NHIF-WNS pharmacies to cover the work day (24/hrs.).
- Distributing the pharmacies according to the health map to insure equity in services distribution.
- Orientation of the community (customers) about pharmacies locations.
- 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.
- Encouragement a positive of staff nice attitude towards customers is required.

- Good advocacy about the NHIF-WNS services is required to attract a new customer.

5.4 Limitation of the study

- Shortage of sources and books references in this field.
- Less cooperative from respondents.
- Shortage in number of well trained &aware people in collecting data.

5.5 Suggestions for further researches

The following studies are suggested:

1. Measuring provider performance based on behavior and attitude towards customers during providing services.
2. Studying the external factors that affecting pharmaceutical service.
3. Doing a comparative study in drugs service quality using another tool than Serviqul tool between National Health Insurance Fund in White Nile State (NHIF-WNS) and in similar organization in other state.
4. Doing a comparative study in drugs service quality between Sudanese National Health Insurance Fund and similar organization at regional or international level.