ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

ASSESSMENT OF THE IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT: THE CASE OF ETHIOPIAN PHARMACEUTICALS MANUFACTURING S.C

SUBMITTED TO; DR MATIWOS ENSERMU

JULY,2017

PREPARED BY; ABIY WONDIMAGEGNE

GSE/1512/08

Addis Ababa University

SCHOOL OF BUSINESS AND ECONOMICS

This is to certify that the Thesis prepared byAbiyWondimagegne entitled"Assessment of The Implementation of Total Quality Management: The Case of Ethiopian Pharmaceuticals Manufacturing S.C" and submitted in partial fulfillment of the requirements for the Master'sdegree of business administration complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by Examining Committee:

_____	_____	_____
Advisor	Signature	Date
_____	_____	_____
Internal ExaminerSignature		Date
_____	_____	_____
External Examiner	Signature	Date

Abstract

The purpose of this study is to assess Total Quality Management (TQM) practices in Ethiopian pharmaceuticals S.C. TQM is a factor of its principles and practices namely customer focus, Leadership, Engagement of People, Process Approach, Evidence based decision making and Supplier relationship. Hence, the research tried to assess whether these principles are practiced in the organization.The research tried to obtain both primary and secondary data. The primary data was obtained from employees of Epharm using semi-structured questionnaire and Interview questions The secondary sources of data were the literatures available and the documents related to TQM that are kept by the organization.The data collected was analyzed and presented with tables and percentages using SPSS. Furthermore to estimate error or how well the sample represented the population, confidence interval method was employedThe general population of the research is all 220 employees of Epharm. These 220 employees are of different departments, experience and exposure to quality related issues.33 out of these 220 employees are managers and supervisors thus 187 employees are non-managers.Since quality is a factor of all the parties in an organization, all 220 employees from all departments have chance to be included in the sample. However,different sampling techniques employed for each department. The results of this paper shows that majority of the employees agree that Epharm is practicing all the seven TQM principles. Results of Interview questions about the benefits and challenges of practicingTQM, shows that all the respondents agree that it makes dramatic change on the way things done throughout the organization. Besides the change process starting form Top management down to all employees of the organization was too hard to adopt at that time. There were some uncertainties, higher costs and higher turnover of employees, who gets it hard to adapt the new paradigm shift towards new philosophy, was the main challenges the organization face during the early stage of practicing TQM system. Review of company documents also show that the company is showing progress through time to time after started practicing TQM system.

Table of Contents

List of Tables

List of Abbreviations and Acronyms

TQM	Total Quality Management
ISO	International Standard Organization
EPHARM	Ethiopia Pharmaceutical Share Company
GMP	Good manufacturing practices
CSA	Central statistics agency
EPMSMA	Ethiopian pharmaceuticals and medical supplies manufacturers association

CHAPTER ONE

1. Introduction

1.1Background of the study

Quality a much known word in the history of humankind and now a day thanks to the rapid growth in the information and communication technology more informed users with a variety of alternatives to choose are also emerged. In order to satisfy the needs of these modern customers, firms are striving to get competitive advantage over others. One weapon to get this competitive advantage is quality. Elite who supported the above argument is John Okland. He claimed that any organization competes on its reputation for quality, reliability and price, yet quality still is the most important of these competitive weapons (Okland, 2004). To enhance the above argument ISO-9001 defines quality as a strategic objective that established to fulfill the needs and expectations of all interested parties and therefore equates with the corporate objectives (Hoyle, 2001). In the same vein Vokurka et al concluded that With customers demanding quality and competitors responding to such demands, businesses turned to total quality management (TQM) as the key to enhance overall performance. As customer expectations increased and performance improvement initiatives were implemented, quality evolved from a product specific focus to an organization wide effort, from a separate manufacturing function to a strategic business initiative. The quality function was expanding, and with that came new practices concerning continuous improvement (Vokurka et al, 2000).

TOM is a vast collection of philosophies, concepts, methods and tools now being used throughout the world to manage quality(Juran, 1999). It is a method that has evolved to achieve, sustain and improve quality (Hoyle, 2001). Gharakhani et al as cited in Abdaziz et al defined Total Quality management as constituent of several quality instruments and technique, in addition to various values and beliefs that all staff within the same organization shares (Abdaziz et al, 2016). In support of this argument Lakhal et al as cited in Abdaziz et al claimed that TQM can be defined as a strategy that aims to generate and transfer more efficient and superior services, through achieving cooperation between organizationalmembers (Abdaziz et al, 2016). Studies support thatachieving;sustaining and

improving quality will give organizations the competitive advantage over others. In the same manner Lagersen as cited by Ndubuisi supported the above argument. He claimed companies all over the world found it was necessary to have good quality management practice in order to stay competitive(Ndubisi, 2012).

Having seen the necessity of quality and total quality management, let us review our country Ethiopia – one of the poorest 3rd world countries with a lot of hope to grow and become a middle income country in the near future. But quality related problems arise in almost all sectors of the country from service to manufacturing, from agriculture to education sectors.

The country is suffering from quality related issues, hearing about quality problems in meetings, seminars, workshops and the like is not a surprise in Ethiopia. The FM radios most of the times come up with news broadcast that exported goods from Ethiopia are returning because of defects. Many researches made in the country found problems in implementation, customization and adaptation of TQM systems. In support of this argument research conducted by Addis Ababa university institute of technology on participants of Ethiopian quality award, 2009 also supported the above arguments, the results justified that quality will be the future challenges of competitiveness in Ethiopia (Birhanu and Daniel,2013).

Having seen the problems raised by many studies in the country still little is done to overcome the situation and hence this research paper will tried to shade some light to the phenomena by demanding to assess the most important aspect of quality management that is the practices of total quality management principles at Ethiopian pharmaceuticals manufacturing S.C (Epharm) - the oldest and the largest drug producing factory in Addis Ababa, Ethiopia.

1.2 Statement of the Problem

As we have mentioned at the introduction that quality related problems are inevitable in developing countries. One major wrong practice made by organizations is letting the production department to take the responsibility for producing quality products believing quality is a factor of the production process only. However, many scholars believe that quality should not be the obligation of the production process only. All members of the organization should be involved to bring quality. Okland for instance, stated that traditionally, quality has

been regarded as the responsibility of quality assurance and quality control departments and still it has not yet been recognized in some organizations that many quality problems originate in the commercial, service or administrative areas (Okland, 2004). Good quality management inessentially way of planning, organizing and understanding each activity and depends on each individual at each level. For an organization to be truly effective each part of it must work properly together towards the same goals, recognizing that each person and each activity affect and in turn affected by others (Okland, 2004).

In the same vein Mohanty and Lakhe as cited in Elfaituri argued thatorganizations face considerable difficulties in developing countries, and thus, their ability to adopt TQM was limited. These difficulties are composed of lack of employee involvement and participation in quality improvement efforts, lack of top management commitment and motivation, perception that quality is the optional extra and not a necessity for development, poor internal communication, lack of focus on the needs of consumers, lack of political support, lack of established quality standards and inadequate test facilities, lack of advanced or modern technologies, insufficient education and training resources, resistance to change at different levels, and inadequate knowledge and information about TQM (Elfaituri, 2012).

Another known scholar Juran supportedthese arguments, he suggested that many companies have found that all of their radical restructuring, reengineering, downsizingand numerous quality programs may have helpedthem survive, but that still do not have a distinctive advantage. Their future will be determined by three key areas. Alignment, linkage and replication combined with the fundamental concepts of quality management (continuous improvement, customer focus and the value of every member of the organization). Their work in these three key areas is transforming the way they are managing the entire organization (Juran, 1999).

These arguments show that for total quality management to be fully practiced all the principles should be placed in practice. If so, what are the other variables that contribute for the existence of quality? Birhanu and Daniel stated in their article that since all quality awards are derived from the tenants of quality management, they look alike. However, they have some differences in their focus area and weight of criteria (Birhanu and Daniel, 2013). In the

same vein Vokura et al asserted that award criteria for successful and established programs continue to improve, reflecting changes in the quality arena. And as national and regional award criteria include updated strategic content, a trend toward a uniform, international model of organization wide quality performance is evolving (Vokura et al, 2000).

From the above statement we can see that even though there are differences on the criteria and weights given, the basic principles of total quality management exists in almost all total quality management models and literatures. These are customer focus, leadership, Engagement of people, process approach, continuous improvement evidence based decision-making and relationship management.

Another wrong belief held by many organizations is quality costs more time and money, which hinders owner's and top level management to strive for quality. MelsaJ.L stated that this problem is a universal believe. He wrote that some organization would argue that if one wants a higher quality product it will take longer to design and manufacture, and it will cost more (Melsa, 2009). However, it was a wrong belief. He stated a research that proved the belief wrong and even on the contrary quality in the long- run is the most important single factor affecting a business unit's performance in relation to its competitors (Melsa, 2009).Supporting this argumentYoussef et al as cited in Elfaituri asserted that the benefits of TQM include such examples as products with fewer defects, a reduction in rework and lead times, cost reductions, improved business competitiveness, increases in market share and profitability, increased flexibility, and enhanced employee and customer satisfaction (Elfaituri, 2012).

Many researches made in our country from past to present found quality system practice problems. They found poor practices in all total quality management principles (Birchanu and Daniel, 2014), (Ezra, 2004). Others also found that even though Ethiopian organizations are conscious about the importance of total quality management, they were not practiced the complete and comprehensive components of total quality management (Haile and Satya, 2016).Other scholars Daniel and Fasikaalso supported the lack of complete and comprehensive implementation and practices of TQM principles in Ethiopia (Daniel and Fasika, 2003). They believe the reason for poor practices were failure to recognize the

importance of culture and organizations structure (Danil and Fasika, 2003). This means that though a system proven useful in a given environment might not work in another set up, some adjustments should be made (Daniel and Fasika, 2003). In the same vein Tata and Prasad as cited in Elfaituri have stated that the lack of significant success in implementation is often not viewed as a failure of the TQM philosophy, but more as a result of not paying sufficient attention to the cultural factors that affect it (Elfaituri, 2012).

The above-mentioned researches suggested a gap in the practices of total quality management in developing countries and still little is done to overcome the problem when compared it to developed countries. Supporting these ideasLakhe and Mohantyas cited in Elfaituri suggested the efforts made in developing countries to progress their economies and participate more fully in the global economy have failed, and their customers continue to suffer with low quality services and products (Elfaituri, 2012). Hence this research will add little insight of the area and can be used by other practitioners as a stepping stone for further studies. Furthermore the purpose of this research is to study practices of total quality management principles by making these principles as variables for successful total quality management system. The results of this research will help the organization to understand how TQM principles are practicing in the organization and its employees understanding about TQM. Moreover since the organization is certified with ISO 9001; 2008 for meeting their standards and working in an industry of zero tolerance for mistakes its practices might be useful for other organizations working in more tolerable industries. Finally as this research's main purpose is of academicals or educational, the major significance relies on equipping the researcher with the necessary skills and techniques to undertake research. Thus, it helped to develop the curiosity of researcher on the subject matter for professional career development.

1.3 Research Questions

1. Are TQM principles practiced in the organization?
2. What are the benefits of practicing TQM to the organization?
3. What are the challenges the organization face to practice total quality management system?

1.4 Objective of the Study

1.4.1 General Objective

The general objective of the study is to assess the practices of total quality management system at Epharm.

1.4.2 Specific Objectives

- Assessing the contributions of practicing total quality system in Epharm.
- Assessing the challenges of practicing TQM systemin Epharm.

1.5 Scope and Limitation of the Study

1.5.1 Scope of the Study

- The scope of the study is limited to one organization-Epharm.
- The study will assess the practice of total quality management at Epharm.
- The main focus of the study is on the practice of total quality management but the contributions of implementing total quality management will also be discussed.
- Out of the number of quality systems available the study will focus on the ISO based quality management system since the organization is an ISO-2008 certified.

1.6 Organization of the Study

This paper is organized in to five chapters. The first chapter contains introduction, problem statement, research questions and objectives of the study. The second chapter is literature review. In this part a lot of topics were raised related to this study such as TQM practices, evolution of TQM, TQM practices and trends in the 21st century, TQM in Ethiopiaand other related topics. The third chapter about methodologies used for the study. The fourth chapter is about data analysis; responses collected using survey instruments are carefully analyzed. In the fifth chapter, conclusions and recommendation based on the results of data analysis are provided.

CHAPTER TWO

2. LITERATURE REVIEW

Objective

The main objective of this chapter is to identify how TQM principles should be practiced and to find gaps in the area of the study that needs to be searched. In order to do so carefulobservationof literatures and empirical studies available undertaken to understand what TQM means,its evolution,current trends and theories of TQM. The chapter tried to discuss different opinions and models of quality gurus, different quality excellence models and frame works suggested by these excellence models. While reviewing the literatures the chapter tried to highlight how TQM principles should be practiced, the benefits and challenges of practicing TQM principles. Furthermore the gaps in practicing TQM in our country, the pharmaceutical industry in general and Ethiopian pharmaceuticals S.C specifically are discussed in this chapter. Finally after detailed discussion on the gaps in practicing TQM research questions are formulated.

2.1 Definitions of Total Quality Management

Before we go through the literatures about TQM we first need to define quality. Quality is degree of excellence (oxford dictionary) or quality is the general standard or grade of something. (Encarta dictionary).These definitions are concise but of little help to study the area since it are too vague. More detailed and operationalized definition is illustrated by Okland. He claims that Quality is often used to signify ‘excellence’ of a product or service people talk about ‘Rolls-Royce quality’ and ‘top quality’. In some manufacturing companies the word may be used to indicate that a piece of material or equipment conforms to certain physical dimensional characteristics often set down in the form of a particularly ‘tight’ specification. In a hospital it might be used to indicate some sort of ‘professionalism’. If we are to define quality in a way that is useful in its management, then we must recognize the need to include in the assessment of quality the true requirements of the ‘customer’ – the needs and expectations (okland, 2004).He pointed out that other quality gurus also shared the

argument that quality is simply meeting customer requirements and presented some of the definitions of other authors as follows;

- 'Fitness for purpose or use' – Juran, an early doyen of quality management (Okland, 2004).
- 'The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs' – BS 4778: 1987 (ISO 8402, 1986) Quality Vocabulary: Part 1, International Terms (Okland, 2004).
- 'Quality should be aimed at the needs of the consumer, present and future' – Deming, another early doyen of quality management (Okland, 2004).
- 'The total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectation by the customer' – Feigenbaum, author of 'Total Quality Control.' (Okland, 2004).
- 'Conformance to requirements' – Crosby, an American quality management consultant famous in the 1980s. 'Degree to which a set of inherent characteristics fulfils requirements' – ISO (EN) 9000:2000 Quality Management Systems – fundamentals and vocabulary (Okland, 2004).

Though their perspective varies in defining quality, the definitions are interrelated since meeting standards, fitness to use and provide customer satisfaction are related by themselves. Moreover, all quality gurus agreed that quality is an end point hence something should be applied to bring it.

Another author Graeme Knowles illustrated that if quality is the end point, then Quality management is the approach for getting there. Accordingly, we need also to develop an appropriate understanding of what this idea means. In this context there is no simple definition which encapsulates the area instead we need to consider the key principles which are central to the topic (Knowles, 2011).

2.2 Evolution of Total Quality Management

Prior to TQM comes in to use there were eras traditional ways related to TQM theories applied. Before the 20th century and the industrial revolution were the craftsmanship era, when works were less sophisticated and no far-reaching distribution systems. The person providing the service dealt directly with the customer and it was particularly important to achieve and retain a local reputation for good work at fair price. Then after, with the formation of factories and increasing automation, work became progressively de-skilled and more repetitive eroded the pride in workmanship associated with the skilled craftsman. Factories begin to hire semi-skilled and unskilled workers which led to the standardization, mass production and quality assurance era (1900-1930). Later, workers start to give-up any attempt to correct things that were wrong in the production operation and begun to disassociate themselves from the success of the organization. Though, there were quality inspectors who gave assurance that sub-standard products are not dispatched to customers, the key issue is that inspection is an activity that takes place after a defective product is made. In an attempt to overcome this problem a new era- The quality control era (1930-1950) came in to practice. Scholars like Walter A. Shewhart and his student Edward Deming's came up with systems to control quality before the products are made. Even after all these era's taken place the view of quality was just about manufacturing. Dr. Armard V. Feigenbaum was the first to express the view that quality was not just about manufacturing, but could be applied to departments such as engineering, development, sales and service. He stated that quality is from cradle to grave, from womb to the tomb. Following him, a more comprehensive concepts of total quality management like 'Do it right the first time' as a way to change the management culture of an organizationby Philip Crosby emerged. The strength of TQM was in the principles it laid down for how to transform an organization and over the years, a need for standardization was felt, to homogenize not the approach but at least the principles. Quality systems standards like the ISO 9000 have been most successful elements of this approach (Knowles, 2011).

2.3 Theories of Total Quality Management

2.3.1 Deming's Approach to TQM

Anderson et al as cited by Zhang pointed out that the theoretical essence of the Deming approach to TQM concerns the creation of an organizational system that fosters cooperation and learning for facilitating the implementation of process management practices, which, in turn, leads to continuous improvement of processes, products, and services as well as to employee fulfillment, both of which are critical to customer satisfaction, and ultimately, to firm survival(Zhang, 2000). Deming as cited by Zhang stressed the responsibilities of top management to take the lead in changing processes and systems. Leadership plays in ensuring the success of quality management, because it is the top management's responsibility to create and communicate a vision to move the firm toward continuous improvement. Top management is responsible for most quality problems; it should give employees clear standards for what is considered acceptable work, and provide the methods to achieve it. These methods include an appropriate working environment and climate for work-free of faultfinding, blame or fear (Zhang, 2000). Deming as cited by Zhang also emphasized the importance of identification and measurement of customer requirements, creation of supplier partnership, use of functional teams to identify and solve quality problems, enhancement of employee skills, participation of employees, and pursuit of continuous improvement (Zhang, 2000).

Deming emphasizes contentious improvement and believes that it is management's obligation to constantly and forever improve the system of production and service. The concept of ongoing improvement is illustrated by Shewhart cycle or the do plan check act (PDCA) cycle (Suarez, 1992).

The means to improve quality lie in the ability to control and manage systems and processes properly, and in the role of management responsibilities in achieving this. Deming as cited by Suarez advocated methodological practices, including the use of specific tools and statistical methods in the design, management, and improvement of process, which aim to reduce the inevitable variation that occurs from "common causes" and "special causes" in production. "Common causes" of variations are systemic and are shared by many operators, machines, or

products. They include poor product design, non-conforming incoming materials, and poor working conditions. These are the responsibilities of management. “Special causes” relate to the lack of knowledge or skill, or poor performance. These are the responsibilities of employees (Suarez, 1992).

2.3.2 Juran’s Approach to TQM

Juran and Gryna as cited by Zhang defined TQM as the system of activities directed at achieving delighted customers, empowered employees, higher revenues, and lower costs (Zhang, 2000). Juranas cited in Zhang believed that main quality problems are due to management rather than workers. The attainment of quality requires activities in all functions of a firm. Firm-wide assessment of quality, supplier quality management, using statistical methods, quality information system, and competitive benchmarking are essential to quality improvement (Zhang, 2000). Juran’s approach is emphasis on team (QC circles and self-managing teams) and project work, which can promote quality improvement, improve communication between management and employees coordination, and improve coordination between employees. He also emphasized the importance of top management commitment and empowerment, participation, recognition and rewards (Zhang, 2000).

According to Juran, it is very important to understand customer needs. This requirement applies to all involved in marketing, design, manufacture, and services. Identifying customer needs requires more vigorous analysis and understanding to ensure the product meets customers’ needs and is fit for its intended use, not just meeting product specifications. Thus, market research is essential for identifying customers’ needs. In order to ensure design quality, he proposed the use of techniques including quality function deployment, experimental design, reliability engineering and concurrent engineering(Zhang, 2000).

Juran considered quality management as three basic processes (Juran Trilogy): Quality control, quality improvement, and quality planning. In his view, the approach to managing for quality consists of: The sporadic problem is detected and acted upon by the process of quality control; The chronic problem requires a different process, namely, quality improvement; Such chronic problems are traceable to an inadequate quality planning process (Zhang, 2000).

2.3.3 Crosby's Approach to TQM

Crosby as cited in Zhang identified a number of important principles and practices for a successful quality improvement program, which include, for example, management participation, management responsibility for quality, employee recognition, education, reduction of the cost of quality (prevention costs, appraisal costs, and failure costs), emphasis on prevention rather than after-the-event inspection, doing things right the first time, and zero defects. Crosby claimed that mistakes are caused by two reasons: Lack of knowledge and lack of attention. Education and training can eliminate the first cause and a personal commitment to excellence (zero defects) and attention to detail will cure the second (Zhang, 2000).

Crosby's approach focuses on doing things right for the first time and every time. There's no place in his philosophy for differing levels of quality or categories of quality. He stresses out that the way to manage quality is by prevention not detection and testing. And according to him, as quality an increase, costs decrease thus quality doesn't cost. To implement his quality improvement process, Crosby delineates a 14 point step approach consisting of activities that are the responsibilities of management, but also involve workers(Suarez, 1992).He also stresses out that key to quality improvement is to change the thinking of top managers to get them not to accept mistakes and defects, as this would in turn reduce work expectations and standards in their jobs. Understanding, commitment, and communication are all essential. Crosby presented the quality management maturity grid, which can be used by firms to evaluate their quality management maturity. The five stages are: Uncertainty, awakening, enlightenment, wisdom and certainty (Zhang, 2000).

2.3.4 Feigenbaum's Approach to TQM

Feigenbaum as cited by Zhang defined TQM as: An effective system for integrating the quality development, quality-maintenance, and quality-improvement efforts of the various groups in a firm so as to enable marketing, engineering, production, and service at the most economical levels which allow for full customer satisfaction. He claimed that effective quality management consists of four main stages, described as follows:

- Setting quality standards;
- conformance to these standards;

- Acting when standards are not met;
- Planning for improvement in these standards.

The quality chain, he argued, starts with the identification of all customers' requirements and ends only when the product or service is delivered to the customer, who remains satisfied. Thus, all functional activities, such as marketing, design, purchasing, manufacturing, inspection, shipping, installation and service, etc., are involved in and influence the attainment of quality. Identifying customers' requirements is a fundamental initial point for achieving quality. He claimed that effective TQM requires a high degree of effective functional integration among people, machines, and information, stressing a system approach to quality. A clearly defined total quality system is a powerful foundation for TQM. Total quality system is defined as follows:

The agreed firm-wide operating work structure, documented in effective, integrated technical and managerial procedures, for guiding the coordinated actions of the people, the machines, and the information of the firm in the best and most practical ways to assure customer quality satisfaction and economical costs of quality (Zhang, 2000).

Feigenbaumcited in Zhang emphasized that efforts should be made toward the prevention of poor quality rather than detecting it after the event. He argued that quality is an integral part of the day-today work of the line, staff, and operatives of a firm. There are two factors affecting product quality: The technological-that is, machines, materials, and processes; and the human-that is, operators, foremen, and other firm personnel. Of these two factors, the human is of greater importance by far. Feigenbaum considered top management commitment, employee participation, supplier quality management, information system, evaluation, communication, use of quality costs, and use of statistical technology to be an essential component of TQM. He argued that employees should be rewarded for their quality improvement suggestions, quality is everybody's job. He stated that effective employee training and education should focus on the following three main aspects: Quality attitudes, quality knowledge, and quality skills (Zhang, 2000).

2.4 Discussion of the theories related to TQM

From the theories and approaches of quality gurus discussed above we can understand that all of them have their own distinctive insight over quality. However if we bring together the approaches of all quality gurus we can come up with more comprehensive insight to quality management. Moreover though they all have differences when they come to specific approaches, they also share similar ideas about quality management. Some of their similarities are as follows

1. All of them emphasize Top management's commitment and leadership as vital for successful quality system in organizations.
2. They also claims that organization wide understanding and cooperation is inevitable for organizations to implement successful TQMS.
3. Employee education, training and empowerment is also emphasized in changing employees' beliefs, behavior, and attitudes; enhancing employees' abilities in carrying out their duties and also Employees should be recognized and rewarded for their quality improvement efforts.
4. They also emphasize the need to have systematic and process oriented approaches is essential for quality improvement
5. Quality is a systematic firm-wide activity from suppliers to customers. They concluded all functional activities, such as marketing, design, engineering, purchasing, manufacturing, inspection, shipping, accounting, installation and service, should be involved in quality improvement efforts.
6. All of them revealed that customer is a key ingredient and organizations should strive to satisfy customers by contentiously improving quality

The difference in the approaches of the three most known quality gurus (Crosby, Deming and Juran) is summarized in the table below.

Table1; Comparisons of Crosby, Deming and Juran (Suarez, 1992)

DEFINITION OF QUALITY	Crosby	Deming	Juran
Defined by conformance to requirements	X		
Defined by fitness for use and customer requirements.			X

Defined by the current and future needs of the customer		X	
USE OF MEASUREMENT			
Views the monetary cost of quality as the focus of measurement.	X		X
Places emphasis on statistical thinking and statistical methods.		X	X
GOAL SETTING.			
"Defect-free" products and services are the ultimate goal. Stresses individual conformance to requirements	X		
Puts emphasis on company-wide goals and the deployment of goals			X
Opposes the use of goals and quotas to manage work.		X	
SUPPLIER RELATIONSHIPS			
Favors the practice of reducing the number of suppliers.	X		X
Favors the practice of using a single supplier when possible.		X	
LEADERSHIP ACTIVITIES			
Urges the creation of an activity where management and employees I reaffirm their commitment to quality.	X		X
Defines leadership roles and responsibilities but does not provide a "cookbook" approach to implementation.		X	
TRAINING			
Targets training to help managers develop a new organizational culture.	X		
Targets training toward quality management practices and problem-solving techniques.			X
Targets training towards leadership practices. Addresses the need for education and training for enhancing knowledge and developing skills		X	
QUALITY IMPROVEMENT			

Emphasizes prevention to meet specifications.	X		
Uses three quality-oriented processes (planning, control, and improvement) to achieve improvements.			X
Views the organization as a system and applies the scientific method to optimize the system. Uses statistical methods to monitor variation.		X	

Source; Three experts on quality management, Suarez, 1992

The above table clearly shows that though they all agree on the foundations of TQM when they come to specific approaches they have differences on the processes, systems and activities that should be done to bring quality system to an organization.

2.5 Quality Excellence Models

Many organizations have adopted business excellence models because they realize that those models promote the adoption of the best practices and tools that allow the achievement of a strategy of quality, benchmarking of best practices, self-assessment and continuous improvement. Furthermore, some researchers have analyzed the hypothesis that implementing effective quality management programs improves the operating performance of firms. (Sampaio, 2011)

Award criteria for successful and established programs continue to improve, reflecting changes in the quality arena. And as national and regional award criteria include updated strategic content, a trend toward a uniform, international model of organization wide quality performance is evolving.(Vokura et al, 2000)

When these award programs were compared, significant similarities were found in the criteria used for assessing award applicants. In addition, all of the award programs utilize continuous improvement initiatives to retain their positions as benchmarks in quality systems and as principals in the formation of a global quality model. (Vokura et al, 2000)

2.5.1 The European Quality Award (EQA)

Recognizing the importance of quality management in the organizations performance, 14 major European companies formed the Foundation forQuality Management(EFQM) in 1988. By 1991, EFQM had developed the European Quality Award (EQA) program to honor outstanding European businesses. The award is now similar to the MBNQA. The corresponding model criteria do comprise enablers and results, including the following categories: leadership, people, strategy, partnerships and resources, processes, products and services (enablers), people results, customer results, society results and key results (Sampaio et al, 2011)

Bohoris as cited in Elfaituri discussed the purpose of this award as to enhance the position of Western European companies in the world market by accelerating the acceptance of quality as a strategy for global competitive advantage and by stimulating and assisting the development of quality improvement activities. (Elfaituri, 2012)

2.5.2 Malcolm Baldrige National Quality Award

In an effort to improve quality management practices and the competitiveness of U.S. firms, President Ronald Reagan signed the Malcolm Baldrige National Quality Improvement Act on August 20, 1987. The Malcolm Baldrige National Quality Award (MBNQA) was created to promote quality awareness, identify the requirements for quality excellence, and share information about successful quality strategies and benefits. The National Institute of Standards and Technology (NIST) currently administer the award, with ASQ assisting with the application review process, preparation of award documents and other administrative duties. Striving to define quality performance, NIST developed a set of core principles for quality management, including customer driven quality, leadership, continuous improvement and learning, employee satisfaction, design quality and prevention, planning for the future, company responsibility and citizenship, and results. Baldrige administrators believe these core principles form a framework for performance excellence— the basis of the award's criteria. The criteria, used to assess an applicant's performance, are divided into seven categories and provide the strategic direction for the entire system. The categories are leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management

and business results.(Vokura et al, 2000) Evans and Lindsay as cited in Elfaituri described that each category consists of items including the basic requirements that must be the focus of organizations competing for the award. (Elfaituri, 2012)

2.5.3 Deming Prize

In 1951, the Deming Prize was established in Japan by the Union of Japanese Scientists and Engineers (JUSE). It was named in honor of the American statistician and father of the worldwide quality movement, W. Edwards Deming. Today, the Deming Prize honors private and public organizations for the successful implementation of quality control activities. Unlike other national or regional quality awards, the Deming Prize does not provide a model framework for organizing and prioritizing criteria. Instead, the evaluation includes 10 equally weighted points that each applicant must address. The 10 points involve the following categories: policies, organization, information, standardization, human resources, quality assurance, maintenance, improvement, effects and future plans. Expert panel members judge performance against these points. While the Deming Prize does not provide a model per se, the categories emphasize values similar to those of the other award models. (Vokura et al, 2000)

The deming prize guide 2011 as cited in Elfaituri concluded the most important benefits and effects of the Deming application Prize as quality stabilization and enhancement, productivity improvement and cost reduction, expansion of sales, increase of profits thorough implementation of management and business plans, enhancement of participation and improvement skills, and raised morale and motivation of employees. (Elfaituri, 2012)

2.5.4 Canadian Quality Award

The Canadian Ministry of Industry introduced the Canada Awards for Business Excellence in 1984, but revised the program in 1989 to reflect the MBNQA concept. The resulting program the Canadian Quality Award was released in 1989. Canada's National Quality Institute continues to use the reward to honor the practice of continuous quality improvement in Canadian organizations. Instead of a framework linking award criteria, the Canadian Quality Award relies on a continuous improvement guide entitled The Roadmap to Excellence (Vokura et al, 2000).

2.5.5 Australian Quality Award

The Australian Quality Award provides a model certified by the Australian Quality Council, an organization recognized by the Commonwealth Government of Australia as the top organization for quality management. The council was formed in 1993 with the merger of Enterprise Australia, the Total Quality Management Institute, the Australian Quality Awards Foundation and the Quality Society of Australia. Six additional organizations later joined the council, encouraging quality performance in Australian industries. The goal of the award program is to develop and deploy a comprehensive and contemporary body of quality principles and best practices. The council measures quality performance through seven categories of criteria. The people, information and analysis, strategy, policy and planning categories have the greatest effect on the quality of processes, according to the model. The quality of the processes, in turn, affects organizational performance. Customer focus and leadership are key elements, interacting with all the other parts of the model. Although it is similar to the MBNQA, the Australian Quality Award has an increased emphasis on the significance of multicultural management. (Vokura et al, 2000)

2.5.6 1S0 9000 certification

1S0 9000 was published in 1987 by the International Organization for Standardization (ISO), and is granted to organizations able to demonstrate that they have reached a certain standard of quality control. (Elfaituri, 2012)

ISO 9001 provides a set of standardized requirements for a quality management system, regardless of the user organization's industry, size, or whether it operates in the public or private sector. In the family of ISO standards, it is the only one against which organizations can be certified – although certification is not a compulsory requirement of the standard. The ISO 9001: 2008 standard is suitable for organizations that require an established pathway to follow in order to take a systematic approach to the management of processes, so that they can consistently produce goods and services to satisfy the expectations of their customers.(Elfaituri, 2012)

The documents produced by ISO provide standardized descriptions of principles of quality management as they appear in ISO 9000. They additionally provide examples of the benefits derived from implementation and of actions that managers typically take in applying the principles in order to improve the performance of their organizations. These principles are (ISO, 2008): Customer focus, Leadership, Involvement of people, Process approach, continual improvement, factual approach to decision-making and mutually beneficial supplier relationships. (Elfaituri, 2012)

2.6 Total Quality Management inthe21st Century

Quality improvement and cycle reduction are no longer feds or slogans but have become the survival issues of the 21stcentury companies that have adopted quality management practices have experienced an overall improvement in corporate performance including better employee relations, higher productivity, greater customer satisfaction, increased market share and improved profitability. There has been a strong belief that quality costs both time and money some organizations would argue that if one wants a higher quality product, it will take longer to design and manufacture and it will cost more. Interestingly, all of these beliefs have been proven to be wrong. A study at the profit impact and strategic information (PIMS) data base which contains financial and strategic information for around 3000 businesses over a twenty year period indicates that in the long run, the most important single factor affecting a business unit's performance is the quality of its products and services in relation to those of its competitors (Melsa, 2009).

To days successful complains have one thing in common they are strongly customer focused and heavily committed to marketing. These companies share a passion for understanding and satisfying customer needs in well-defined target markets. They motivate everyone in the organization to help build lasting customer relationship based on creating value (Kotler and Armstrong, 2012). By consistently meeting customer requirements, we can move in to a different plane of satisfaction- delighting the customer. There is no doubt that may organizations have so well ordered their capability to meet their customers and their satisfaction is customer loyalty, an important variable in an organization's success (Okland ,2004). One and the most prominent way to gain this organizational success is by implementing total quality management principles. In the same vein Abdaziz et al presented

that TQM practices include commitment of top-management, focus on customers, training and education, continuous improvement, supplier management, involvement and encouragement of employees, benchmarking, and quality information and performance. The outputs are the enhanced productivity and quality, the achievement of high level customer satisfaction, the improved customer loyalty and on-time delivery. Generally, all TQM models indicated that each managerial action is consisting of planning, implementing and evaluating processes. (Abdaziz et al, 2016). Thus one and the most prominent way to gain this organizational success is by implementing total quality management principles.

Research Question: What are the benefits of practicing TQM to the organization?

Total quality management is defined as a continuous effort by the management as well as employees of a particular organization to ensure long term customer loyalty and customer satisfaction. (Managements study guide. com). To apply the philosophy of total quality management a company must operate by several principles. First all functions in side an organization including production, finance, marketing, information system and purchasing should apply quality control to improve their output second each part of the company has to focus on meeting customer requirements and expectations the first time and every time. Third, each part of the company must strive to improve continuously. Fourth to achieve these aims, the entire work force must be involved and employees must be empowered (Daniel &Fasika, 2003). The seven quality management principles introduced by ISO 9000, ISO-9001 and related ISO quality management standards with the rationale and key benefits are summarized in the table below.

Table 2; Principles of Total quality management

Principles	Rationale	Key benefits
1. Customer focus	Sustained success is achieved when an organization attracts and retains the confidence of customers and other interested parties	➢ Increased customer value ➢ Increased customer satisfaction ➢ Improved customer loyalty ➢ Enhanced repeat business ➢ Enhanced reputation of the organization

2. Leadership	Creation of unity of purpose, direction and engagement of people enable an organization to align its strategies	➢ Increased effectiveness and efficiency in meeting the organization's quality objectives ➢ Better coordination of the organization's processes ➢ Improved communication between levels and functions of the organization
3. Engagement of people	To manage an organization effectively and efficiently, it is important to involve all people at all levels and respect them as individual	➢ Improved understanding of the organizations quality objectives by people in the organization ➢ Enhanced involvement of people in improvement activities ➢ Enhanced personal development, initiatives and creativity. ➢ Enhanced people satisfaction ➢ Enhance trust and confabulation through the organization
4. Process approach	The quality management system consists of inter related processes understanding how results are produced by this system enables an organization to optimize the system and its performance.	➢ Enlaced ability to focus effort on key processes and opportunities for improvement ➢ Consistent and predictable out comes through a system of aligned processes.
5. Continuous improvement	Improvement is essential for an organization to maintain current levels of performance, to react to changes in its internal and	➢ Improved process performance, organizational capabilities and customer satisfaction. ➢ Enhance focus on root cause

	external conditions and to create new opportunities	investigation and termination, followed by prevention and corrective actions. ➢ Improved use of learning for improvement ➢ Enhanced drive for innovation
6. Evidence based decision making	Decision making can be a complex process and it always involves some uncertainty. Facts evidence and data analysis lead to greater objectivity and confidence in decision making	➢ Improved decision making process ➢ Improved assessment of process performance and ability to achieve objectives ➢ Improved ability to review, challenge and change opinions and decisions.
7. Relationship Management	Interested parties influence the performance of an organization .sustained success is more likely to be achieved when the organization manages relationships with all of its interested parties to optimize their impact on its performance.	➢ Common understanding of goals and values among interested parties. ➢ A well-managed supply chain that provides a stable flow of goods and services

Note: This table is incorporated from WWW.ISO.org posted at 2015

2.7 Total Quality Management in Ethiopia

During the military regime, the country has adopted a centrally planned socialist economy system. Many state owned enterprise set - up, and nearly all the private companies were confiscated or bought by the government. During this period, the Russian way of doing things influenced and dominated the quality management practices in Ethiopia. An enterprise was

basically a factory or production unit where the production was assigned according to the central plans. The government has established special departments to perform both the procurement and marketing functions for industries. Because of quota system in a non-competitive environment, the majority of companies had no clear quality vision and mission, and their management lacked the initiative to steer quality activities through corporate strategies and policies. Although many enterprises have introduced the quality control techniques, awareness was inadequate at that time. It was also common that no independent quality department or function was established in companies. There were several deep rooted barriers of quality management. These include, but not limited to, the inability to plan for changes, the ignorance of cost of poor quality, the misconception of quality control and inadequate education and training. Moreover, lack of customer focus made the situation deteriorate further and imposed difficulties in developing quality management practices in Ethiopia enterprises at the time (Daniel and Fasika, 2016). The researchers also draw the following conclusions at that time;

- The focus of quality management was not for customer satisfaction
- Poor management commitment
- Lack of systematic quality training program made people in quality and other departments in a situation that hinders systematic quality improvement.

The researchers also pointed out that organizations often failed to recognize the importance of culture and its influence in transplanting what has worked in a different cultural setup, organizational structure and individualism without reviewing its compatibility or incompatibility with different cultures (Daniel and Fasika, 2003). This argument is supported by Pekar he stated in his book that there is no single path to achieving total quality within an organization. There are no hard and fast rules to follow to become a world class company. The only constant are basic guidelines, that, when followed, lead to success. This is because all organizations have their own cultures, people, and technologies. What may work well for one company will not necessarily work for another company(Pekar,1995).Kayis and Shin as cited in Elfaiturihighlighted some obstacles to TQM implementation derived from a descriptive analysis of the Australian banking industry; these included lack of top management support, lack of an innovative culture, poor communication between

departments, lack of employee trust in management, and lack of understanding of customers' needs. Furthermore, they found some of the obstacles to TQM implementation in the South Korean banking industry to be: suggestions of low employee quality, failure to provide challenges at work, poor communication, and little use of relevant data to set performance standards (Elfaituri, 2012).

Research Question: What are the challenges the organization face to practice total quality management system?

When we come to current studies in the area the World Bank as cited by Haile and Satiya claimed Ethiopia as a country with long world history and a population of more than 90 million still remains as one of the least developing countries in the world. The manufacturing sector contributes no more than 11% to GDP and 5% to employment (Haile and Satya, 2016). The pace to maximize benefits from manufacturing industry is far below expectation due to quality management and other different problems. Recently Ethiopian manufacturing organizations are demanded to improve their products quality in order to improve their competitiveness and verify the current strategy of the government to export their products abroad. In the same time the government opened the Ethiopian market to receive a variety of foreign products from different markets. However the problems pointed out by Daniel and Fasika are still not resolved. A study supporting this argument is research made by Daniel, one of the researchers studied in the area back in 2003, with his associate Birhanu, in 2014.They found that generally, quality management practices in Ethiopia was found to be low in all the tenants including leadership, policy and strategy, resource management, process management, customer satisfaction, business performance and impact on society (Birhanu and Daniel, 2014). Another study carried out by Ezra found that quality problems including poor quality supplies of raw material, poor relationship with customers and suppliers and poor product design (Ezra, 2004). Another research made by Haile and Dr. Satya supported the above arguments. The researchers concluded that firms in their survey are found to have implemented certain kinds of quality management programs. This means that they are generally conscious of the importance of TQM. However, firms were not practiced the complete and comprehensive components of TQM as their original proponents (American and Japanese TQM gurus) had convinced them (Haile and Satya, 2016).

Research Question: Are TQM principles practiced in the organization?

2.8 Pharmaceutical industrial development in Ethiopia

2.8.1 Phases of industrial development

The history of pharmaceutical manufacturing in Ethiopia is only half a century old and it may be classified into three periods: the establishment of the Ethiopian Pharmaceutical Manufacturing company (EPHARM), the subsequent boom, crash, and the later 'reform andrevival' period.The first pharmaceutical manufacturing plant in Ethiopia, EPHARMwasfounded in 1964 as a joint venture by the Ethiopian government and the British company, Smith &Nephew. In 1971, Smith & Nephew was superseded by Teva Jerusalem of Israel. Following the overthrow of the monarchial government by the military in December 1975, the company was nationalized. Due to the socialistic policy of the military regime, private industrial investment generally stagnated and EPHARM remained the sole producer of medicines in the country until 1993. In February 1994, EPHARM was re-established as a public share holding company and recently it was sold to a local investor. (Maureen et al, 2016)

According to the secretary of the Ethiopian Pharmaceuticals and Medical Supplies Manufacturing Association (PMSMA), the production capacities of the majority of the industries at the time were below 50% of their installed capacity. There was a high tariff on raw materials and a chronic shortage of experienced human resources, associated with high turnover of technical staff, shortage of technical manpower, and an absence of any training centeron good manufacturing practices (GMP) and pharmaceutical management. In addition there were no GMP-certified inspectors at the regulatory authority. It was hard to get working capital from banks, there were management problems in the industries, an absence of qualified equipment calibration and maintenance centers, and university-industry linkages were weak. (Maureen et al, 2016)

The 'reform and revival' period began in 2005. The Ethiopian Pharmaceutical and Medical Supplies Manufacturers Association (EPMSMA) and other key stakeholders appealed to the government for appropriate measures to be taken in support of local manufacturing. To address the crisis the local manufacturers were facing, the government created benefit

packages and undertook policy reforms. This improved the business environment, resulting in some new joint ventures. In 2013, Julphar (Gulf Pharmaceutical Industries) commissioned its pharmaceutical manufacturing facility in Addis Ababa. The facility has the capacity to produce 150 million bottles of suspension and syrup, 500 million tablets and 170 million capsules annually(Maureen et al, 2016).

2.9 The Ethiopian industry today

Central statistics agency (CSA) as cited in Maureen et al declare that Today, the Ethiopian pharmaceutical industry consists of 15 pharmaceutical manufacturers, of which nine produce medicines, one manufactures empty gelatin capsules, and the rest are engaged in producing medical supplies such as syringes, absorbent cottons, gauzes, bandages and sanitary products. Though significant expansion of the industry is taking place, as such the base is not yet well developed, and the companies have relatively low production capacities. Although most of the manufacturers operate below their respective capacities, the capacity utilization of the manufacturers has shown improvement during the 2005–14 periods, increasing from a mere 29.3% in 2008 to 79.0% in 2013. This is indicative of the growing market for locally produced pharmaceuticals – an opportunity lying ahead for the sector (Maureen et al, 2016).

As regards quality issues, there are three manufacturers that comply with basic GMP standards, one of whom is to acquire PIC/S Certification soon, while two others are expected to acquire the same in the near future. One of the main issues that must be addressed by local manufacturers is the need to access updated technology. In terms of personnel, however, Ethiopia seems to have sufficient trained pharmacists, though there is a dire need for those with industrial and managerial skills. (Maureen et al, 2016)

2.10 Ethiopian Pharmaceuticals Company S.C Profile

The company started production on June, 1964 as Ethiopian drug manufacturing shack after a memorandum of agreement was signed by the British company Smith and Nephew associated company limited and the Imperial Ethiopian government (IEG). After two years of operations the company reported significant laws and had even been closed for nine months. After many ups and downs the company was re-established in Aril 1970 as Ethiopian pharmaceutical manufacturing (EPHARM). From 1970 to 1974, with the improved motto “Quality is our

most important product" the factory was producing about 130 pharmaceutical products which included tablets, syrups, ointments, inject able and capsules. It started making profits.

Epharm was nationalized on 2nd Feb. 1975 following the popular revolution that resulted in the demise of the imperial regime. The factory was then merged with the state owned pharmaceuticals and medical supplies import and distribution corporation.

After down fall of the socialist regime, the factory was re-established as an independent public enterprise under the directory of public enterprises supervising authority on 13th Feb. 1994. In line with the government's program to privatize public enterprises, MEDTECH Ethiopia, the major customer of Epharm by then, bought the factory in Sep. 2014. Since then it has been working aggressively to transform the factory to a greater level and make it competent than it was ever before.

3.10.1 Vision

To be one of Africa's top three pharmaceutical companies by 2025.

3.10.2 Mission

To manufacture high quality customer focused affordable and research based pharmaceutical products using modern technology to ensure sustainable profitability and maintain breed market share both nationally and globally.

Epharm's core values includes maintaining customer satisfaction by achieving excellence in the quality of products and services it provides and gives at most priority to meet international quality standards throughout it's manufacturing process.

3.10.3 Research and development (R&D)

In R&D new products and new packaging's are being formulated and optimized to have maximum quality in terms of cause efficiency and ease of manufacturing processes

3.10.4 Quality control system

Ethiopian Pharmaceuticals Manufacturing Sh. Co. (EPHARM Sh.Co.) is committed to; Meet the needs of its customers and other stakeholders by providing pharmaceuticals of proven quality, safety and efficacy through the application of internationally accepted practices, management systems and through fulfillment of regulatory requirements.

The company adopted two separate departments to execute its quality control policy. The quality control department continually monitors incoming raw materials and finished products to ensure compliance with compositional standards, microbiological standards and various government regulations. The quality assurance department develops quality systems, standard operating procedures and document control programs, ensuring alignment with the company's policy and regulatory body requirements. It confirms that all pertinent manufacturing, packaging and testing documents are complete and reflected accordingly to satisfy customers and regulatory body requirements. The company is certified with ISO 9001:2008 based quality management system for it's quality operations since 2012.

Chapter Three

3.1 Research Design and Methodology

The research's main question and objective was to assess TQM practices. In order to do so TQM principles were basic elements for the study. To be ISO certified, the organization is obliged to practice all the principles formulated by ISO 9001; 2008. So the research design and methodology was centered on these principles. On the other hand the research also tried to find out the organization's employees opinions on the benefits of implementing TQM and the challenges the organization faced while practicing TQM.

In order to assess the application of TQM practices in the organization the researcher registered questions in the form of questionnaire and interview questions to sample employees to get their opinions on the subject. In order to maintain internal validity all the principles used by ISO-9000 and ISO-9001 are employed as a variables that bring full-scale practice of TQM to an organization. The research also tried to maintain external validity by taking a larger number of samples from all the departments of the organization to make sure the findings of the research are generalizable across the organization.

The data collected were both qualitative and quantitative. Qualitative data gained during the interview and reviewing of quality related materials from the organization. On the other hand, quantitative data obtained using questionnaires. .

3.2. Data Sources and Data Collection Techniques

The research tried to obtain both primary and secondary data. The primary data was obtained from employees of Epharm using semi-structured questionnaire. Interview questions were also given to the management and supervisors of Epharm. The secondary sources of data were the literatures available and the documents related to TQM which are kept by the organization.

3.3. Population, Sample and Sampling Techniques

3.3.1. Population

The general population of the research is all 220 employees of Epharm. These 220 employees are of different departments, experience and exposure to quality related issues.33 out of these 220 employees are managers and supervisors thus 187 employees are non-managers.

3.3.2. Sample and Sampling Techniques

In our introduction and other prior topics we have discussed that quality is a factor of all the parties in an organization and since one of the principles of TQM is engagement of people, all 220 employees from all departments have chance to be included in the sample. However,different sampling techniques employed for each department. In order to make the data more credible expert sampling employed to the quality department employees. The advantage of this approach is that since experts tend to be more familiar with the subject matter than non-experts, opinions from a sample of experts are more credible than a sample that includes both.(AnolBhattacherjee, 2012). Because of this advantage, all 22employees from quality assurance and control department of the organization nominated for the semi-structured questionnaires. For the remaining departments that consist of 198 employees, systematic random sampling employed. Thus, third employee from their list picked for the questionnaire. Based on my personal judgment and review of literatures on sampling techniques 88 employees from a total of 220 employees or 40% sample size is fair enough for large number of population. In addition, out of 33 managerial position employees five managers and supervisors chosen to the interview. This makes our sample size to be 93 or one third of the total population. Based on my personal judgment and review of literatures on sampling techniques around 42 % sample size is fair enough for large number of population. Hence, data from these 93 employees with careful review of the company's documents related to quality placed to understand the phenomena.

3.4. Survey Instruments

The research has three basic components. The first one and number one priority of the study is to assess the practice of all the seven principles of TQM in the organization. Hence, the semi-structured questionnaire had concepts that explained whether every principle had

effectively implemented or not. The semi-structured questionnaires had three sections. Section one, dealt with the subjects of demographic factors like age, experience in the organization and position occupied in the organization. The second section had seven subsections for the seven variables namely customer focus, management commitment, engagement of people, process approach, continuous improvement, evidence based decision making and supplier relationship. Detailed questions included for every variable. The third section gathered opinions of subjects about benefits of TQM by comparing results before and after Practicing TQM. The second and third components of the study are the benefits obtained and the challenges faced by the organization that were related to TQM practices. These components addressed during the interview. The interview questions mainly focused on management and supervisors knowhow about quality, principles, practices and procedures related to quality improvement, benefits of practicing and challenges of practicing TQM principles while its initial stage of implementation. In addition, documents related to these three components, were carefully reviewed.

This questionnaire is taken from the work of Md. Syduzzaman on TQM implementation for Bangladesh University of textiles and has been modified to fit for the subject area of the study. Md. Syduzzaman is an assistant professor at Bangladesh University of textiles.The original and modified questionnaires are attached in the appendixes. In order to meet sufficiency all the seven principles of ISO 9001-2015 are included in the questionnaire. The questionnaire is valid and reliable since it tried to cover all the principles and detailed questions for each principle.

3.5 Methods of data analysis and Estimation of Error

The questionnaire registered was designed with five Likert scale ranging from strongly disagree to strongly agree and neutral in the middle. The data collected using this questionnaire was analyzed and presented with tables and percentages using SPSS. Based on the results of the analysis, using the mean and standard deviation of the sample further discussions and conclusions are made. The discussions and conclusions are further supported by analysis of interview responses, review of company documents and Literatures. Furthermore to estimate error or how well the sample represented the population, confidence interval method was employed. This was done by using the standard error of the mean and

the95% confidence level assuming the sample was large, random and normally distributed. According to the central limit theorem, for very large number of samples, the sampling distribution of means is approximately normal; that is, it is approximately the same shape as the normal distribution. (Bowen and Weisberg, 1980 pp 123)

CHAPTER FOUR

4.1 Analysis of Demographic Factor of the Respondents

Frequencies

Table 4.1 Statistics

		Age	years of experience in the organization	
N	Valid	88	88	
	Missing	0	0	
Mean		2.73	2.53	
Std. Deviation		1.122	1.072	

Frequency Table

Table 4.2Ages composition of the respondents

Response options		Frequency	Percent	Cumulative Percent
Valid	below 25years	5	5.7	5.7
	25-30years	44	50.0	55.7
	30-35years	20	22.7	78.4

	35-40years	8	9.1	87.5
	Above 40years	11	12.5	100.0
	Total	88	100.0	

Table 4.2 and 4.3 presents the frequency distribution of age composition and experience of the employees in the organization used as a case for this study. The data depicts that most of the respondents were between the age of 25-30years and have 1-5 years of experience in the organization. Given the fact that the subjects of this study selected randomly from the total population, the data in table 4.2 and 4.3 reveals not only that most of the employees are young, they have also joined the organization recently. This implies that they were not in the organization during the early practicing of total quality management in the organization. On the other hand, fewer employees are less experienced since only five employees found to be below the age of 25years. The fact that eighty of the eighty-eight (nearly 90%) of the subjects were working with the organization at least for more than one year suggests a reasonably high level of credibility of their responses as they have spent enough time to understand the culture, the procedures and working environment of the organization. Imply.

Table 4.3 experience working in the organization

Response options		Frequency	Percent	Cumulative Percent
Valid	below 1year	8	9.1	9.1
	1-5years	49	55.7	64.8
	5-10years	14	15.9	80.7
	10-15years	10	11.4	92.0

	above 15years	7	8.0	100.0
	Total	88	100.0	

Position in the Organization

For the question asked to the respondents to write down their position in the organization, they answered 37 different positions of the organization. This helped to maintain the quality of the data obtained. These accords with the literatures, which suggest that quality, must incorporate the opinions of everyone in the organization. However, to better understand the phenomena and get better results most of the employees work under quality department. This is because the research tends to assess practice of total quality management in the organization and quality department is the nucleus of the area of study. When we look into the literatures, Knowles emphasized the need to move from assessment of outcome performance to the development and control of processes to deliver customer value. In particular it should be recognized that the organizational processes flow across the departmental boundaries and management focus on departmental outcomes will often have a departmental effect on the overall business process (Knowles, 2011).

4.2 Analysis of the Customer Focus Variable

Table 4.4 Emphasis on assessing current customer's needs and expectations

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	7	8.0	14.8
	Neutral	19	21.6	36.4

	Agree	43	48.9	85.2
	Strongly agree	13	14.8	100.0
	Total	88	100.0	

From the above table 48.9% of the respondents believe that current customer's needs and expectations assessed by the organization. Followed by 21.6% responding neutral to the situation this may be because the subjects are in departments that did not interact with customers and about 15% of the respondents strongly agree that their organization assess customer's current needs and expectations. 14.8% of the respondents disagree and even strongly disagree that their organization did not assess current customer's needs and expectations. This indicate that organization assess current customer's needs and expectations. Moreover, during the review of the organization's documents on the product development procedure clearly stated that R&D manager coordinates and initiates marketing research. Here the marketing research committee under the close supervision of R&D manager conduct marketing research so as to assess the market demand and those coming from the stake holders request and also from the prepared annual plan of EPHARM. When we refer to researches on this area,Khan pointed out towards the argument that customer satisfaction transforms into customer delight when goods or services exceed customers" expectations. Thus, understanding what the customer wants is crucial (Khan, 2015).

Table 4.5 Trend of assessing future customer's needs and expectations in the organization

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	9	10.2	12.5

	Neutral	25	28.4	40.9
	Agree	35	39.8	80.7
	Strongly agree	17	19.3	100.0
	Total	88	100.0	

When we come to trend of the organization on assessing future customer's needs and expectations, 39.8% of the respondents agree. 28.4% neutral, this may be due to they stay for too short in the organization that they can't decide, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one, 19.3% strongly agree, 10.2% disagree and only 2.3% strongly disagree. The fact that 60% of the employees either agree or strongly agree implies that the organization have good trend of assessing future needs and expectations of its customers. During review of company documents under customer satisfaction monitoring procedure the company clearly states that the actual scope, methods, and program for collecting customer satisfaction information is determined by the Marketing and Sales Head. The program periodically adjusted to account for the status and importance of customer satisfaction with respect to particular aspects, and availability of information and methods for collecting it. When we look at theories of TQM Okland infer the importance of knowing future customer focus he pointed out that any organization will also need to establish customer requirements by reviewing the market needs, particularly in terms of unclear or unstated expectations or preconceived ideas held by customers. It is central to identify the key characteristics that determine the suitability of the product or service in the eyes of the customer. This May of course, call for the use of market research techniques, data gathering, and analysis of customer complaints (Okland, 2004).

Table 4.6Frequency of resolved Customer complaints by employees of the organization

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4
	Disagree	15	17.0	20.5
	Neutral	20	22.7	43.2
	Agree	35	39.8	83.0
	Strongly agree	15	17.0	100.0
	Total	88	100.0	

Table 4.4 presents responses of the subjects to the question asked that if employees frequently resolve customer's complaints, 39.8% of the respondents agree. 22.7% neutral, this may be due to they stay for too short in the organization that they can't decide, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one, 17% strongly agree, 17% disagree and only 3.4% strongly disagree. From the fact, around 57% of the respondents either agree or strongly agree, we can infer that the organization's employees frequently resolve customer complaints. On the organizations customer handling procedure the company its clearly stated that following an appropriate investigation, the organization should offer a response, for example correct the problem and prevent it happening in the future. If the complaint cannot be immediately resolved, then it should be dealt with in a manner intended to lead to its effective resolution as soon as possible. The decision or any action taken regarding the complaint, which is relevant to the complainant or to the personnel involved, as soon as the decision or action taken. When we see at the literatures, Knowles pointed out that studies over the years have shown that the majority of customers will often simply go elsewhere if they are not satisfied rather than

complain. If we respond effectively to complaints we can generate a positive experience for those involved but they are always a minority of those who had the experience in the first place (Knowles, 2011).

Table 4.7 Adaptation of formal ways to collect customer complaints

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	8	9.1	15.9
	Neutral	28	31.8	47.7
	Agree	38	43.2	90.9
	Strongly agree	8	9.1	100.0
	Total	88	100.0	

For the question of whether the organization adopts formal ways to collect customer complaints or not 43.2% of the respondents agree that the organization adopts formal ways to collect customer complaints. 31.8% are neutral, this may be due to they stay for too short in the organization that they can't decide, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 9.1% strongly agree, 9.1% disagree and 6.8% strongly disagree with the idea that the organization adopts formal ways to collect customer complaints. By looking at the results, one can indicate that the organization adopts formal ways to collect customer complaints. During review of company documents, the company maintains compliant handling procedure and compliant registration form.

Table 4.8 Are complaints coming to the organization after practicing TQM are minimized

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	4	4.5	4.5
Disagree	12	13.6	18.2
Neutral	29	33.0	51.1
Agree	32	36.4	87.5
Strongly agree	11	12.5	100.0
Total	88	100.0	

For table 4.8 asking if, customer's complaints coming to the organization after practicing of TQM minimized, 36.4% of the respondents agree. 33% neutral, this may be due to they stay for too short in the organization that they can't decide, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 13.6% disagree which is above percentage of the employees who strongly agree with 12.5% and 4.5% of the subjects strongly disagree customer complaints after practicing of TQM are minimized. This implies that customer complaints coming to the organization after practicing principles of TQM minimized. Further review of customer's complaint register book shows that the cases coming to the organization minimized. Moreover, during an interview with the quality department manager, he discussed that the complaints coming to the organization are dramatically minimizing after practicing of TQM system.

Table 4.9 Studying customer complaints to identify patterns and prevent the same problems from recurring

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	2	2.3	2.3
Disagree	14	15.9	18.2
Neutral	23	26.1	44.3
Agree	34	38.6	83.0
Strongly agree	15	17.0	100.0
Total	88	100.0	

For the question that customer's complaints are studied to identify patterns and prevent the same problems from recurring 38.6% respond to be agreed, 26.1% neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one, 17% strongly agree, 15.9% disagree and only 2.3% strongly disagree. The responses imply that the organization study customer complaints to identify patterns and prevent same cases from occurring again. During review of company documents, on its product development procedure the company clearly state that the research should include type of drug having high public demand in terms of dosage form, packing material, strength and area highly in need including region, type of person and age, and if possible type of color of the dosage form. ISO 9000 quality system also emphasizes the need to record and study customer complaints. David Hoyle on his ISO 9000 quality system handbook pointed out that the customer can be mistaken and customer complaints therefore need to be validated as genuine nonconformities before entering the corrective action process. Parts returned from dealers, customer and manufacturing plants etc. might not be nonconforming. They may be obsolete, surplus to requirements, have suffered damage in handling or have been used in

trials etc. Products may have failed under warranty and not be logged as a complaint but nonetheless they are nonconforming. (Hoyle, 2001)

Table 4.10 Incorporation of data on customer expectations and/or satisfaction when designing new product in the organization

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	5	5.7	5.7
Disagree	5	5.7	11.4
Neutral	17	19.3	30.7
Agree	34	38.6	69.3
Strongly agree	27	30.7	100.0
Total	88	100.0	

For table 4.10 that asked if the company incorporates data on customer expectations and/or satisfaction when designing new product 38.6% of the respondents agree and 30.7% strongly agree. 19.3% neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one and the respondents responding to disagree and strongly dis agree are 5.7% each. Hence from their responses we can conclude that the organization incorporate data on customer expectations and/or satisfaction when designing new products.During review of company documents, on its product development procedure the company clearly state that the research should include type of drug having high public demand in terms of dosage form, packing material, strength and area highly in need including region, type of person and age, and if possible type of color of the dosage form. Hackman and Wageman (1995) as cited in Abegaz, sums up that

obtaining information about customer is one of the most widely used QM implementation practices to improve quality performance of the organization.(Abegaz, 2015).

4.3 Analysis about Management Commitment Variable

Table 4.11 senior executive's highly visible leadership in maintaining an environment that supports quality improvement

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	9	10.2	10.2
Disagree	12	13.6	23.9
Neutral	20	22.7	46.6
Agree	33	37.5	84.1
Strongly agree	14	15.9	100.0
Total	88	100.0	

For the above table asking respondents that The senior executives of the organization provide highly visible leadership in maintaining an environment that supports quality improvement 37.5% agree, 22.7% neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 15.9% of the respondents strongly agree, 13.6% disagree and at last, 10.2% of the respondents strongly disagree. From these responses, we can infer that the senior executives of the organization provide highly visible leadership in maintaining an environment that supports quality improvement. During an interview with the General manager of the organization, he raised a point that top management hold meetings every month about the work environment, reports from quality department and from marketing department about the situations with customers. All the decisions of these meetings recorded on the minutes of meetings and documented. When we

look at the Literatures, David Hoyle on his book of ISO 9000 system raises a presumption in that a management that is committed to the development, implementation and continual improvement of a management system will be committed to quality because it believes that the management system is the means by which quality be achieved (Hoyle, 2001).

Table 4.12 Do Top management drive quality improvement efforts

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	7	8.0	8.0
Disagree	10	11.4	19.3
Neutral	17	19.3	38.6
Agree	32	36.4	75.0
Strongly agree	22	25.0	100.0
Total	88	100.0	

Table 4.12 hold responses of the subjects on question whether Top management is a primary driving force behind quality improvement efforts or not. 36.4% and 25% of the respondents agree and strongly agree respectively, 19.3% are neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one 11.4% disagree and only 8% strongly agree. The responses indicate that top management of the organization is a primary driving force behind quality improvement efforts. With an interview held with the general manager and quality department manager, both of them agreed that top managements leadership was visible and starting from the owner, every member of management is driving force for quality improvement. While reviewing secondary data and looking through the company profile the chairperson, CEO and founder of med tech Ethiopia-sister Company said that their motto is “quality is our most important product”. He

also said that they will strive to their best and will work very hard with passion and creativity to uphold this noble motto. When we look at the Literatures, David Hoyle on his book of ISO 9000 system raises that management must be seen doing what it says it will do to demonstrate its understanding. There is no doubt that actions speak louder than words for it is only when the words are tested that it is revealed whether the writers are serious. It is not about whether management can be trusted but whether they understand the implications of what they have committed themselves to. (Hoyle, 2001)

Table 4.13 Participation of Senior executives on quality improvement

Response options	Frequency	Percent	Cumulative Percent
Valid	4	4.5	4.5
Strongly disagree	15	17.0	21.6
Disagree	11	12.5	34.1
Neutral	31	35.2	69.3
Agree	27	30.7	100.0
Strongly agree	88	100.0	
Total			

For the above table 4.13 that asks if, the senior executives consistently participate in activities to improve quality 35.2% and 30.7% of the respondents agree and strongly agree, sharing the largest pie followed by respondents who disagree 17%. 12.5% are neutral, this is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. At the bottom, there are respondents who strongly disagree 4.5% that senior executives consistently participate in activities that improve quality. The result implies that the senior executives consistently participate in activities to improve quality. During an interview with the general manager of the organization, he raised a point that top management

hold meetings every month about the work environment, reports from quality department and from marketing department about the situations with customers. All the decisions of these meetings recorded on the minutes of meetings and documented.

Table 4.14 Demonstration of an ability to manage the changes needed to improve the quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	5.7	5.7
	Disagree	11	12.5	18.2
	Neutral	20	22.7	40.9
	Agree	33	37.5	78.4
	Strongly agree	19	21.6	100.0
	Total	88	100.0	

For the above table 4.14, 37.5% of the respondents agree that senior executives have demonstrated an ability to manage the changes (E.g. organizational, technological) needed to improve quality, 22.7% are neutral. This is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one, 21.6% strongly agree, 12.5% disagree and 5.7% strongly disagree hence the results indicate that senior executives have demonstrated an ability to manage the changes (E.g. organizational, technological) needed to improve quality. During the interview session, all top-level managers included in the interview agreed that they make strategic decisions to make the changes manageable even by spending a lot of investment for consulting companies to help with the setup and training how to adapt with the changes coming due to practicing of new philosophy in the organization. ISO 9000 also needs management to manage changes. Hoyle

hints at to meet this new requirement, change management processes need to be designed and put in place. The integrity of the management system will be maintained only if these processes are made part of the management system so that in planning the changes, due consideration is given to the impact of the change on the organization, resources, processes and products and any resulting or associated documentation. (Hoyle, 2001)

Table 4.15 Appreciation of efforts that improve quality throughout the organization

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	3	3.4	3.4
Disagree	9	10.2	13.6
Neutral	19	21.6	35.2
Agree	37	42.0	77.3
Strongly agree	20	22.7	100.0
Total	88	100.0	

For the question if the senior executives appreciate, efforts that improve quality throughout the organization 42% and 22.7% of the respondents agree and strongly agree respectively. 21.6% are neutral, this may be due to they stay for too short in the organization that they can't decide, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one, disagree 10.2% and strongly disagree 3.4%. Taking the majority of the responses, we can say that the senior executives of the organization appreciate efforts that improve quality throughout the organization. During review of company documents, the organization maintains reward and retention procedures, talent management procedures and incentive schemes based on performance and results.

Table 4.16 Involvement on obtaining information on needs and suggestions for quality improvement directly from customers

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	1.1	1.1
	Disagree	11	12.5	13.6
	Neutral	22	25.0	38.6
	Agree	35	39.8	78.4
	Strongly agree	19	21.6	100.0
	Total	88	100.0	

For the question asking if senior executives involve on activities that enhance customer expectation by obtaining information on needs and suggestions for quality improvement directly from customers 39.8% and 21.6% of the respondents agree and strongly agree. 25% are neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 12.5% disagree and at last, only 1.1% strongly disagrees. The responses infer to that senior executives involve on activities that enhance customer expectation by obtaining information on needs and suggestions for quality improvement directly from customers. During an interview with deputy marketing head, he raises a point that since they are manufacturers, their primary customers are whole sellers and retailers. Hence, since they are not too many in number marketing officers assigned to follow up customers and forward suggestions to their supervisors.

4.3 Analysis of Engagement of People Variable

Table 4.17 Employee's thought as an input to make any quality decision

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	15	17.0	21.6
	Neutral	19	21.6	43.2
	Agree	37	42.0	85.2
	Strongly agree	13	14.8	100.0
	Total	88	100.0	

From the above table 4.17 we can see that 42% of the respondents agreed that every employee's thought have been used as an input to make any quality decision, followed by 17% neutral, 17% disagree, 14.8% strongly agree and 4.5% strongly disagree. These results imply that every employee thought have been used as an input to make any quality related decisions. Quality advocator Okland pointed out that the key medium for motivating the employees and gaining their commitment to quality is face-to-face communication and visible management commitment (Okland, 2001).

Table 4.18 Establishment of Regular employee awareness and feedback on status and a reward/recognition process to improve quality

Response options	Frequency	Percent	Cumulative Percent

Valid	Strongly disagree	5	5.7	5.7
	Disagree	10	11.4	17.0
	Neutral	19	21.6	38.6
	Agree	38	43.2	81.8
	Strongly agree	16	18.2	100.0
	Total	88	100.0	

For the above table 4.18 asking if Regular employee awareness and feedback on status provided and a reward/recognition process established, helped employees to improve quality 43.2% and 18.2% of the respondents agree and strongly agree. 21.6% choose to be neutral, may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 11.4% disagree and only 5.7% of the respondents disagree on regular employee awareness and feedback on status are provided and a reward/recognition process established, helped employees to improve quality. These results infer that regular employee awareness and feedback on status provided and a reward/recognition process established, helped employees to improve quality in the organization. Juran, well-known quality guru entails that Organizations, that have won the Malcolm Baldrige National Quality Award (MBNQA), or have seriously competed for it, have developed clear and organized quality awareness training for all employees. Typically, the training is delivered to everyone in the organization, then to all new employees as part of their orientation. This material presents in very basic terms, the organization's quality philosophy and how employees are expected to support it (Juran, 1999).

Table 4.19 Employees turnover reduced and therefore reduces the cost of hiring and training new employees

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	7	8.0	8.0
	Disagree	13	14.8	22.7
	Neutral	29	33.0	55.7
	Agree	28	31.8	87.5
	Strongly agree	11	12.5	100.0
	Total	88	100.0	

For the above table 4.19 33% of the respondents are ambivalent if employees' positioning of themselves as key ingredients in the organization's success reduces the turnover and therefore reduces the cost of hiring and training new employees. This is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. Followed by respondents appears to agree with the phenomena 31.8% and 14.8% disagree, 12.5% strongly agree the remaining 8% of the respondents disagree. Here though the sum of the respondents who agree and strongly agree is greater than those who disagree and strongly disagree, the neutrals that appeared to have the largest responses is not a positive sign. So we can infer to that even though the organization’s employees’ positioning of themselves as key ingredients in the organization's success reduces the turnover and therefore reduces the cost of hiring and training new employees caution needs to be taken since the respondents who disagree, strongly disagree and neutral is too much. From the literatures

(Peters, 1987) as cited in Juran makes a great point about employee empowerment and their positioning of themselves. He pointed out that these teams will take the organization to even higher levels of performance. Members of the empowered team support each other and the organization to achieve organizational and team goals (which, many times, they have helped establish). Peters states that the self-managing team should become the basic organizational building block (Juran, 1999).Juran enhance these argument that empowered work systems are designed so that the teams are empowered (having capability, authority, desire, and understanding of their purpose) and thus positioned to meet the needs of customers, business, and employees (Juran, 1999).

Table 4.20 Employees' involvement and empowerment to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	7	8.0	14.8
	Neutral	18	20.5	35.2
	Agree	45	51.1	86.4
	Strongly agree	12	13.6	100.0
	Total	88	100.0	

For table 4.20 asking if employee's involvement and empowerment encourages them to exert the best of their abilities to improve quality 51.1% of the respondents agree, 20.5% are Undecided to choose, This is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 13.6% strongly agree, 8%and 6.8% of the respondents disagree and strongly disagree.

These implies that respondents who agree and strongly agree is too high 64.7% compared to those who disagree and strongly disagree 14.8% thus we can infer that the organization's employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality. While reviewing secondary data on a magazine printed for the organization 50th year anniversary, the chairperson said that they would not fire because of capabilities. If some employees get difficulties doing their job, we will not let them go. We have experts and they will train them. This shows that the company encourages employee's involvement and empowerment. Juran supported the argument that empowered employees become more productive. He point toward Empowered work team membership can make 80 to 90 percent of daily decisions regarding the team's business. The team is responsible for its own actions and team results, and thus for the overall product and service provided. Members accept that their job expanded to include improving the work processes of the team. They also accept more responsibility for problem solving, leadership, and team development as the team matures. Administrative tasks such as scheduling and the team itself coordinates trainings. (Juran, 1999)

Table 4.21 Employees are interested about their jobs and are prepared to go extra mile to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4
	Disagree	12	13.6	17.0
	Neutral	18	20.5	37.5
	Agree	47	53.4	90.9
	Strongly agree	8	9.1	100.0
	Total	88	100.0	

For table 4.21 asking if employees at work are interested in a positive, even excited about their jobs and are prepared to go extra mile to improve quality more than half of the respondents which is 53.4% agreed. 20.5% are neutral, this is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one.13.6% disagree, 9.1% strongly and only 3.4% of the respondents strongly disagreed to the situation. From these responses, it is so interesting that more than half of the respondents agreed employees at work are interested in a positive, even excited about their jobs and are prepared to go extra mile to improve quality. Hence, one can infer that the organizations Employees at work are interested in a positive, even excited about their jobs and are prepared to go extra mile to improve quality. Reviewing secondary sources there is the testimony of manager of labor union in which he witnessed plenty of benefits that makes the employees to be motivated and come to work excited. The benefit packages range from free meals to discounted household materials. (Naumann and Giel, 1995) cited in Zhang asserted employees satisfaction to be the most important thing for organization's success. They stated that employees' negative feelings could lead to behaviors that are detrimental to firms. Organizational practices that maximize employee satisfaction will likely see employees who are more cooperative and willing to help the firm be successful. Employee satisfaction is a topic of interest to both researchers who study it and practitioners who work in firms (Zhang, 2000).

Table 4.22 Organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees and helped to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4
	Disagree	10	11.4	14.8
	Neutral	17	19.3	34.1

Agree	43	48.9	83.0
Strongly agree	15	17.0	100.0
Total	88	100.0	

For the question asking the respondents if organizational structure of the organization that allows employees to exercise corrective actions based on their authority, is appreciated by employees and helped to improve quality nearly half of the responses, which is 48.9%, agreed, respondents who are neutral and strongly agree have very closer percentages 19.3% and 17% respectively. The fact that 17% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. The rest of the responses disagree and strongly dis-agree share the remaining 14.8%, 11.4% and 3.4% respectively. Looking at the result, one can infer that the organization develops organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees and helped to improve quality. The company has a very wider organizational chart that helps the supervisors, division heads, and others to control few people so that they can manage the job and train subordinates. When we incorporate these with the responses, we can say that the organization develops organizational structure that allows employees to exercise corrective actions based on their authority. Zhang advocates the problem with a very formal organizational structure. On his study, Zhang indicate that the major problem of this formal structure is that it seems everyone is responsible, but no one is responsible. Therefore, it is difficult to implement improvement actions. (Zhang, 2000).

Table 4.23Training on the application of formal processes enhances knowledge of employees to perform their jobs satisfactory and improve quality

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	8	9.1	9.1
Disagree	6	6.8	15.9

Neutral	18	20.5	36.4
Agree	40	45.5	81.8
Strongly Agree	16	18.2	100
Total	88	100.0	

Table 4.23 Training involves the application of formal processes to enhance knowledge and help employees to acquire the skills necessary for them to perform their jobs satisfactorily and improve quality 45.5% of the respondents agreed. Respondents who are neutral and strongly agree have very closer percentages again 20.5% and 18.2% respectively. . The rest of the responses strongly disagree and dis-agree share the remaining 15.9% with 9.1% and 6.8% respectively. By looking at these results, one can infer that the organization's training involves the application of formal processes to enhance knowledge and help employees to acquire the skills necessary for them to perform their jobs satisfactorily and improve quality. While reviewing company documents, on the Organization's training manual it is wrote that the division heads are responsible for this training, and based on the acquisition of technical skills needed for the job. It is particularly important at this stage to teach the trainee not only what he/she should do and how, but why it must be done in such a way and in no other. The two components of teaching are instruction and education: Instruction involves the teaching of how-to or what, and education involves the why of the training effort. Juran advocates the need to provide technical training. He pointed out that the skilled trades are well-known examples. The design for control should emphasize aptitude testing of workers, training and certification, quality rating of workers, and error proofing to reduce worker errors (Juran, 1999).

Table 4.24 Education and training in statistical and other quantitative methods that support quality improvement

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	9	10.2	10.2

Disagree	9	10.2	20.5
Neutral	15	17.0	37.5
Agree	42	47.7	85.2
Strongly agree	13	14.8	100.0
Total	88	100.0	

For table 4.24 asking question if the organization's employees given education and training in statistical and other quantitative methods that support quality improvement 47.7% and 14.8% of the respondents agreed and strongly agreed respectively. The fact that 17% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. Responses of disagree and strongly disagree get 10.2% each. From these results, we can understand that 62.5% of the respondents agree and strongly agree is much higher than 20.4% who disagree and strongly disagree who might be from departments that do not need statistical and qualitative trainings. This implies that the organization's employees given education and training in statistical and other quantitative methods that support quality improvement. On the training manual the organization state that the training manual presents the good manufacturing practices requirements on training, an overview of the training process, types of training and different groups requiring training, the instructional systems design (ISD) model, and some considerations to make training more effective. This manual also describes what to include in a training procedure. Different evaluation and assessment methods explained along with ways to plan and document training for the purpose of manufacturing pharmaceuticals of proven quality, safety and efficacy for the public. For most of human history quality goals consisted of product features or process features, usually defined in words. Juran relate the need to train employees in statistical terms to the growth in science and technology. He indicates that the growth of technology then stimulated the growth of measurement plus a trend to define quality goals in numbers. In addition, there emerged the concept of limits or “tolerances” around the goals. (Juran, 1999)

Table 4.25 Employees are appreciated when take necessary risks to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	7	8.0	8.0
	Disagree	15	17.0	25.0
	Neutral	18	20.5	45.5
	Agree	37	42.0	87.5
	Strongly agree	11	12.5	100.0
	Total	88	100.0	

Table 4.25 presents responses of the subjects if, the organization's employees are appreciated when they take necessary risks to improve quality 42% of the respondents agreed. The fact that 20.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 17% disagree, 12.5% strongly agree and only 8% strongly disagreed. From these results, one can infer that the organization’s employees appreciated when they take necessary risks to improve quality. The companies training manual state Periodic reinforcement is necessary for protecting staff from hazards. This training also implemented in case of changes or modifications of the safety regulations, changes or modifications of the technological process, work resources, raw materials, materials, new potential risks or other factors that could affect the workers’ safety and health. However, during an interview with the quality supervisor she claimed that taking necessary risks that do not have sever destruction is rewarding.

Table 4.26 Effective system for employees to make suggestions to management on how to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	18	20.5	25.0
	Neutral	18	20.5	45.5
	Agree	37	42.0	87.5
	Strongly agree	11	12.5	100.0
	Total	88	100.0	

For the above table asking the respondents whether the organization has an effective system for employees to make suggestions to management on how to improve quality or not 42% of the respondents agreed. The fact that 20.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 20.5% disagree, 12.5 strongly agreed and only 4.5% strongly disagreed. Since majority of the respondents agreed that, the organization has an effective system for employees to make suggestions to management on how to improve quality one can indicate that the organization has an effective system for employees to make suggestions to management on how to improve quality. The organization prepares training feedback sheet that the trainees use to fill after taking training. On this sheet, there is a field to be field by the trainee any suggestions they have on any improvements they have to enhance quality. Moreover, during the interview with the quality supervisor she said that employee's suggestions of any kind will be documented and be raised as an agenda on meetings with managers. Juran emphasizes the need to empower employees not only to take their suggestion but also to make them to be

part of the decision makers. He indicates that empowered work team membership can make 80 to 90 percent of daily decisions regarding the team's business. The team is responsible for its own actions and team results, and thus for the overall product and service provided. Members accept that their job expanded to include improving the work processes of the team. They also accept more responsibility for problem solving, leadership, and team development as the team matures (Juran, 1999).

4.4 Analysis of Process Approach Variable

Table 4.27 Identification the key business processes by prioritizing

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	3	3.4	3.4
Disagree	10	11.4	14.8
Neutral	23	26.1	40.9
Agree	36	40.9	81.8
Strongly agree	16	18.2	100.0
Total	88	100.0	

For the question on table 4.27 asking if the organization identifies the key business processes by prioritizing based on the value chain, customer needs and strategic significance and using process models and definitions, 40.9%, agreed, respondents who are neutral and strongly agree have very closer percentages 26.1% and 18.2% respectively. The fact that 26.1% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one The rest of the responses disagree and strongly disagree share the remaining 14.8%, 11.4% and 3.4% respectively. These results

implies that the organization identifies the key business processes by prioritizing based on the value chain, customer needs, strategic significance, using process models, and definitions since 59.1% of the respondents agreed and strongly disagreed. On production manual, the company clearly puts the processes, steps and necessary inputs with detailed discussion. The production manual is attached on the appendixes.

Table 4.28 Managing processes systematically by giving process ownership and resolving process interface issues through meetings or ownership models

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	12	13.6	15.9
	Neutral	23	26.1	42.0
	Agree	39	44.3	86.4
	Strongly agree	12	13.6	100.0
	Total	88	100.0	

For the question on table 4.28 asking if the organization manages processes systematically by giving process ownership to the most appropriate individual or group and resolving process interface issues through meetings or ownership models 44.3% of the respondents agreed. 26.1% are neutral. The fact that 20.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. Respondents responses strongly agree and disagree get 13.6% each the remaining 2.3% strongly disagree. These results show that, most of the respondents believe that the organization manages processes systematically by giving process ownership to the most

appropriate individual or group and resolving process interface issues through meetings or ownership models. Hence, one can infer that the organization have a good trend of managing processes systematically by giving process ownership to the most appropriate individual or group and resolving process interface issues through meetings or ownership models. On the company's production manual there is a table holding all the processes and the owners of those processes. The manual attached on the back pages in the appendixes section.

Table 4.29 Review processes and set improvement targets

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	5.7	5.7
	Disagree	9	10.2	15.9
	Neutral	24	27.3	43.2
	Agree	34	38.6	81.8
	Strongly agree	16	18.2	100.0
	Total	88	100.0	

For the question on table 4.29 asking respondents if the organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers 38.6% and 18.2 % of the respondents agreed and strongly agreed, 27.3% are neutral, 10.2% disagreed and only 5.7% of the respondents strongly disagreed. The fact that 27.3% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. From these responses, one can infer that the organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers. The company's production manual stated that the main department for

process re-engineering is Research and Development. Research and Development manager coordinates and initiates marketing research. Here the marketing research committee under the close supervision of R&D manager conduct marketing research so as to assess the market demand and those coming from the stake holders request and also from the prepared annual plan of Epharm. The research should include type of drug having high public demand in terms of dosage form, packing material, strength and area highly in need including region, type of person and age, and if possible type of color of the dosage form.

Table 4.30 Innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	5.7	5.7
	Disagree	13	14.8	20.5
	Neutral	19	21.6	42.0
	Agree	36	40.9	83.0
	Strongly agree	15	17.0	100.0
	Total	88	100.0	

For the question-asking if the organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes 40.9% of the respondents agreed.21.6% neutral, this may be due to their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 17% strongly agreed. 14.8% and 5.7% of the respondents disagree and strongly disagree. From these responses, since 57.9% of the respondents agree and strongly agree one can infer that the organization uses innovation and creativity to improve processes by adopting self-

managed teams, business process improvement and idea schemes. On a magazine published by the organization for the year 2016G.C the company state that existing products of the company also researched for formulation, revision and new packaging to provide better product presentation for customers at a competitive price. This will be accomplished by different cost minimization strategies like formulas revision, easing production processes, troubleshooting of manufacturability problems, and the likes.

Table 4.31 Changing processes and evaluate the benefits

Response options		Frequency	Percent	Cumulative Percent
Valid	Disagree	17	19.3	19.3
	Neutral	26	29.5	48.9
	Agree	34	38.6	87.5
	Strongly agree	11	12.5	100.0
	Total	88	100.0	

For the question asking if the organization change processes and evaluate the benefits through process improvement or reengineering teams, project management and involving customers and suppliers 38.6% of the respondents agree. The fact that 29.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 19.3% disagreed and 12.5% strongly agree and no respondent choose strongly disagree.

From these results, we can fairly say the organization change processes and evaluate the benefits through process improvement or reengineering teams, project management and involving customers and suppliers. While review of company related materials, on a magazine published by the organization for the year 2016G.C, The Company state that existing products

of the company also researched for formulation, revision and new packaging to provide better product presentation for customers at a competitive price. These will be accomplished by different cost minimization strategies like formulas revision, easing production processes, troubleshooting of manufacturability problems, and the likes.

Moreover, when we look at the literatures Zhang conducted a study on the hypothesis that process control and improvement has a positive effect on product quality. The result strongly confirmed by the data ($p<0.01$). The results from interviews also support the questionnaire finding he brought to the subjects. According to the interviewees, they paid much attention to process control and improvement in order to ensure that their products performed the functions for which they were intended to meet manufacturing and safety requirements. They also stated that they adopted incoming, in process, and final inspection in order to ensure that the finished products could meet the requirements of specifications.(Zhang, 2000). Supporting this argument is David Hoyle. On his book ISO 9000 quality system hand book pointed out that No matter how simple the task, there is always an objective or a reason for doing it, the consumption of resources and expenditure of energy, a sequence of actions, decisions concerning their correctness, a judgment of completeness and an output which should be that which was expected. The organization exists to create and satisfy customers and other interested parties therefore the organization's processes must serve the needs of these interested parties. (Hoyle, 2001)

4.5 Analysis of Continuous Improvement Variable

Table 4.32 Awareness of the need to improve continuously and show efforts for improvement

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	10	11.4	18.2

	Neutral	22	25.0	43.2
	Agree	37	42.0	85.2
	Strongly agree	13	14.8	100.0
	Total	88	100.0	

For the table holding the responses of respondents for the question if everyone in the organization is aware of the need to improve continuously and show their efforts for improvement 42% agreed. The fact that 25% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 14.8% strongly agree, 11.4% disagree and strongly disagree. By looking at the responses of the respondents, one can infer that everyone in the organization is aware of the need to improve continuously and show their efforts for improvement. During an interview with the quality supervisor, she mentioned on the training manual there is a section that states the need for ongoing training. On this session, the core of the training's concept is continuous improvement.

Table 4.33 Supporting employees on their personal career developments

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	12	13.6	20.5
	Neutral	19	21.6	42.0
	Agree	31	35.2	77.3
	Strongly agree	20	22.7	100.0
	Total	88	100.0	

For the question on table 4.33 asking if the organization supported employees even in their personal career developments like sponsoring for education and providing scholarships 35.2% and 22.7% of the respondents agree and strongly agree respectively taking the largest pie. 21.6% of the respondents are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 13.6% disagree and only 6.8% strongly disagree that the organization supported employees even in their personal career developments like sponsoring for education and providing scholarships. Since 57.9% agree and strongly-agree, one can fairly infer that the organization supported employees even in their personal career developments like sponsoring for education and providing scholarships. During interview with human resource personnel, he mentioned that benefit schemes of the organization include providing scholarships to star employees whose performance was outstanding, providing free leave to employees taking courses and sponsoring professional trainings given to employees, which are related personal developments.

Table 4.34 Identification on possible faults, training on common types of faults and how to manage problematic situations when happened

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	12	13.6	20.5
	Neutral	25	28.4	48.9
	Agree	35	39.8	88.6
	Strongly agree	10	11.4	100.0
	Total	88	100.0	

For the above question asking if the causes of all the possible faults identified, informed and employees are well trained on common types of faults, and how to manage problematic situations when happened, 39.8% and 11.4% agree and strongly agree. 28.4% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 13.6% and 6.8% of the respondents disagree and strongly disagree. By looking at the responses in which 51.2% of the respondents agree and strongly agree one can infer that the causes of all the possible faults identified, informed and employees are well trained on common types of faults and how to manage problematic situations when happened in the organization. The company's training manual clearly states that employees whose activities take them into production areas or into Quality control laboratories and other personnel whose activities could affect the quality of the product should receive work-specific training at the time of joining the company and on a continuing basis. Hence, the company is providing training on the causes of all the possible faults and informing employees.

Table 4.35 Promoting improvements to enhance competitive environment among members by recognizing best performing individuals and units

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4
	Disagree	19	21.6	25.0
	Neutral	20	22.7	47.7
	Agree	34	38.6	86.4
	Strongly agree	12	13.6	100.0
	Total	88	100.0	

For the above table holding the responses of the respondents if the organization promote improvements in a way that enhance competitive environment among members of the organization by recognizing best performing individuals and units 38.6% and 22.7% of the respondents agree and strongly agree respectively. Neutral and disagree have very close percentage with 22.7% and 21.6% respectively. The fact that 25% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. Strongly-disagree get only 3.4%. The results imply that the organization promote improvements in a way that enhance competitive environment among members of the organization by recognizing best performing individuals and units. During an interview with the Human resource personnel, he said that the organization has perfect compensation and reward plans that support teamwork. The rewarding process is based on performances of teams, individuals and the organization as a whole.

Table 4.36Regular application of Continuous improvement tools

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	5	5.7	5.7
Disagree	17	19.3	25.0
Neutral	27	30.7	55.7
Agree	30	34.1	89.8
Strongly agree	9	10.2	100.0
Total	88	100.0	

For table holding responses for question, which asked if continuous improvement tools (brainstorming, check sheet and other statistical process control), applied on regular basis, 34.1% of the respondents agree. 30.7% of the respondents are neutral is may be their job type

may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 19.3% disagree, 10.2% strongly agree and only 5.7% of the respondents strongly disagree. Though the sum of the responses of agrees and strongly agrees is below 50% the sum of the responses for disagree and strongly disagree much lesser. Hence, by looking at the response one can infer that Continuous improvement tools (brainstorming, check sheet and other statistical process control) applied on regular basis in the organization.

Table 4.37Continuously improving by trying to apply the latest knowledge and technologies in the industry

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	11	12.5	12.5
	Disagree	18	20.5	33.0
	Neutral	17	19.3	52.3
	Agree	29	33.0	85.2
	Strongly agree	13	14.8	100.0
	Total	88	100.0	

For the question-asking if, the organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry. 33% of the respondents agree and 20.5% disagree. The fact that 19.3% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 14.8% strongly and finally only 12.5% strongly disagree. Since Most of the respondents agreed with the question, one can infer that the organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry. On the company's magazine published for the year 2016, the chairperson of the organization says that they have

learned from experience how important research and development, people and quality are to Epharm's success. The chairperson added that they are willing to invest much of their time, effort and resources in order to make Epharm world class.

Table 4.38Benchmarking by comparing results to those of competitors and best practices

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	18	20.5	25.0
	Neutral	19	21.6	46.6
	Agree	31	35.2	81.8
	Strongly agree	16	18.2	100.0
	Total	88	100.0	

For the above table holding the responses of the respondents if the organization uses benchmarking by comparing its results to those of competitors and best practices 35.2% of the respondents agree, neutral and dis agree get very closer results 21.6% and 20.5% respectively. The fact that 20% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. Strongly agree is chosen by 18.2% of respondents. Finally, only 4.5% strongly disagree. From these results, we can understand more than half of the respondents agree and strongly agree. Thus, one can infer that the organization uses benchmarking by comparing its results to those of competitors and best practices. The company's production manual state that research and development department make research on the overall situation of the country's pharmaceutical industry in order to get information on customers, suppliers and competitors.

Literatures on TQM suggest the need for continuous improvement as vital. Zhang indicate benchmarking to improve performance. He define benchmarking as the process of understanding one's practice and performance, comparing them against that of competitors or best-in-class firms, learning how they practice and perform, and using that information to improve one's own practice and performance. (Zhang, 2000) Juran supported the above argument he praises benchmarking for helping understand how industry leaders do things. Benchmarking helps identify what must be changed. And by showing what is possible and what other companies have done, benchmarking creates a picture of how the organization should look after the change (Juran, 1999). ISO 9000 suggests that top management should never be complacent about the organization's performance. Even maintaining the status quo requires improvement, just to maintain market position, keep customers, and retain capability. If the management review restricts its agenda to examining audit results, customer complaints and nonconformities month after month without a commitment to improvement, the results will not get any better – they will more than likely get worse. (Hoyle, 2001)

4.6 Analysis of Evidence Based Decision Making Variable

Table 4.39 Encouragement of statistical measurements and analysis throughout the organization

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	18	20.5	25.0
	Neutral	20	22.7	47.7
	Agree	37	42.0	89.8
	Strongly agree	9	10.2	100.0
	Total	88	100.0	

For the question-asking if, the organization encourages statistical measurements and analysis throughout the organization 42% agree. Neutral and disagree is chosen by 22.7% and 20.5% respectively. The fact that 20.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 10.2% strongly agree and only 4.5% strongly disagree. Most of the respondents, 52.2% agree and strongly agree. This implies that the organization encourages statistical measurements and analysis throughout the organization. During an interview with the quality supervisor she mentioned that production and research and development departments are obligated to bring statistical measurements and analysis during monthly meetings held with top management.

Table 4.40 Activities in the organization are recorded and checked for accuracy on a daily basis

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	10	11.4	15.9
	Neutral	11	12.5	28.4
	Agree	38	43.2	71.6
	Strongly agree	25	28.4	100.0
	Total	88	100.0	

For the question- asking if employees record every activity in the organization and checked by supervisors for accuracy on a daily basis, 43.2% and 28.4 % of the respondents agree and strongly agree respectively which are the largest numbers. Neutral and disagree get a very close percentage with 12.5% and 11.4% respectively. The fact that 12.5% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have

their own reason not to pick one. Finally, strongly disagree is chosen by 4.5% of the respondents. By looking at the responses, one can infer that every activity in the organization recorded by employees and checked by supervisors for accuracy on a daily basis. Moreover, while review of company documents, the company prepares and distributes recording documents and check lists like daily production, waste, materials used, drugs sold and the likes.

Table 4.41 Summarized reports of the facts recorded on a daily basis to make quality related decisions

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	5.7	5.7
	Disagree	12	13.6	19.3
	Neutral	20	22.7	42.0
	Agree	34	38.6	80.7
	Strongly agree	17	19.3	100.0
	Total	88	100.0	

For the question on table 4.41 asked if top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions 38.6% of the respondents agree, 22.7% neutral. The fact that 22.7% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 19.3% strongly agree, 13.6% disagree and only 5.7% of the respondents strongly disagree. By looking at the responses in which 61.3% of the respondents agree and strongly agree, one can infer that top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions. While reviewing secondary sources, the discussion on table

4.40 about daily recordings summarized for monthly, quarterly, semi quarterly and yearly reports and presented to top management for discussions and decision-making.

Table 4.42 Application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	5.7	5.7
	Disagree	8	9.1	14.8
	Neutral	24	27.3	42.0
	Agree	33	37.5	79.5
	Strongly agree	18	20.5	100.0
	Total	88	100.0	

For the question asked if the organization application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality 58% of the respondents agree and strongly agree in which 37.5% and 20.5% agree and strongly agree respectively. 27.3% of the respondents are neutral, this is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. 9.1% disagree and 5.7% strongly disagree. This implies that the organization application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality. While interviewing the quality supervisor she raised a point that the organization's application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to make information more faster, relevant and more precious than ever before.

Table 4.43 providing planned targets and decisions made based on deviations of actual and targeted outcomes

Response options	Frequency	Percent	Cumulative Percent
Strongly disagree	7	8.0	8.0
Disagree	9	10.2	18.2
Neutral	15	17.0	35.2
Agree	37	42.0	77.3
Strongly agree	20	22.7	100.0
Total	88	100.0	

For the question on table 4.43 asked if the organization provides planned targets for every employees and subsequent decisions are made based on deviations of actual and targeted outcomes 42% and 22.7% of the respondents agree and strongly agree. 17% of the respondents are neutral, 10.2% disagree and only 8% of the respondents strongly disagree. Since 64.7% of the respondents agree and strongly agree, we can merely say that the organization provides planned targets for every employee and subsequent decisions made based on deviations of actual and targeted outcomes. Moreover, the company has a format for setting targets on department level and transformed in to action plans. Then it transferred to every employee. This helped employees to know what expected from them in order to achieve overall company target.

Table 4.44 Objective tools to evaluate contributions of internal and external stakeholders in cases of rewarding and recognizing

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	1.1	1.1
	Disagree	13	14.8	15.9
	Neutral	32	36.4	52.3
	Agree	31	35.2	87.5
	Strongly agree	11	12.5	100.0
	Total	88	100.0	

For the question asked if the organization applies objective tools to evaluate contributions of its internal and external stakeholders in cases of rewarding and recognizing its employees, suppliers and customers most of the respondents choose neutral with 36.4% followed by respondents who agree 35.2%. 14.8% of the respondents disagree, 12.5% strongly agree and only 1.1% strongly disagrees. Though respondents who are neutral about the phenomena get the highest vote when we see the overall, outcomes agree and strongly agree got 47.7%, which is greater than those who disagree and strongly disagree. Thus, one can infer that the organization applies objective tools to evaluate contributions of its internal and external stakeholders in cases of rewarding and recognizing its employees, suppliers and customers. On the company's format for target for employees there are columns holding the point that specific objective gets, the target expected for that objective and performance column with points ranging from poor to very good. Hence, every employee knows what expected from him/her and the reward on their performance while trying to achieve their targets.

When we review literatures, Okland suggests that objectives need to be clearly and completely understood by all members before good decision-making can begin. In making

decisions effective, teams develop the ability to collect information quickly then discuss the alternatives openly. (Okland, 2004) ISO 2000 also incorporates the need to make decisions based on facts. Hoyle on his book of ISO 2000 based quality system handbook pointed out those facts obtained from observations performed by qualified personnel using devices, the integrity of which is known. The factual approach to decision-making leads us to take certain actions. To make decisions based on facts we need reliable mechanisms for collecting facts such as measurement systems (Hoyle, 2001).

4.7 Analysis of Supplier Relationship Management Variable

Table 4.45 plans and manage external partnerships to support the effective operation of its processes

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	11	12.5	17.0
	Neutral	30	34.1	51.1
	Agree	34	38.6	89.8
	Strongly agree	9	10.2	100.0
	Total	88	100.0	

For the question asked if the organization plans and manages the external partnership that is in line with its overall policies and strategies, being designed and developed to support the effective operation of its processes 38.6% of the respondents agree. Responses of 34.1% subjects are neutral. The fact that 22.7% are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one.

Responses of 12.5% of the subjects are disagreeing, 10.2% strongly agree and only 4.5% of the respondents strongly disagree. By looking at these results, one can infer that the organization plans and manages the external partnerships, which is in line with its overall policies and strategies, designed and developed to support the effective operation of its processes because 48.8% of the respondents agree and strongly agree. The supplier selection criteria form state that every supplier must be in conformance to purchase requirements stated or adherence to specifications, implied and regulatory requirements of the country.

Table 4.46 maintain successful partnerships with suppliers through good communications and exchange of information

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	15	17.0	21.6
	Neutral	17	19.3	40.9
	Agree	36	40.9	81.8
	Strongly agree	16	18.2	100.0
	Total	88	100.0	

For the question asked if the organization maintains successful partnerships with its suppliers through good communications and exchange of information 40.9% of the respondents agree. Respondents with neutral and strongly agree responses get very closer percentages, 19.3% and 18.2% respectively. Respondents with disagree and strongly disagree responses share the remaining 21.5% of the respondents with 17% and 4.5% respectively. From these responses, one can infer that the organization maintains successful partnerships with its suppliers through good communications and exchange of information since 59.1% of the respondents

agree and strongly agree with the question. The organization's main supplier of employees Addis Ababa university health science collage even witnessed Epharm's partnership. The collage's coordinator of pharmacy supply-chain management program, associate professor TeferiGedif said to the organizations magazine on its 50th year anniversary that relationship with the college and Epharm is historical and good. The organization also received recognition from many international pharmaceutical suppliers.

Table 4.47 developing a stronger working relationship with suppliers to deliver better products and services to the end customer

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	1.1	1.1
	Disagree	9	10.2	11.4
	Neutral	26	29.5	40.9
	Agree	34	38.6	79.5
	Strongly agree	18	20.5	100.0
	Total	88	100.0	

For the question asked about the existence of a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer 38.6% and 20.5% of the respondents agree and strongly agree respectively. Responses of 29.5% subjects are neutral and the remaining 11.3% chosen by the respondents who disagree and strongly disagree. Out of which 10.2% disagree and 1.1% strongly disagree. By looking at these responses, we can fairly say that there is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer. The purchasing

and recruitment division head discussed the benefits of maintaining long-term relationship during the interview. He said that the company is leveraging through discounts, credit purchases, getting priority during shortage and stock out that helped the organization to make higher quality products at lowest cost.

Table 4.48 Recruit and retain suppliers to improve quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	6	6.8	9.1
	Neutral	23	26.1	35.2
	Agree	39	44.3	79.5
	Strongly agree	18	20.5	100.0
	Total	88	100.0	

For question asked to respondents, if the organization recruits suppliers and have a way to retain them that supported the organization to improve quality, more than 60% of them agree and strongly agree that the organization recruit suppliers and have a way to retain them that supported the organization to improve quality. Out of which 44.3% agreed and 20.5% strongly agree. 26.1% of the respondents are neutral that the organization recruit suppliers and have a way to retain them that supported the organization to improve quality. Less than 10% of the respondents, of which 6.8% disagree and 2.3% strongly disagreed. From these results, it is inevitable to indicate that the organization recruits suppliers and have a way to retain them that supported the organization to improve quality. The organization clearly states on its supplier selection manual how to select genuine suppliers, which work legally, and in

conformance with Epharm's criteria and want to work for long with the company based on mutual benefit.

Table 4.49 Closer relationships with suppliers helped to get technical support from its suppliers when needed rather than merely exchange of goods

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4
	Disagree	12	13.6	17.0
	Neutral	16	18.2	35.2
	Agree	37	42.0	77.3
	Strongly agree	20	22.7	100.0
	Total	88	100.0	

For the question asked to respondents if the organization have closer relationship with its suppliers, which helped the organization to get technical support from its suppliers when needed, rather than merely exchange of goods 64.7% of the respondents choose agree and strongly agree with 42% agree and 22.7% even strongly agree. 18.2% of the respondents are neutral. 13.6% disagree and only 3.4% appeared to strongly disagree that the organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods. Since more than 60% of the respondents agree and strongly agree one can infer that the organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods. On the company's magazine of 50th year anniversary, a lot of suppliers and customers witnessed how proud to

work with Epharm and show their willingness to help the organization in any form they can. In addition, send their best wishes for the company to grow larger.

Moreover when we see the literatures support the need to create long-term relationship with suppliers. Newman (1988) as cited in Zheng suggested that a firm pursuing long-term relationships with suppliers could benefit from improved quality and process performance and continuous cost reductions. Flynn et al. (1995) as cited in Zheng also stated that suppliers could contribute to quality performance in a number of ways. For example, selection of suppliers should be based on product quality rather than price, and suppliers can contribute (Zhang, 2000).

Table 4.50 Overall Mean Values for Each Variable

Variables	N	Minimum	Maximum	Mean
Customer focus	88	1	5	3.5
Management commitment	88	2	5	3.6
Engagement of people	88	1	5	3.48
Process Approach	88	1	5	3.52
Continuous improvement	88	1	5	3.37
Evidence based decision making	88	1	5	3.55
Supplier Relationship	88	1	5	3.59
Total Valid N(list wise)88				

Table 4.50 presented the overall mean value for each variable. When we see the mean values, we can understand the responses of the subject employees of the organization skewed to the upper values between Neutral and agree responses. The fact that a lot of the respondents are neutral is may be their job type may prevent them from knowing about the phenomena or maybe they have their own reason not to pick one. However, if it is due to lack of awareness the company should work on employee awareness. Moreover, looking in to the responses we can say that the company successfully implements TQM system.

4.8 Analysis of Benefits of Implementing TQM

Table 4.51 Improvement on Customer satisfaction

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	5	5.7	8.0
	Neutral	21	23.9	31.8
	Agree	33	37.5	69.3
	Strongly agree	27	30.7	100.0
	Total	88	100.0	

For question related to the employee's opinion if customer's satisfaction have shown improvement 37.5% of the employees agree and 30.7 % strongly agree that customer satisfaction have shown improvement. 23.9% of the respondents are neutral. Less than 10% of the respondents disagree and strongly disagree, to name 5.7% disagree and only 2.3% strongly disagree, that customer satisfaction has shown improvement. The largest results 37.5% agree and 30.7% strongly agree implies that customer satisfaction have shown improvement after practicing of TQM system.

Table 4.52Products/service defects, errors, or failures found by the customer have decreased

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	7	8.0	8.0
	Disagree	7	8.0	15.9
	Neutral	17	19.3	35.2
	Agree	38	43.2	78.4
	Strongly agree	19	21.6	100.0
	Total	88	100.0	

For question asked to respondents if the number of products/service defects, errors, or failures found by the customer have decreased 43.2% agree, 21.6% strongly agree that the number of products/service defects, errors, or failures found by the customer have decreased. 19.3% are neutral and responses favoring disagree and strongly disagree are 8% each. Since more than 54% of the respondents agree and strongly agree, one can indicate that the number of products/service defects, errors, or failures found by the customer have decreased.

Table 4.53Customer complaints has decreased

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	8	9.1	15.9

	Neutral	27	30.7	46.6
	Agree	31	35.2	81.8
	Strongly agree	16	18.2	100.0
	Total	88	100.0	

For question asked to employees if the number of customer complaints has decreased after practicing of TQM system, 35.2% agree, 30.7% are neutral and 18.2% strongly agree that the number of complaints coming to the organization after practicing of TQM system has decreased. 9.1% of the respondents disagree and only 6.8% of the respondents strongly disagree that the number of complaints coming to the organization after practicing of TQM system has decreased. Since more than half of the respondents agree and even strongly agree, one can point toward the number of complaints coming to the organization after practicing of TQM system has decreased.

4.54Improved financial results

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	4.5	4.5
	Disagree	6	6.8	11.4
	Neutral	22	25.0	36.4
	Agree	33	37.5	73.9
	Strongly agree	23	26.1	100.0
	Total	88	100.0	

For question asked to employees if the organization's financial results have been improving after practicing of TQM system, 37.5% and 26.1% of the respondents taking the largest pie agree and strongly agree respectively. 25% are neutral. And not much greater than 10% of the respondents disagree and strongly disagree, with 6.8% disagreed and only 4.5% strongly disagreed that the financial results of the organization have been improving after practicing of TQM system. From these results, one can easily infer that the organization's financial results have been improving after practicing of TQM system.

Table 4.55More accurate and valuable decisions at the Organization

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	10	11.4	18.2
	Neutral	22	25.0	43.2
	Agree	27	30.7	73.9
	Strongly agree	23	26.1	100.0
	Total	88	100.0	

For the question asked if respondents believe that decisions made by the organization becomes more accurate and valuable after practicing of TQM system 30.7% and 26.1% of the respondents agree and strongly agree, taking the largest pie. 25% of the respondents are neutral. 11.4% of them disagreed and only 6.8% of the respondents strongly disagree that decisions made by the organization becomes more accurate and valuable after practicing of TQM system. This result implies the decisions made by the organization become more accurate and valuable after practicing of TQM system.

Table 4.56Culture that promotes teamwork and emphasizes quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	14	15.9	18.2
	Neutral	15	17.0	35.2
	Agree	29	33.0	68.2
	Strongly agree	28	31.8	100.0
	Total	88	100.0	

For question asked if Employee's participation on quality related issues have increased after practicing of TQM system A very closer percentages goes to agree and strongly agree. 33% of the respondents agree and 31.8% strongly agree that Employee's participation on quality related issues have increased after practicing of TQM system. 17% are neutral, 15.9% disagree and only 2.3% strongly disagree that Employee's participation on quality related issues have increased after practicing of TQM system. From these results, one can infer that Employee's participation on quality related issues have increased after practicing of TQM system.

Table 4.57Culture that promotes teamwork and emphasizes quality

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	3	3.4	3.4

	Disagree	6	6.8	10.2
	Neutral	20	22.7	33.0
	Agree	36	40.9	73.9
	Strongly agree	23	26.1	100.0
	Total	88	100.0	

For the question asked to respondents if the organization developed a culture that promotes teamwork and emphasizes quality, 40.9% and 26.1% of the respondents choose agree and strongly agree that the organization developed a culture that promotes teamwork and emphasizes quality. 22.7% of the respondents are neutral. Around 10% of the respondents disagree and strongly disagree of which 6.8% disagree and only 3.4% strongly disagree. Since more than 75% of the respondents vote in favor of agree and strongly agree, one can conclude that the organization developed a culture that promotes teamwork and emphasizes quality.

Table 4.58Less turnover due to Employee satisfaction

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	11	12.5	19.3
	Neutral	25	28.4	47.7
	Agree	28	31.8	79.5
	Strongly agree	18	20.5	100.0
	Total	88	100.0	

For the question asked to respondents if employee satisfaction has increased hence the organization face less turnover, 31.8% of the respondents agree, 28.4% are neutral and 20.5% of the respondents strongly agree that employee satisfaction has increased hence the organization face less turnover. 12.5% and 6.8% of the respondents disagree and even strongly disagree that employee satisfaction has increased hence the organization face less turnover. Since more than 50% of the respondents choose, agree and strongly agree, one can infer that employee satisfaction has increased hence the organization face less turnover.

Table 4.59 Increased Organizational performance

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	6	6.8	6.8
	Disagree	8	9.1	15.9
	Neutral	22	25.0	40.9
	Agree	28	31.8	72.7
	Strongly agree	24	27.3	100.0
	Total	88	100.0	

For question asked if the organization's performance in general increased after practicing of TQM system 31.8% and 27.3% of the respondents agree and strongly agree that the organization's performance in general increased after practicing of TQM system. 25% of the respondents are neutral, 9.1% disagree and only 6.8% of the respondents strongly disagree that the organization's performance in general increased after practicing of TQM system. By looking at the results in which more than 60% of the respondents choose in favor of agree and strongly agree, one can infer that the organization's performance in general increased after practicing of TQM system.

Table 4.60 Improved Partnership with suppliers

Response options		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	2.3	2.3
	Disagree	4	4.5	6.8
	Neutral	25	28.4	35.2
	Agree	33	37.5	72.7
	Strongly agree	24	27.3	100.0
	Total	88	100.0	

For the question asked if partnership with suppliers has improved helping the organization to provide quality products and services 37.5% and 27.3% of the respondents, which are the largest responses are agree and strongly agree. 28.4% are neutral, 4.5% agree and only 2.3% of the respondents strongly disagree that partnership with suppliers has improved helping the organization to provide quality products and services. By looking at the results of the responses, in which more than 60% of the respondents choose agree and strongly agree, one can infer that partnership with suppliers has improved helping the organization to provide quality products and services.

4.9 Inferential Statistics Estimation of Error

Table 4.61 Standard Error of the Mean and Fiducial limits

		Mean	Std. Error	Std. Deviation	Range(Fiducial Limits)
customer focus	88	3.50	.083	.781	±0.16
management commitment	88	3.60	.094	.880	±0.18
Engagement of Employees	88	3.48	.082	.768	±0.16
process approach	88	3.52	.081	.762	±0.16
continuous improvement	88	3.37	.091	.856	±0.18
evidence based decision making	88	3.55	.089	.835	±0.17
supplier relationship	88	3.59	.092	.860	±0.18
benefits of implementing TQM	88	3.68	.091	.855	±0.18

Standard error column on the above table shows the estimated standard error of the mean and computed by dividing standard deviation of the sample by the square root of the sample (N).

Standard Error=Standard Deviation/√N(Sample)

Source; Chase 1985, p. 218

From this standard error by applying the 95% confidence level, the researcher tried to find the fiducial limits or the range where the population mean would lie is presented as follows. The formula to find the fiducial limits is as follows at 95% level of confidence.

Range=Mean±(1.96)×(Standard Error)

Source; Chase 1985, p. 219

- For the first variable which is Customer focus the fiducial limits are

  =3.5±0.16

So at 95% level of confidence the population mean would lie between 3.34 and 3.66.

- For the second variable Management commitment the range on which the population mean would have laid is as follows

  =3.6±0.18

So at 95% level of confidence the population mean would lie between 3.42 and 3.78.

- For the third variable engagement of employees the range on which the population mean would be laid is between 3.32 and 3.64.

  =3.48±0.16

Hence at 95% level of confidence the population mean would be between 3.32 and 3.64.

- For the fourth variable which is process approach the range the population mean would be is

  =3.52±0.16

Hence at 95% level of confidence the population mean would be between 3.36 and 3.68.

- For the fifth variable which is continuous improvement the range on which the population mean would be is

  =3.37±0.18

So at 95% level of confidence the population mean would be between 3.19 and 3.55.

- For the sixth variable which is evidence based decision making the range on which the population mean would be is as follows;

  =3.55±0.17

Hence at 95% level of confidence the range on which the population mean would be is between 3.38 and 3.72.

- For the sixth variable which is supplier relation the range on which the population mean would be is as follows

  =3.59±0.18

Hence at 95% level of confidence the population mean would be between 3.41 and 3.77.

Finally for the variable of benefits of practicing TQM the range on which the population Mean would fall is as fallows;

=3.68±0.18

Hence at 95% level of confidence the population mean would be between 3.5 and 3.86.

4.10 Analysis of Interview Questions

Analysis of Interview Questions about Quality understanding, its benefits and Challenges they faced to implement TQM system

Qualitative analysis of the responses of employees selected for the interview asking about their familiarity with TQM system and its benefits their responses infer that they have good understanding of TQM system. They raise points about the principles of TQM systems. They point out the need to implement TQM system is to achieve superior quality with improved organizational culture and satisfied employees in a way that can help the organization to achieve its vision. They all agree that it makes dramatic change on the way things done throughout the organization. Some of them pointed out that exposure to this principles and challenges also helped in their personal development. Since, they have the opportunity to participate too many types of trainings of different aspects on how to improve an organization

starting from change of attitude, organizational culture and change it in to a completely new system, where works done systematically, problems solved before they reach to outside customers through check and balance system. They believe practicing of TQM helped to increase productivity, less damage and waste, and more qualified products, which leads to higher financial results. From these thoughts of employees, one can infer that employees of the organization have satisfactory understanding about TQM system.

Qualitative analysis of the responses of employees selected for the interview asking about the challenges the organization face while practicing of TQM system. The employees asked pointed out three major challenges:

1.Since quality is not a one-night job there were some frustrations among management members due to high costs incurred to train, to improve the premises according to ISO standards which include additional costs like pest control, hiring professionals to consult the organization and additional advertising and publicity expenses.

2. When Epharm privatized and owned by med tech Ethiopia cultural differences between former employees of Epharm and employees who joined Epharm from Med tech Ethiopia challenges the organization too hard. They remembered that there was some false information transmitted throughout the organization that former employees will be removed gradually, which imposes some fears on former employees that they might lose their job disturbed the organization.

3. Besides different cultural problems among former and new Employees, the practicing of TQM system that is new to the organization brought changes throughout the organization. The change process starting form Top management down to all employees of the organization was too hard to adopt at that time. There were some uncertainties, higher costs and higher turnover of employees, who gets it hard to adapt the new paradigm shift towards new philosophy, was the main challenges the organization face during the practicing of TQM system.

Daniel and Fasika on their work pointed out that organizations often fail to recognize the importance of culture and its influence in transplanting what has worked in a different cultural

setup, organizational structure and individualism without reviewing its compatibility or incompatibility with different cultures (Daniel and Fasika, 2003). Jack P. Pekar he stated in his book that there is no single path to achieving total quality within an organization supports this argument. There are no hard and fast rules to follow to become a world-class company. The only constant are basic guidelines, that, when followed, lead to success. This is because all organizations have their own cultures, people, and technologies. What may work well for one company will not necessarily work for another company (Pekar, 1995). However, in spite of the challenges the organization face the employees believe they have overcome those challenges, adopted the new philosophy, and awarded ISO Certificate successfully.

Chapter Five

5.1 Summary of Findings and Recommendations

5.1.1. Summary of findings

This section further discussed the summary of the responses of the subjects. First Epharm certified from ISO-9001 for its quality system and ISO-14000 for its contribution to safe guard the environment. Other different institutes including government authorities also acknowledged its work to achieve better results and help the society.

When we look at the responses for every variables the mean values are Customer focus (3.5), Management commitment (3.6), Engagement of people (3.48), Process approach (3.52), Continuous improvement (3.37), Evidence based decision making (3.55), Supplier relationship (3.59). Thus, the minimum mean is for Continuous improvement that is 3.37 and the maximum is for management commitment that is 3.6. From the means, we can understand that the mean values are between subjects who are neutral and who agree with the phenomena.

The variable Customer focus with the mean of 3.5 shows that the responses are skewed towards the agree responses. From this result, one can infer that the company works hard on its customer's satisfaction, which is basic element to have successful TQM system. Review of the secondary sources also supported the above argument that the organization works hard to improve quality that helped to satisfy its customers. Literatures on TQM system implementation enhance the need to focus on satisfying customer is one of the basic elements in TQM. Hence, Epharm is working hard to satisfy its customers by making products focusing its customers primarily.

For the second variable management commitment, the responses provide a mean value of 3.6 that is the highest mean value from all of the other six variables. This implies that most of the subjects agree that the organizations management was committed to bring quality system in the organization. Interview sessions with the members of management and reviewing organizational documents also lead that top management works hard to bring quality to the organization. Literatures discussed on previous chapters also point out the necessity of visible leadership of top

management is vital to successfully implement TQM system. Therefore the management of Epharm is committed and striving to bring an environment that enhances quality system.

The third variable that is Engagement of people the mean value is 3.48. By looking at the mean value one can infer that the organization creates working environment that is suitable for employees to engage in activities that enhance quality system in the organization. Interview sessions and review of organizational documents show that employees are well treated, trained and feel they are useful part of organizational successes. Literatures supported the argument of the need to value and empower employees is probably the cornerstone for an organization's success. Juran, well-known quality guru entails that Organizations, that have won the Malcolm Baldrige National Quality Award (MBNQA), or have seriously competed for it, have developed clear and organized quality awareness training for all employees. Typically, the training delivered to everyone in the organization, then to all new employees as part of their orientation. This material presents in very basic terms, the organization's quality philosophy and how employees expected to support it. (Juran, 1999) Hence, Epharm's employees engage in activities that enhance quality system in the organization and they are satisfied by their organization's support to involve in all activities.

The fourth variable is process approach towards the works done in the organization in the aim of achieving higher quality system. The mean value for process approach variable is 3.52. The result shows that the responses skewed towards agree that the organization uses process approach that is basic element to implement TQM system in the Organization. While reviewing of company documents, the researcher got documents on the application of processes throughout the organization in order to transform inputs in to outputs. Literatures support the need to focus on processes is vital for organizational success in implementing TQM system.Okland, suggest that Changing the culture of an organization to incorporate a sustainable ethos of continuous improvement and responsive business planning will come about only as the result of a carefully planned and managed process (Okland, 2004). Hence, the organization is applying different process approach methods which in turn helped the organization to produce quality products.

The fifth variable is continuous improvement the mean value is 3.37 which is between the responses for neutral and agrees. This result means most of the respondents choose neutral and

agree. The fact that most of the subjects choose to neutral that the organization is continuously improving is may be because, the subjects are working in positions that could not allow to notice continuous improvement in the organization or the subjects may not work for too long to notice whether the organization is continuously improving or not. In addition to that, they are unaware how to notice continuous improvement in the organization. However, having the facts discussed one can infer that the organization is continuously improving from time to time. The organization's documents show that the company is continuously improving in terms of financial positions, variety of products produced, geographical location operated and expansions through purchasing other companies and working with well-known companies from oversees. The best example for this is that Julphar pharmaceuticals launched by Epharm and United Arab Emirates investors and the new plant the company is building at sebeta, oromia region.Okland emphasizes the need to continuously improving. He pointed out that the climate must change from the traditional approach of 'If it meets the specification, there are no problems and no further improvements are necessary'. The driving force for this will be the need for better internal and external customer satisfaction levels, which will lead to the continuous improvement question, 'Could we do the job better?' (Okland, 2004) Therefore continuous improvement is the heart of the organization's vision and it's shared across the organization by every departments and individuals hence every one involves to improve and bring the maximum state of the art technologies and products.

For the six variable, which is evidence based decision making the mean value is 3.55. This mean value shows that the responses of the subjects skewed towards agree response. In addition, the interview session also points that the organization is benefiting from evidence based decision-making through fast flow of accurate information. Hence, the organization successfully implements TQM system for the evidence-based decision-making. During an interview with senior employee, the researcher understood that decisionsbased on facts generated through a number of processes from bottom to top involving all the employees. ISO 2000 also incorporates the need to make decisions based on facts. Hoyle on his book of ISO 2000 based quality system handbook pointed out those facts obtained from observations performed by qualified personnel using devices, the integrity of which is known. The factual approach to decision-making leads us to take certain actions. To make decisions based on facts we need reliable mechanisms for

collecting facts such as measurement systems. (Hoyle, 2001) Hence, the organization's top management and supervisors made decisions based on facts and evidences.

For the last variable, which is Supplier relationship the mean value is 3.59. This mean value implies that the average of the subjects responses skewed towards agree response. The review of secondary sources also show that even the suppliers witness how glad they are working with Epahrm. From these results, we can say that the organization works hard to maintain long-lasting relationship based on mutual benefit. This means that the organization successfully implements TQM system by maintaining good supplier relationships. Newman (1988) as cited in Zheng suggested that a firm pursuing long-term relationships with suppliers could benefit from improved quality and process performance and continuous cost reductions. Flynn et al. (1995) as cited in Zheng also stated that suppliers could contribute to quality performance in a number of ways. For example, selection of suppliers should be based on product quality rather than price, and suppliers can contribute.(Zhang, 2000) Hence we can conclude that Epharm maintains good relationships with its suppliers based on mutual benefits which helped the organization to achieve quality production system with uninterrupted supply even in difficult situations.

Finally, 3.52 is the overall mean value of the seven variables, which are basic for practicing TQM system in any organization. This means that the mean value is between responses of subjects who choose neutral and those subjects who agree that the company successfully apply all the seven principles. Considering the fact that on average most of the subjects respond to agree and reviewing company documents and magazines published by the organization, we can say that the company successfully applies all the principles of TQM system.(Dale, 1999)as cited in Azda discussed about the new philosophy which is TQM. He advocates that the latest focus in the evolution of quality is considered to be on Total Quality Management (TQM),which invokes the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes (Azda, 2012). Flynn et al. (1994) as cited in Zhang defined TQM as an integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the firm, in order to meet or exceed customer expectations. (Zhang, 2000) by looking at the analysis we can conclude that Epharm is practicing TQM ISO model satisfactorily and rewarded from different organizations for its achievements.

The overall mean value for the benefits of practicing TQM system is 3.68. This shows that most of the subjects on average agree that the organization is benefiting by implementing TQM system. Review of company documents also show that the company is showing progress through time to time after implementing TQM system. The company's financial statements show improved results. Employees relationship with the organization becomes better leading to less turnover, the company's expansion is overwhelming, more satisfied customers leading to less complaints, quality results through process approach and evidence based decision making are some of the benefits the organization is enjoying by implementing TQM system. Literatures support the overall benefits of implementing TQM system. Okland pointed out that Quality management requires strong leadership with clear direction and a carefully planned and fully integrated strategy derived from the vision. One of the greatest tangible benefits of excellence in leadership is the improved overall performance of the organization. The evidence for this can be seen in some of the major consumer and industrial markets of the world. Moreover, effective leadership leads to improvements and superior quality that can be converted into premium prices. Research now shows that leadership and quality clearly correlate with profit but the less tangible benefit of greater employee participation is equally, if not more, important in the longer term. The pursuit of continual improvement must become a way of life for everyone in an organization if it is to succeed in today's competitive environment. (Okland, 2004) Hence we can conclude that Epharm is enjoying the benefits of practicing TQM system.

The last section is discussion of the qualitative data of interview with the managements and supervisors about their awareness of TQM system and the challenges they face while practicing of TQM system. Their answer about their awareness was good. They raise points about the principles of TQM systems. They point out the need to implement TQM system is to achieve superior quality with improved organizational culture and satisfied employees in a way that can help the organization to achieve its vision. They all agree that it makes dramatic change on the way things done throughout the organization. They believe practicing of TQM helped to increase productivity, less damage and waste, and more qualified products, which leads to higher financial results. From these thoughts of employees, one can infer that employees of the organization have satisfactory understanding about TQM system.

While discussion about the challenges the organization face while practicing TQM system. The employees asked pointed out three major challenges:

1. Since quality is not a one-night job there were some frustrations among management members due to high costs incurred to train, to improve the premises according to ISO standards which include additional costs like pest control, hiring professionals to consult the organization and additional advertising and publicity expenses.

2. When Epharmprivatized and owned by med tech Ethiopia cultural differences between former employees of Epharm and employees who joined Epharm from Med tech Ethiopia challenges the organization too hard. They remembered that there was some false information transmitted throughout the organization that former employees will be removed gradually, which imposes some fears on former employees that they might lose their job disturbed the organization.

3. Besides different cultural problems among former and new Employees, the practicing of TQM system that is new to the organization brought changes throughout the organization. The change process starting form Top management down to all employees of the organization was too hard to adopt at that time. There were some uncertainties, higher costs and higher turnover of employees, who gets it hard to adapt the new paradigm shift towards new philosophy, was the main challenges the organization face during the practicing of TQM system.

5.2. Conclusions and Recommendations

These section Tried to conclude and forward necessary recommendations based on the results of Data analysis in the previous chapter. For the first research, question that to understand the awareness about TQM system throughout the organization. The results show that the organization and its employees have satisfactory awareness about TQM system according to the interview. However, the subjects who filled the questionnaire who choose to be neutral about the questions about the principles of TQM system need to be examined. If the reason is due to lack of awareness the organization needs to consider some awareness creating mechanisms like trainings.

For the second question asking the practices of the seven principles of TQM system, both the interview and questionnaire bring positive results. The organization is successfully practicingTQM

principles. However, caution must be given since one principle is continuous improvement that is an everlasting activity. Hence, the organization must sustain its position and to keep growing every time.

The benefits of practicing TQM systems are significant to the organization. The company's financial statements show improved results. Employee's relationship with the organization becomes better leading to fewer turnovers, less defects and reworks which significantly help the organization to minimize its costs. The company's expansion is overwhelming and its quality system helped the organization to open Julphar pharmaceuticals jointly with United Arab Emirates investors. More satisfied customers leading to fewer complaints, quality results through process approach and evidence based decision making are some of the benefits the organization is enjoying by implementing TQM system.

The last question is about the challenges of practicing TQM system. The organization raises the following challenges:

1. Since quality is not a one-night job there were some frustrations among management members due to high costs incurred at the initial phase of the implementation and practice.

2. When Epharm privatized and owned by med tech Ethiopia cultural differences between former employees of Epharm and employees who joined Epharm from Med tech Ethiopia challenges the organization too hard. They remembered that there was some false information transmitted throughout the organization that former employees will be removed gradually, which imposes some fears on former employees that they might lose their job disturbed the organization. However through time they overcame this problem.

3. Besides different cultural problems among former and new Employees, practicing of TQM system that is new to the organization brought changes throughout the organization. New employees hired by the organization who are new for the concept of ISO based TQM struggled to adapt the new culture leading the organization to additional training costs.

References

1. Aishwariya Dash and Dr. SushantaTripaty, Journey of quality management practices towards 21st Century, International journal of management business studies, Vol 6, 2016
2. Alan Larson, Demystifying six sigma A companywide approach to continuous improvement, Amacom, 1st edition, 2003
3. AnolBhattacherjee, Social science research; principles, methods and practices, Global text project, 2016
4. AsherefAbdelselam Ali Elfaituri, An assessment of TQM implementation and the influence of organizational culture on TQM implementation in Libyan banks, University of Gloucestershire, 2012
5. AzrilahAbdaziz, Norah Dhafer Al- Qahtani, Sebah Sa' ad Alshehri, The impact of Total Quality Management on Organizational Performance, European journal of Business and Management, 2015
6. BirhanuBeshah and Daniel Kitaw, Quality management practice in Ethiopia, African journal of business management, Vol 8, 2014
7. Bowen D. Bruce and Herbert F. Weisberg, An introduction to data analysis, W. H. Freeman and company, 1980
8. Bruce D. Bowen and Herbert F. Weisberg, An introduction to Data analysis, W. H. Freeman & Company, 2nd edition, 1980
9. Clinton I. Chase, Elementary statistical Procedures, McGraw- Hill book company, 3rd edition, 1985
10. Daniel Kitaw and FasikaBete, Quality management; efforts and problems in Ethiopian manufacturing firms; an empirical evaluation, International journal of applied research, 2016
11. David Hoyle, ISO 9000 Quality systems hand book, Butterworth-Heinemann, 4th edition, 2001
12. Dr. Gerald Suarez, Three experts on quality management, Total quality leadership office, 1st edition, 1992
13. Ezra Tsegaye, Quality management system in Ethiopian food processing industries, Addis Ababa University,2004
14. Greame Knowles, Quality management, Bookboon.com,1st edition,2011

15. Haile YeshanewBaye and Dr. SatyaRaju R, The extent of TQM practices in Ethiopian manufacturing firms: an empirical evaluation, International journal of applied research, 2016
16. Jack P. Pekar, Total Quality Management: Guiding principles for application, ASTM, 1995
17. John S. Oakland, Okland on quality management, Elsevier butterworth-heinemann, 1st edition, 2004
18. Joseph M. Juran and A. Blanton Godfrey, Juran's Quality handbook, McGraw hill, 5th edition, 1998
19. Maureen Mackintosh, Geoffery Banda, Paula Tibandebage and WatuMamae, Making medicines in Africa, Palgrave Macmillan, 2016
20. Melsa J.L, Principles and tools of TQM, Systems engineering and management for sustainable development, Vol 2, 2009
21. Mohammed Adel Mohammed Samy Mohsen, The introduction of A TQM culture in Hotels, University of Wales, Cardiff, UK, 2009
22. NechiNdubuisi H., Impact of TQM on organizational productivity, a case study of Ama Brewery, University of Nigeria, 2012
23. Paulo Sampio, Pedro Saraiva and Ana Monteiro, A comparison and usage overview of business excellence models, Emerald group publishing limited, 2012
24. Philip Kotler and Gary Armstrong, Principles of Marketing, Pearson prentice hall, 4th edition, 2012
25. Robert J Vokura, Gary L Stading and Jason Brazeal, A comparative analysis of national and regional quality awards, Quality Progress, 2000
26. WWW. Management study guide.com
27. WWW.ISO.org
28. Zhihai Zhang, Implementation of TQM, An empirical study of Chinese manufacturing firms, Labyrint publication, 2000

Appendix

Survey Instruments; Interview Questions

1. What do you understand by TQM? What contributes to TQM? Why is it necessary to implement TQM?
2. How do you manage your relationship with customers? What do you do to satisfy your customers by providing quality services?
3. Do you believe top management involvement have significant effect on quality? Can you explain Top management's activities in your organization to enhance quality system?
4. How do you make decisions on quality issues? Can you explain the way decisions are made in your organization?
5. How do you rate your organization's employee's contribution to bring quality? Do you provide trainings to empower your employee's involvement in groups and individual level in maintaining quality system?
6. How do you manage your suppliers? Do you believe your relationship with suppliers affected quality in the organization? How do you explain it?
7. How do you explain the benefits of implementing TQM system for your organization in relation to the costs of implementation?
8. What challenges do you encounter in implementing TQM? What are the challenges at different levels – workers, management, board/ decision makers at the top and policy/ government levels? How did you address those challenges?
9. How do rate your organizations employees? Do you provide

Survey Instruments

Section one; Demographic Questions

1. Age below 25 25-30 30-35 35-40 >40
2. Years of experience in the organization <1yr 1-5yrs 5-10yrs 10-15yrs >15yrs
3. Your position in the organization ……

Section two; Quality Understanding

1. What do you think is your organization's motive to implement TQM system?
2. From which institution does your organization get certificate?
3. Has your organization won any quality award? Please list if any
4. What do you think is TQM system? Can you mention some of the principles of TQM?

Section three; TQM principles and practices related questions

This following sections deal with your opinion about your organization's implementation of Total Quality Management principles. The following statements are presented for your evaluation. Please circle the number of the response which best represents the level of agreement that indicates whether you:

1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree

3.1 Questions related to customer focus

1	Your organization emphasizes on assessing current customers' needs and expectations.	1	2	3	4	5
2	Your organization have good trend of assessing future customer needs and expectations.	1	2	3	4	5
3	Customer complaints are frequently resolved by employees of the organization	1	2	3	4	5
4	The organization adopts formal ways to collect customer complaints	1	2	3	4	5
5	The customer's complaints coming to the organization	1	2	3	4	5

	after implementation of TQM areminimized					
6	Customers' complaints are studied to identify patterns and prevent the same problems from recurring.	1	2	3	4	5
7	The company incorporates data on customer expectations and/or satisfaction when designing new products	1	2	3	4	5

3.2 Questions related to Leadership/Management Commitment/

1	The senior executives of the organization provide highly visible leadership in maintaining an environment that supports quality improvement.	1	2	3	4	5
2	Top management is a primary driving force behind quality improvement efforts.	1	2	3	4	5
3	The senior executives consistently participate in activities to improve the quality.	1	2	3	4	5
4	The senior executives have demonstrated an ability to manage the changes (e.g., organizational, technological) needed to improve the quality.	1	2	3	4	5
5	The senior executives appreciate efforts that improve quality throughout the organization	1	2	3	4	5
6	Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality improvement directly from customers.	1	2	3	4	5

3.3 Questions related to Engagement of employees

1	Every employee’s thought has been used as an input to make any quality decision.	1	2	3	4	5

2	Regular employee awareness and feedback on status are provided and a reward/recognition process established helped employees to improve quality	1	2	3	4	5
3	Employees' positioning of themselves as key ingredients in the organization's success reduces the turnover and therefore reduces the cost of hiring and training new employees.	1	2	3	4	5
4	Employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality	1	2	3	4	5
5	Employees at work are interested in and positive, even excited about their jobs and are prepared to go the extra mile to improve quality	1	2	3	4	5
6	Organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees and helped to improve quality.	1	2	3	4	5
7	Training involves the application of formal processes to enhance knowledge and help employees to acquire the skills necessary for them to perform their jobs satisfactorily and improve quality	1	2	3	4	5
8	The organization's employees are given education and training in statistical and other quantitative methods that support quality improvement	1	2	3	4	5
9	The organization's employees are appreciated when they take necessary risks to improve quality	1	2	3	4	5
10	The organization has an effective system for employees to make suggestions to management on how to improve quality.	1	2	3	4	5

3.4 Questions related to process Approach

1	The organization identifies the key business processes by prioritizing on the basis of the value chain, customer needs and strategic significance, and using process models and definitions.	1	2	3	4	5
2	The organization Manages processes systematically by giving process ownership to the most appropriate individual or group and resolving process interface issues through meetings or ownership models.	1	2	3	4	5
3	The organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers.	1	2	3	4	5

4	The organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.	1	2	3	4	5
5	The organization change processes and evaluate the benefits through process improvement or re-engineering teams, project management and involving customers, and suppliers.	1	2	3	4	5

3.5 Questions related to continuous improvement

1	Everyone in the organization is aware of the need to improve continuously and show their efforts for improvement	1	2	3	4	5
2	The organization supported employees even in their personal career developments like sponsoring for education and providing scholar ships	1	2	3	4	5
3	The causes of all the possible faults are identified, informed and employees are well trained on common types of faults and how to manage problematic situations when happened	1	2	3	4	5
4	The organization promote improvements in a way that enhance competitive environment among members of the organization by recognizing best performing individuals and units	1	2	3	4	5
5	Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis.	1	2	3	4	5
6	The organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry	1	2	3	4	5
7	The organization uses benchmarking by comparing its results to those of competitors and best practices	1	2	3	4	5

3.6 Questions related to Evidence based decision making

1	The organization encourages statistical measurements and analysis throughout the organization	1	2	3	4	5
2	Every activity in the organization is recorded by employees	1	2	3	4	5

	and checked by supervisors for accuracy on a daily basis					
3	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions	1	2	3	4	5
4	The organization application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality	1	2	3	4	5
5	The organization provides planned targets for every employees and subsequent decisions are made based on deviations of actual and targeted outcomes	1	2	3	4	5
6	The organization applies objective tools to evaluate contributions of its internal and external stake holders in cases of rewarding and recognizing its employees, suppliers and customers					

3.7 Questions related to supplier relationship management

	The organization plans and manages the external partnerships which is in line with its overall policies and strategies, being designed and developed to support the effective operation of its processes	1	2	3	4	5
	The organization maintains successful partnerships with its suppliers through good communications and exchange of information.	1	2	3	4	5
	There is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer	1	2	3	4	5
	The organization recruit suppliers and have a way to retain them that supported the organization to improve quality	1	2	3	4	5
	The organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods	1	2	3	4	5

Section four; Questions related to benefits of implementing TQM

The following sections deal with your opinion about the benefits your organization gets by implementing Total Quality Management system. The following statements are presented for your evaluation. Please circle the number of the response which best represents the level of agreement that indicates whether you:

1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree

4. Benefits of implementing TQM

   By implementing TQM system

1	Customer satisfaction has shown improvement	1	2	3	4	5
2	The numbers of products/service defects, errors, or failures found by the customer have decreased.	1	2	3	4	5
3	The number of customer complaints has decreased.	1	2	3	4	5
4	The organization's financial results have been improving.	1	2	3	4	5
5	The decisions made by the organization becomes more accurate and valuable	1	2	3	4	5
6	Employee's participation on quality related issues have increased.	1	2	3	4	5
7	The organization developed a culture that promotes team work and emphasizes quality	1	2	3	4	5
8	Employee satisfaction has increased hence the organization face less turnover	1	2	3	4	5
9	The organization's performance in general increased	1	2	3	4	5
10	Partnership with suppliers has improved helping the organization to provide quality products and services	1	2	3	4	5

የጥራትፖሊሲ

QUALITY POLICY

¾›=ƒÄåÁSÉ›’>ƒ ów]" ›.T (›=.S.ó ›.T) &	Ethiopian Pharmaceuticals Manufacturing Sh. Co. (EPHARMSh.Co.) is committed to;
➢ ›KU ›kõ }kvÃ’ƒ ÁL†¨<” MUÊ‹’¾T’@ÏS”ƒ Y‘¯„‹”“ ¾IÓ É”ÒÑ@‹” }Óv^© uTÉ[Ó’ Ø^›†¨< ¾}Öuk’ Ÿ}ÕÇ˜ ›K<›© }ê•‹ ’é ¾J’<“ õ~”’›†¨< ¾}[ÒÑÖ<SÉ›’>„‹” uTp[w ¾Å”u™‡”“uÉ‘Ï~ LÃ Ñ<ÇÃ ÁL†¨<” K?KA‹ ›"KA‹ õLÔ„‹ KTTELƒul‘Ö˜’ƒ ÃW^M ::	➢ Meet the needs of its customers and other stakeholders by providing pharmaceuticals of proven quality, safety and efficacy through the application of internationally accepted practices, management systems and through fulfillment of regulatory requirements.
➢ ƛ”Ç=G<U É‘Ï›© °ÉÑƒ” KT[ÒÑØ“ ¾}k“ ¾Ø^ƒ T’@ÏS”ƒY‘¯ƒ” ¨<Ö?›T’ƒ“eŸ?›T’ƒuk×Ã’ƒKThhM&	➢ Ensure organizational development and continually improve the effectiveness and efficiency of integrated management system through:
G) wnƒ ÁK¨< ¾c¨<›ÃM’ ¾W^}™‹” ”l }dƒö“ }eTT> ,¡•KAÏ ÃÖkTM’	
K) }eTT> ¾Y^ ›"vu= uSõÖ‘ ²Lm’~ ¾}Öukƛ”Ç=J” ÁÅ‘ÒM ::	a) The use of skilled manpower, active participation of the workforce and appropriate technology; b)The establishment and maintenance of favorable work environment.

General Manager **Date:** 03/06/18