



Sudan University Of Science and Technology

College of Graduate Studies

Total Quality & Excellence Centre



**Assessment of Quality of Service Provided by
medical centers and its Impact on Renal Failure
Patients in Khartoum State**

Case Study of Bahri Medical Centre for Kidney Disease and Surgery

From October 2014 to January 2016

**تقييم جودة الخدمة المقدمة من المراكز الصحية وأثرها علي مرضي الفشل الكلوي
دراسة حالة: مركز بحري لأمراض وجراحة الكلي**

**A Thesis Submitted as a Partial Fulfillment Research of the
Requirements for the Degree of M.Sc. in Total Quality
Management and Excellence**

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2016

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى:

(وَقُلْ اَعْمَلُوا فَسَيَرَى اللهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ وَسَيُرَدُّونَ اِلَى عَالَمٍ

الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ تَعْمَلُونَ (١٠٥)

صدق الله العظيم

سورة التوبة

الآية (١٠٥)

Dedication

I dedicate this study to my father's soul, to my mother, to my brothers, to my sisters, to my supervisor, to Bahri Medical Centre for Kidney Disease and Surgery, to my friends to my colleagues and HabiboNet family.

Acknowledgment

First and above all, I praise God, the almighty for providing me this opportunity and granting me the capacity to proceed successfully. This thesis appears in its present form due to the assistance and guidance of several people, I would therefore like to offer my sincere thanks to all of them.

I would like to thank Sudan University for Science and Technology – Deanship of Quality and Development for giving me the opportunity to get a master's degree in quality management and excellence.

I would like to thank my supervisor Dr. Ali Arnaooti for support and encouragement; also I want to express my deep thanks to Mr. Hamid Almaleeh Abu, department of statistics at Sudan Open University for helping me analyzing my study and to achieve the objective of the study, and my thanks to my family and friends who provided me with their advice and support. The product of this research paper would not be possible without the help of all of them.

Abstract

This study aimed to assess quality of service provided and its impact on renal failure patients in Khartoum State, taking Bahri Medical Centre for Kidney Disease & Surgery as a case study.

The problem of research is how implementation of quality, continuous training of staff, and top management commitment contribute strongly in improving the quality of service?

I listed the hypothesis: continuous training of staff improved quality of service, implementation of quality programs improved quality of service, and top management commitment to quality improved quality of service.

I have some main results such as: success of quality implementation depends mainly on the top management commitment and awareness of the staff of their roles in satisfying their patients.

Finally this study provided some recommendation such as: the providers of service to renal failure patients must treat their patients in a special and pleasant way and the Ministry of Health must be aware that those patients are not only in need of medicine to recur, but their psychotics' status must be considered.

مستخلص البحث

تناولت الدراسة تقييم جودة الخدمة المقدمة من المراكز الصحية وأثرها علي مرضي الفشل الكلوي متخذةً مركز بحري لأمراض وجراحة الكلي كنموذج.

تمثلت مشكلة الدراسة في أثر تطبيق الجودة والتدريب الدوري للعاملين والتزام الإدارة العليا ببرامج الجودة في تحسين جودة الخدمة المقدمة بواسطة المركز.

حدد الباحث ثلاث فروض للدراسة وهي: أن أثر تطبيق الجودة في تحسين الخدمة المقدمة للمرضي، وأن التدريب المستمر للقوي العاملة أدّي إلي تحسين الخدمة، كما أن إلتزام الإدارة العليا ببرامج الجودة أدّي إلي تحسين الخدمة.

توصلت الدراسة إلي عدة نتائج أهمها:

نجاح تطبيق برامج الجودة يعتمد كلياً علي إلتزام وتفاعل الإدارة العليا وإشراك كل أعضاء المركز فيها وتوعيتهم بدورهم في نجاح الخدمة المقدمة منهم وأن رضاء المريض هو هدفهم جميعاً.

تقدمت الدراسة بعدة توصيات أهمها: أن يتعامل مقدمو الخدمة لمرضي الكلي مع مرضاهم بخصوصية، وأن تولي وزارة الصحة السودانية مزيداً من الإهتمام بهذه الشريحة وأن تدرك بأن علاجهم ليس مجرد تقديم العقار الطبي، وأن تولي الجانب النفسي القليل من الإهتمام.

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Chapter One:

Methodology & Previous Studies

Chapter One

Research Methodology & Previous Studies

Introduction

Measuring the quality and quality of provided services to identify their weakness is one of the most effective strategies of health care managers to improve the quality of services. In addition, due to the effect of services quality on the patients' satisfaction, quality measurement from their viewpoints is considered as an important indicator.

Accordingly, the present study aimed to measure the quality of service provided to renal failure patients in Khartoum State.

Today the world has become a global village and domestic and export trade is vital to the development of any country economy.

The key to lowering of the barriers to international trade is acceleration , the whole basis of which is to create confidence in the work carried out by certification and inspection bodies, as well as testing and calibration laboratories , located anywhere in the world.

Accreditation also has larger role to play within the country's economy because it provides confidence to the buyer or user of services. In the internal economy accredited laboratories are used to test medical specimens (blood, urine, body fluids... etc.).

Theme 1: Research Methodology:

Research Problem:

The weakness in quality of health services is reflected in the total quality of product and services in many sectors in Sudan as well as health sector.

This study tried to answer the following questions:-

1. Does implementation of quality in health sector improve service and raise patients' satisfaction?
2. Does the top management commitment to quality programmes improve the service provided to patients?
3. Do the training programmes for work force improve the service provided, and customer's satisfaction?

Significance of Research:

Nowadays quality is important in business and industries, and health care sector, many of customer required high quality products and services.

In order to fulfill the requirements of customer, organization must have quality system to ensure that their products or services have high quality to fulfill the customer's requirements.

For hospital and generally the health care sectors to provide good service, laboratories must have periodical calibration to have accurate test results. The visual tests and diagnosis test should be periodically traced to ensure that they have high quality of service.

The Hypotheses:

1. Implementation of quality programs in the health sectors improves customer service and patient satisfaction.
2. The top management commitment to the quality programs improve the service provided by health sectors and raise patient's satisfaction.

3. The periodical training of the staff of health sector improves the quality of service provided and patients' satisfaction.

Study Population:

The target population of this study including personal format all patients and key personnel in Bahri Medical Centre for Kidney Disease and Surgery (BMCKD) in Khartoum State in Sudan.

Sampling:

Random Sampling Technique is used to select 50 samples from target population.

Source:

Primary: Direct contact with patients and key personnel of the field.

Secondary: Internet and archives of the field.

Theme 2: Previous Studies:

M. Arici and GH. H Kim, 2013

A needs assessment was conducted on renal failure patients registered to a leading hospital trust in London in order to explore their psychological, social and spiritual needs. The aim of needs assessment was to create an evidence base for the development of comprehensive health psychology service to run currently with renal counseling support service within the department.

Found patients with End Stage Renal Disease (ESRD) receiving hemodialysis developed a new identity and a sense of self. This new and evolving emotional psychological state indicated patients became cognizant of a new set of circumstances: an uncertain future, demand illness, dependence of machinery, medication and health care providers.

This study aims to focus on psychiatry of renal failure patients anxiety and depression and common complications observed in patients with renal failure. So the patients suffering from renal failure often present with unusual psychological problems where treatment methods vary on an individualized basis and drug therapy is often needed in the management of such problems.

Patients on dialysis are in situation of dependence on machine, procedure, and a professional qualified medical group for the rest of his or her life.

Abstract: Kidney disease is one of the most striking examples of health disparities in American public health; disparities in the prevalence and progression of kidney disease are generally thought to be a function of group differences in the prevalence of kidney disease risk factors such as diabetes and hypertension. However, the presence of these comorbidities does not completely explain the evolved rate of progression from chronic kidney disease (CKD) to end stage renal failure disease among high risk population such African Americans. We believe that the social environment is an important element in the pathway from (CKD) risk factors to

(CKD) and end-stage renal failure disease. This review of the literature draws heavily from social science to present a conceptual frame specifying how social, economic and psychological factors interact to affect the risk for the progression of kidney disease.

Patients, who choose peritoneal dialysis (PD) must be trained to perform the dialysis treatment safely and effectively, they must be trained to wash hands first, wear a surgical glove and face masks and clean their exit side every day. Patients are also trained to spot the sign of an infection some of which include fever, and nausea. (Marino A. Bruce et al, journal)

Training is given to patients as well as patients care partner, to help patients when needed. Also a trained (PD) nurse is generally available by phone 24 hours a day to answer question and help troubleshoot minor problems that may arise.

Create a good nurse environment to improve patient satisfaction

A staffing plan with more nurses on a unit and supportive working conditions are factors that not only appeal to nurses; they also contribute to better outcomes, which could help hospitals bottom line and patient satisfaction. New researches approved the association between better staffing and good practice environment, and nursing care is a core service of hospitals. (University of Pennsylvania, School of Nursing)

While a supportive environment with good staffing levels may seem like a large investment, Marino said, it will pay off in better outcomes as evidence by prior studies linking quality of care and less staff turnover with better nurse-patient ratio and supportive work place.

My study: Healthy kidneys clean the blood by removing excess fluids the, minerals, and wastes. They also make hormones that keep the bones strong and the blood healthy when the kidneys fail. Harmful, waist build in the body, the blood pressure may retain excess fluid and not make enough red blood cells when this happens

patient need treatment to replace the work of the failed kidneys. (Debra wood, RN, contributor, 2013)

Researcher are exploring whether shorter daily session , or longer session performed overnight while the patient sleeps are more effective in removing , never dialysis machines makes these alternative more practice with home dialysis . But the government has not yet established a policy to pay for more than two haemodialysis session a week.

The quality guru Crosby said that: (complain is the gift). (Module Five (TQM)p300)

Types of complaints: Have to do with office procedure, such as long waiting time to return telephone calls and attitude of staff. These types of complaints can often be handled by staff (unless the complaint has to do with specific staff members) If you have a large group you can appoint a risk manager to handle these issues.

Hospital complaints: The most common complaint in the hospital setting is that the doctor does not see the patient often enough, Try to have a hospitalized patient seen every day by either yourself or your colleague.

Clinical complaints: If the patient has clinical complaint, the quality manager should address it himself. She or he must become personally involved in the more serious issues, particularly those related to quality – of – care concerns if the patient has a bad results, invite the patient to have an office visit.

How does the centre satisfy the patients: The centre must treat the patients as customer and that they need to tell nurses that we want to satisfy them? Hospital must have patient satisfaction score as a factor in fixing nurses and doctors pay and annual bonuses. Medical staff must learn that, patient satisfaction is not like guest satisfaction in a five stars hotel. It is ideally different. Also pleasant interactions with nurses translate in to high patient satisfaction; but if the nurses hate their job, this will give opposite results. (Debra wood, RN, contributor, 2013).

The reasons for a patient being dissatisfied with a particular health care can be very complex. It is not so simple as to just include a line in a survey "were you satisfied with your doctor?"

Sometimes patient voices frustration in a survey despite your best efforts to be nice, helpful and professional .The saying "sick but satisfied "encourage the patient to come back to hospital and get better service. The biggest obstacle to improving patient satisfaction is that the health care providers compare themselves to the providers of any other service and forget the human side of their job.

Information was taken directly by contacting quality supervisor in the centre under study.

Awareness of Patients

The need to educate patients in order to enable them to participate in making appropriate choices for all therapeutic options in end stage renal disease would seem obvious. Yet there are many barriers to providing such information. We measured pre-cared knowledge of the therapeutic options for end stage renal disease in to patients with chronic kidney disease in established treatment programmes a self-administrated questionnaire was given to 676 patients with stage 3-5 chronic kidney disease as a part of the study designed to identify trends in practice pattern and outcomes over a four years period. (Direct contact with Key-Personnel of the Medical Centre).

The medium patient age was 66. About three fourths Caucasian and almost half were diabetic. When patients were asked to rate their level of knowledge about one third reported limited or no understanding of their (CKD) and no awareness regarding their treatment options.

Significant and substantial number of patients indicated they have no familiarity with transplant, haemodialysis and continued automated peritoneal dialysis.

Perceived knowledge improved with the progression of kidney disease and frequency nephrology visits. However only about half of patients with four or more nephrology appointments in the prior year reported knowledge of haemodialysis, peritoneal dialysis or transplant. (Dr. Cladio Ranco, MD, Renaldo Bellome, MD Guse Ppe La Greca MD)

Age, gender and disease had no impact on levels of patient's knowledge, but African-Americans reported having significantly less understanding than Asians or Caucasians.

These findings suggested that the lack of perception concerning the treatment options of chronic kidney and end stage renal disease reflects, in part, problem with the education of patients by awareness.

The discrepancy of perceived knowledge between African-Americans and other races need special attention. (Mohammed Karim Bahadori, Mehdi. Raadabadi, and Ramin Ravangard)

What treatments of kidney are available?

Three major types of treatment are available for patient with kidney failure. These are haemodialysis, peritoneal dialysis, and kidney transplantation.

Haemodialysis maybe done at centre or at home, and treatment usually takes place three times a week.

Peritoneal dialysis may be done at home, at work, at school or wherever a clean private space is available.

The two types of peritoneal dialysis are automated peritoneal dialysis (APD) which requires the use of machine, and continuous ambulatory peritoneal dialysis (CAPD) which is machine-free.

Kidney transplants: can come from living donors, who are usually family members, spouse or friends of the patient. Transplant can also come from people who died recently (non-living donors).

It is important to remember that treatment doesn't cure kidney failure and that each type of treatment has its advantages and disadvantages. Patient and family should explore each choice carefully with the doctor transplant surgeon and other health care team-members.

Taking a look of his life style helps the patient to choose the best treatment for him.

What are the responsibilities of patients?

Understanding the volume of responsibilities is the first step in adjusting to the treatment.

Every patient should:

1. Take part of decision about types of treatments.
2. Apply for funding to cover the medical expenses of treatment.
3. Arrange transportation to the treatment centre by car, taxi etc .

4. The social worker at the dialysis centre may be able to help by suggesting transportation sources for ambulatory patient and patients requiring wheelchair transportation.
5. Arrive in time for scheduled dialysis treatments.
6. Follow the prescribed diet and fluid restrictions and tell the health care staff about any problems in following the diet.
7. Make necessary arrangements for dialysis well in advance when travelling.
8. Returning to work and other activities. Can dialysis and transplant patient return to work? Yes, with their doctors' permission, dialysis and transplant patient encouraged to return to work. at first , working in addition to following an involved medical program can be tiring . Additional support and encouragement at home and from your health care team an important.
9. Patients who are employed may want to consider taking sick leave, or a leave of absence instead of giving up their jobs.

Can patients of renal failure practice physical exercises?

Yes, they can exercise programmes approved by the doctor, these exercises can increase strength, reduce stress and depression and increase overall quality of life day-to-day living.

Can he travel?

Yes, travel for kidney patients requires advanced planning, but it can be done. In fact the ability to travel can be an important part of rehabilitation and satisfying quality of life.

Dr. Claudio Ronco MD, Rinaldo Bellomo MD ...Gluse Ppe La Greca MD

What kinds of changes of physical appearance may occur?

Changes in physical appearance due to chronic kidney disease vary from person to person.

Sometimes the patient's skin may become paler or slightly yellow. Some of the patients may want to use cosmetics to change their skin tone. The skin may become dry and produce an (ashy) appearance on darker skin tone. It is important to bathe daily and keep skin well-moisturized.

Change may occur in body weight, due to fluid loss or retention or some transplant medicines. The patient may also notice a change in a taste in his mouth and a different smell in his breath; this is due to the build-up in the body of waste materials that are normally removed by the kidneys. These seem to be barriers to having a desire of sexual relationships.

While some men and women with kidney failure continue to have sexual problems, many transplant recipients become more active sexually and have fewer sexual problems as their new kidney continues to function. Men with chronic kidney failure have been known to have less chance of fathering a child. This is due to a lowered fertility or even infertility.

Women with kidney failure, whether or not have begun dialysis, are usually advised against becoming pregnant. The rate of complications and the risk to both of the developing baby and the mother is high. It is important to consult a doctor for further information and advice and to consider birth control. But a woman who has a kidney transplant usually has regular monthly period and better general health.

Therefore it is easier for her to get pregnant. In some cases, pregnancy is not recommended because of risk to the mother's life or possible loss of the transplant.

Treatment methods for kidney failure in children

- 1- What are the kidneys, and what do they do?
- 2- What is kidney failure and how is it treated in children?
- 3- What are the types of dialysis?
- 4- What is kidney transplantation?
- 5- What are the possible complications for children with kidney transplant?

- 6- What are the complications of kidney failure and how they treated?
- 7- What are the challenges of kidney failure for children and their families?
- 8- Eating, diet and nutrition. How critical kidney diseases affect children and their families?

The lives of children with serious and long lasting conditions such as CKD are affected in many ways. CKD is any condition that causes reduced kidney function over an extended period of time. Children with CKD may have a negative self-image and may have relationships problems with family members, due to the stress of living with CKD.

The condition can lead to behaviour problems and may make participation in school and extra-curricular activities more difficult.

CKD can cause learning problems because the build-up of wastes in the body can slow down nerve and brain function.

Children with CKD may have trouble concentrating and may develop language and motor skills more slowly than their peers. The most severe problems occur when CKD is present starting early in infancy.

CKD that leads to kidney failure described as end stage kidney disease or ESKD when treated with kidney transplant or blood filtering treatments called dialysis- can increase these challenges.

To determine whether there is an independent association of acute renal failure requiring dialysis with operative mortality after cardiac surgery. (Dr. Claudio Ronco MD, Rinaldo Bellomo MD ...Gluse Ppe La Greca MD)

Patients and methods: the 42-773 patients who underwent coronary artery bypass or valvular heart surgery at 43 Department of Veterans Affairs Medical Central between 1987 and 1994 were evaluated to determine the association between acute renal failure sufficient to require dialysis and operative mortality, with or without adjustment for common.

Assessing Health Quality, the Case for Tracers:

A set of specific health problems – called tracers – were selected by a set of criteria. The tracers include otitis media and associated hearing loss, visual disorders, iron deficiency anemia, urinary tract infection, essential hypertension and cancer of the cervix.

When one tracer is used in a hypothetical community served by a neighbourhood health centre, application of the tracer method for example, is shown to care for only 11% of the estimated population of hypertensive adult males in the community.

By the evaluation of the diagnostic, therapeutic and follow-up processes of tracers and the outcome of treatment, it is possible to assess the quality of routine care provided in a health-care system. (National Academy of Services, 2011)

The components of high quality care that assists healthy people stay healthy, cures people's a cured illness and allow chronically ill people to live as long and fulfilling a life as possible.

To receive quality care; people must have access to care. People with reduced access to care are likely to suffer worse health outcomes in comparison to those enjoying full access (Thomas S. Bodenheimer Kevin, 2009, p 127).

The impact of environmental factors on health, it is clear that the environment in which people live has a direct effect of their health; a safe water supply, food that is nutritionally sufficient has a great role in avoiding diseases.

Besides drugs, polluted air played a major role in transmission of diseases in many countries. Also other exposures such as tobacco and smoking cause a sharp increase in the incident of lung cancer and stomach cancer(Annalee Yassi ... etal, 2001, page 401).

Chapter Two:

Concept of Quality Service

Chapter Two

The Concepts of Quality Service

Service quality is a key factor of the competitive capacity of business consulting services providers. It helps strengthen the image, create references, establish long term business relationships and reduce the perceived risk to the customer of such services.

The existing service quality methods are not suitable for application to the business-to-business (B2B) market due to the differences in service characteristics and specific behaviour of (B2B) customers. Business consulting services are highly intangible and complex to evaluate, with a large number of people involved generally both in their provision and use.

Typically they are implemented in the form of a project, characterized by a high degree of interaction between service providers and customers who differ by their ability to be integrated in their service provision process. It is essential to adapt these services to specific customers' needs, and the outcome of service provision may sometimes be only apparent a while after the consulting project has been completed. Therefore there is no single, generally accepted model of conceptualizing and measuring the quality of (B2B) services such as business consulting services. Building from existing theoretical notion, the paper determines the suitability of Donabedian's service quality model for conceptualizing and measuring the perceived quality of business consulting services (Professor Durdana Ozretic Dosen, Ph.D., Marketing Department Faculty of economics & Business, University of Zagreb).

Based on the result of the companies which use them, the perceived quality of business consulting services was found to be a multi-dimensional construct of a higher order which is perceived by customers through such dimensions as service

potential, process and result. Thus, the preliminary hypothesis of paper was confirmed. Research results provide the basis for recommendations to be presented for use by the marketing management of consulting services providers as well as serving as suggestions for future research. (Professor Durdana Ozretic Dosen, Ph.D., Marketing Department Faculty of economics & Business, University of Zagreb).

An assessment of how well a delivered service conforms to the client's expectations. Service business operators often assess the service quality to their customers in order to improve their service, and ability to identify problems and to better assess client's satisfaction.

Factors Influencing Health Care Services Quality

The main purpose of this study is to identify factors that influence health care quality.

Methods: Exploratory in-depth individual and focus group interviews were conducted with health care stakeholders including health care providers, managers, and policy-makers to identify factors affecting quality of health care services provided in organizations.

Result: Quality of health care services is a production of cooperation between the patient and health care provider in a supportive environment.

Personal factors of the provider and the patient, and factors pertaining to the health care organization, health care system and the broader environment affect health care service quality. Health care quality can be improved by supportive visionary leadership, proper planning, education and training, availability of resources, effective management of resources, employees and processes and collaboration and co-operation among providers. The provider's policy-makers and managers of health care must develop a conceptual framework, and the staff must be aware with factors those affect health care service quality. (Ali Mohammad Mosadeghrad, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4122083/>)

Chapter Three:

Providers of services

Chapter Three

Providers of Service

Theme One: Background about Bahri Medical Centre

Bahri Medical Centre for Kidney Diseases and Surgery (BMCKD) initiated mainly to localize medicines and dialysis of patients in Sudan as the increasing numbers of patients in the recent years rapidly. The centre began its work in 2003 and the first dialysis process ran in 18/05/2003 under supervision of national centre and Bahri Educated Hospital, the staff of the centre at that time was house-officers doctors, sisters and nurses. The capacity of the center was 10 dialysis machines. And one of them was specialized for Hepatitis (B) patients. The machines deal with 20 patients in two shifts daily.

Recently the centre added another shift to become three shifts and thirty dialysis processes a day for 90 patients weekly. The idea to initiate (BMCKD) to help poor patients for free dialysis, first it began shared with Bahri Educated Hospital, then separated to its current position.

Vision and Mission:

Localized medicine care, diagnosis, medical culture and free dialysis for kidney failure patients.

Financial sources of the centre depends on Ministry of Health, World Health Organization, voluntary organizations and individual internal and external charitable.

The first phase of (BMCKD) is one room with 13 dialysis machines then raised to 20. The second phase increased number of rooms to 3, 1 laboratory, theatre and offices. Also there is contact between the centre and local and international leaders to increase number of dialysis machines and rooms.

e.g. Abd ELrahman SwarAldahab

Abdelmajid Hamid Khalil.

Diplomate: Merqhani Solayman.

There is a continues co-ordination between the centre and the WHO. The organizational structure of the center consists of Alsheikh Sadig Abdallah Abdelmajid, Mohammed Swar Aldahab as (CEO) and top management of: Mohammed Malik Osman and Osman Billiya.

Theme Two: Material:

Study Design:

Based on research, researcher, developed the objectives, design and frame work of research Bahri Medical Centre of Kidney Disease and Surgery (BMCKD) was chosen as a research area because it is one of the oldest centres in Khartoum for kidney disease and has a wide scope of testing and research services.

According to objectives of research three hypotheses are assumed to evaluate the service provided by the centre to the patients.

Questionnaire survey was conducted and data was analysed by using SPSS software program.

Study Area:

The study was conducted in BMCKD in Khartoum state during October 2014 to January 2016.

Study Population:

The target population of this study including personal format all patients and key personnel in BMCKD in Khartoum State in Sudan.

Sampling:

Random Sampling Technique is used to select 50 samples from target population.

Inclusion Criteria:

The participants in this study were chosen according to the following criteria:

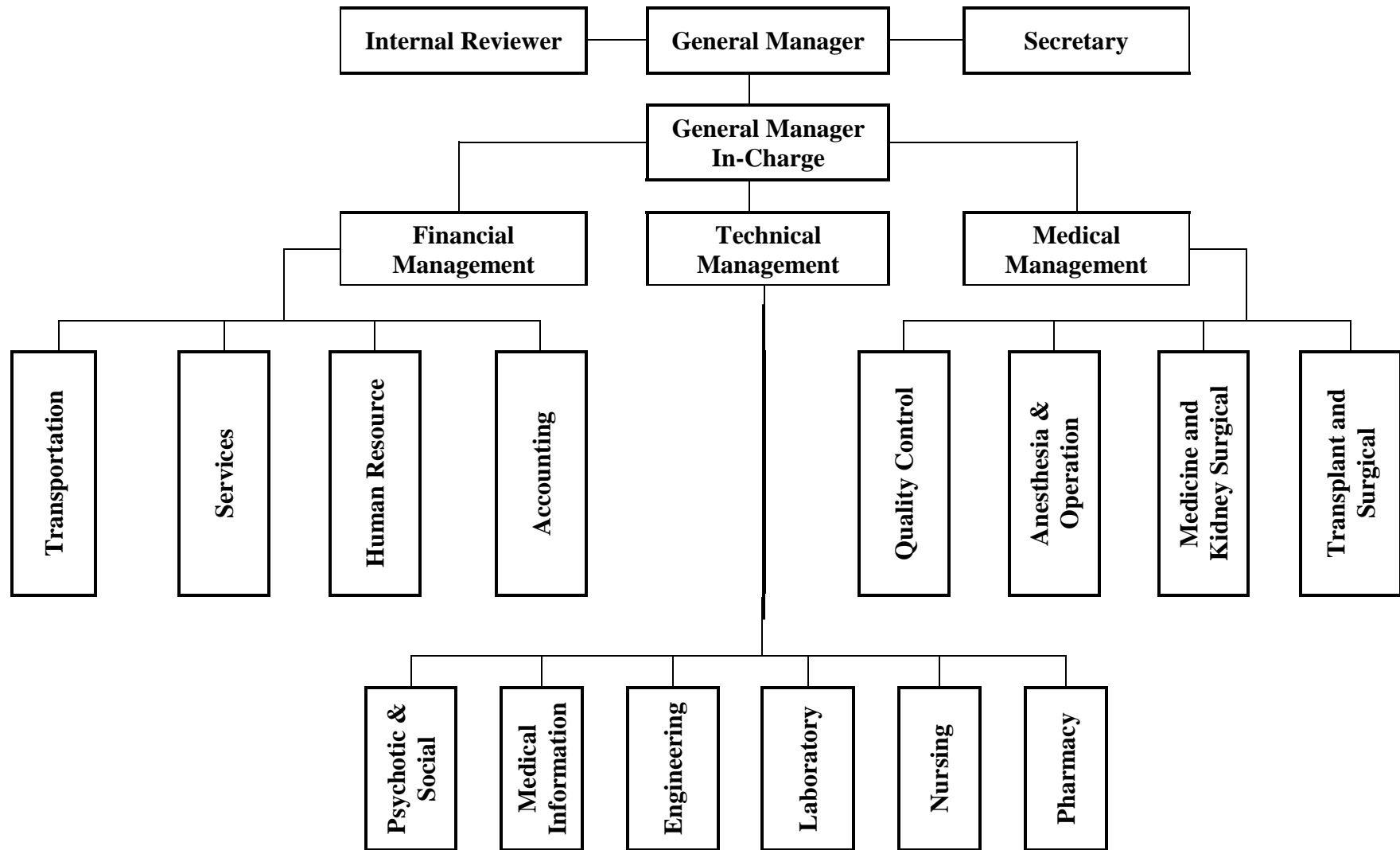
- a. Top managers of BMCK.
- b. Need of department of laboratory.
- c. Professional personnel from supporting department.
- d. Senior patients of dialysis (two years and above).

Ethical Consideration:

Participants' opinions were treated honestly, fairly and respectfully, professional and scientific responsibilities were adhering to highest scientific and professional standard.

Information provided by participants were kept confidential and used only for this study.

Organizational Structure of Bahri Medical Centre for Kidney Disease and Surgery (BMCKD)



Source: HR of (BMCKD)

Job Description of Manager of Nursing Services

Job: Nursing Services Manager

Major Tasks:

1. Daily management of Nursing Services in the Centre.
2. Periodical reports to the centre manager.

Responsibilities:

1. To put plans and policies to achieve the centre's objectives.
2. Monitoring of implementation of the Health Ministry rules.
3. To read and evaluate the supervisor's work.
4. To provide suggestions to improve the work in the centre.
5. Periodical check to the department's needs.
6. Providing programmes of training and education.
7. To improve nursing techniques for better nursing.
8. Any other tasks from the top management.

Job Description of Nursing Manager Assistant:

1. Monitoring and evaluating the work in the centre.
2. Offering plans of orientation to the patients.
3. Controlling of nursing services.
4. Measuring the development of working standard of the nursing team.
5. Controlling needs of the department.
6. Implementation of rules and policies as the head of department said.
7. Evaluating the department members.
8. Maintaining the staff records as (vacations, medical reports, duties)

Source: (BMDCK)

Chapter Four:

Cause of Study and Data Analysis

Chapter Four

Cause of Study & Data Analysis

Theme One: Cause of Study

Cause of study is to assess and improve the quality of service provided to renal failure patients and change the impact remained about it.

Theme Two: Data Analysis:

Introduction:

This chapter contained the analysis of data sample (questionnaire data) which is 51 questionnaires; the sample was delivered randomly to the population of the research. For the analysis used the SPSS program which means (Statistical Package for Social Sciences).

The technique used for the analysis is the measurement of descriptive statistics to show the results of the sample by frequencies, percentages and charts. Also Chi-square test is used to discover the differences of the statistical significance.

First: Descriptive analysis for the demography data:

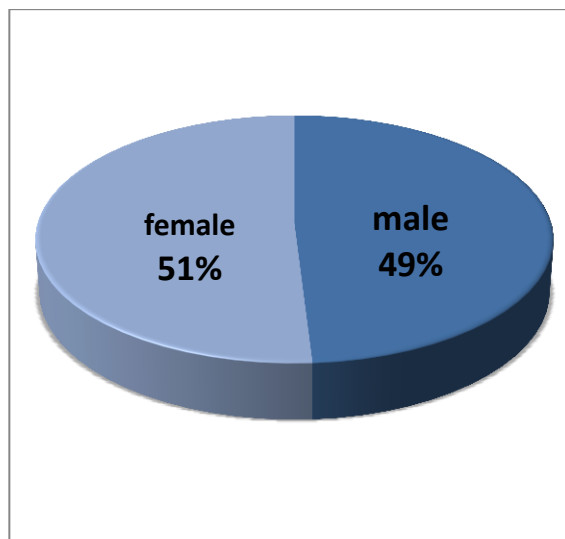
Descriptive analysis for the gender:

Gender	Frequency	Percentage
Male	25	49%
Female	26	51%
Total	51	100%

Table No. (1)

Source: Sample taken from Bahri Medical Centre for Kidney Disease & Surgery (BMCKD)

Figure No.(1):Figure of gender



Source: Sample taken from (BMCKD)

Through the results of frequencies and percentages on the table no. (1) and the Figure above the most frequency of the variables is the female frequencies 26 per percentage 51%, and the male frequencies 25 per percentage 49%.This means the female are greater than male.

Descriptive analysis for the Jobs:

Jobs	Frequency	Percentage
Manager	5	9.8%
Missing value	46	90.2%
Total	51	100%

Table No. (2)

Source: Sample taken from (BMCKD)

Figure No.(2):Figure of jobs



Source: Sample taken from (BMCKD)

Through the Frequencies and percentages on the table no. (2) and the Figure above the most frequency variable is manager only and there is no frequency for Executive chief officer - Chairman of board of directors or others. The missing value is 46 per percentage 90.2%. This means the most Frequencies of the variable is the Missing values.

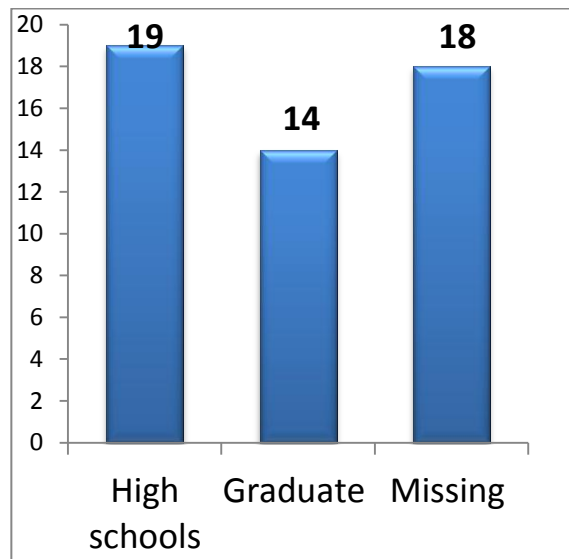
Descriptive analysis for the Academic qualification:

Academic	Frequency	Percentage
High schools	19	37.3%
Graduate	14	27.5%
Missing value	18	35.3%
Total	51	100%

Table No. (3)

Source: Sample taken from (BMCKD)

Figure No. (3): Figure of Academic qualification



Source: Sample taken from (BMCKD)

Through the frequencies and percentages on table no. (3) and the diagram above the most frequency of variable is High schools frequented 19 per Percentage 37.3%. and graduate frequented 14 per Percentage 27.5% there is no frequency for Post graduate. The missing value is 18 per 35.3%. This means the most Frequencies of the variable is the High schools.

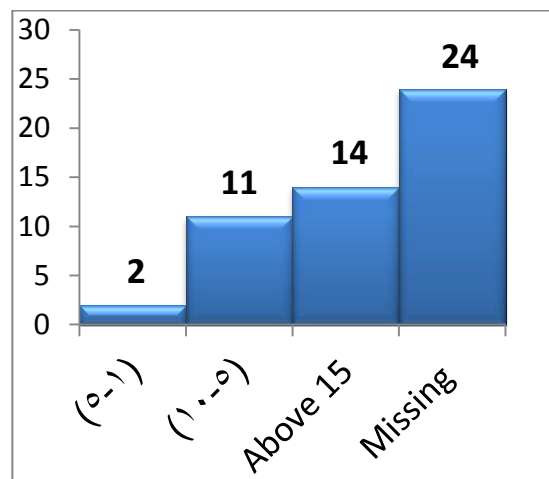
Descriptive analysis for the years of experience:

Years	Frequency	Percentage
(1-5)	2	3.9%
(5-10)	11	21.6%
Above 15	14	27.5%
Missing	24	47.1%
Total	51	100%

Table No. (4)

Source: Sample taken from (BMCKD)

Figure No.(4):Figure of years of experience



Source: Sample taken from (BMCKD)

Through the Frequencies and percentages on the table no. (4) and the Figure above the most frequency variable is the categories of above 15 frequented 14 per Percentage 27.5% , and the categories (5 – 10) frequented 11 per Percentage 21.6%, And the categories (1 – 5) frequented 2 per Percentage 3.9%, there is no frequency for the categories (10 – 15), the missing value is frequented 24 per Percentage 47.1%. This means the most Frequencies of the variable is the Missing values.

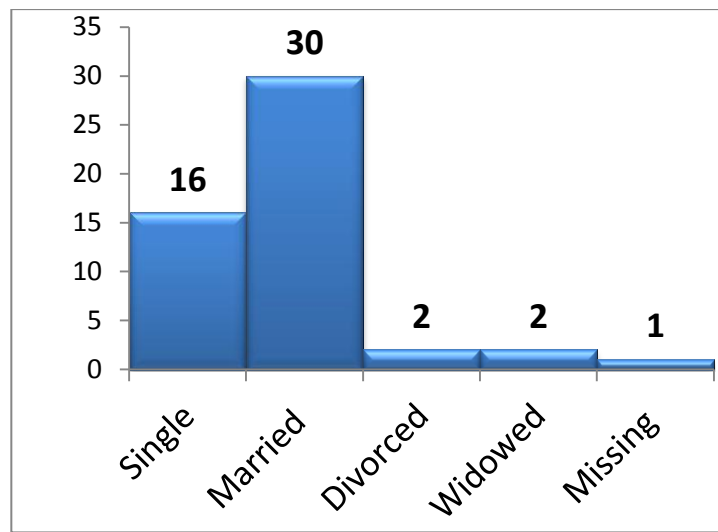
Descriptive analysis for social status:

Social status	Frequency	Percentage
Single	16	31.4%
Married	30	58.8%
Divorced	2	3.9%
Widowed	2	3.9%
Missing	1	2%
Total	51	100%

Table No. (5)

Source: Sample taken from (BMCKD)

Figure No.(5): Figure of Social status



Source: Sample taken from (BMCKD)

Through the frequencies and percentages on table no. (5), and the figure above, the most frequency of the variable is the married frequented 30 percentage 58.8%, and single frequented 16 percentage 31.4%, the divorced and widowed all of them frequented 2 percentage 3.9% for all. There is missing values frequented 1 percentage 2%. This means the most frequencies of the variable is the married people.

Practical application by descriptive statistics analysis to show the results of Statements of the Hypotheses:

The first hypothesis: Application of Quality Improved the Quality of Service

Number	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly Disagree	Result
		Individuals					
		Percentage %					
1	Quality is affecting directly proportional on service provided.	10	29	7	4	1	Agree
		19.6%	56.9%	13.7%	7.8%	2%	
2	Implementation of quality improved the quality of services.	12	35	2	2		Agree
		23.5%	68.6%	3.9%	3.9%		
3	The time patient spend before meeting the doctor is long.	10	11	18	6	5	Agree
		19.6%	21.6%	35.3%	11.8%	9.8%	
4	The waiting and resting rooms are available in the center.	16	20	14	1		Agree
		31.4%	39.2%	27.5%	2%		
5	You faced by difficulties to go from place to place in the center.	2	5	3	17	24	Disagree
		3.9%	9.8%	5.9%	33.3%	47.1%	
6	The important places and persons are available and they are easily found.	2	11	24	9	5	Natural
		3.9%	21.6%	47.1%	17.6%	9.8%	
7	The places and key personal are well known and available to reach	12	18	18	1	2	Agree
		23.5%	35.3%	35.3%	2%	3.9%	
8	Computerize system is used in taking promises with doctors and in taking laboratories results.	9	9	10	17	6	Disagree
		17.6%	17.6%	19.6%	33.3%	11.8%	

Table No. (6)

Source: Sample taken from (BMCKD)

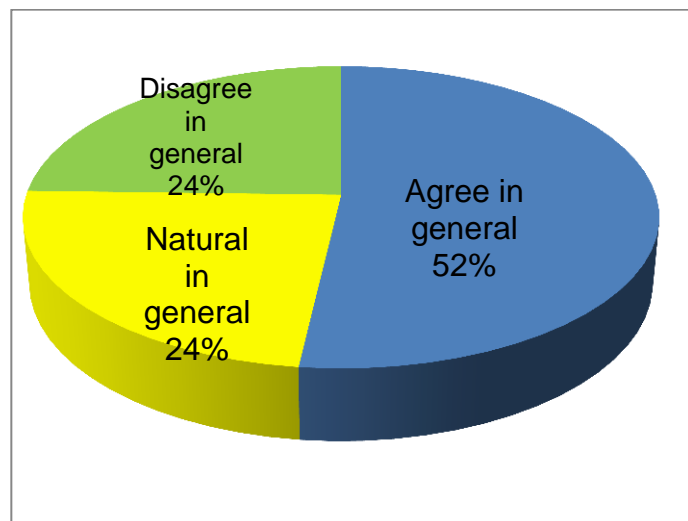
Through the results of analysis on the above table the (strong agree and agree) calculated as general, also (strong disagree and disagree) calculated as general, the process in the table below:

Statement	Agree in general	Natural in general	Disagree in general	Total
Total	211	96	100	407
Percentage	51.84%	23.59%	24.57%	100%

Table No. (7)

Source: Sample taken from (BMCKD)

Figure No.(6): Figure of the statements results



Source: Sample taken from (BMCKD)

Through the results on the table and the Figure above, the "agree" in general is greater than "disagree" in general and natural in general, this mean the most of the results on this hypothesis are indicating agreement except:

- The result of the statement number five is disagree, this mean (You **don't** faced by difficulties to go from place to place in the center).
- The result of the statement number six is natural, this mean most of the sample have no idea on (the important places and persons are available and they are easily found).
- The result of the statement number eight is disagree, this mean (Computerize system **not** used in taking promises with doctors and in taking laboratories results).

The second hypothesis: Periodical Training of the Staff Affected Quality of Service:

Number	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly Disagree	Result
		Individuals					
		Percentage %					
1	The receptionist understanding his work and does it accurately.	6	33	3	3	3	Agree
		11.8%	64.7%	5.9%	5.9%	5.9%	
2	The medical staff responding quickly to the patient call.	17	20	11		1	Agree
		33.3%	39.2%	21.6%		2%	
3	The staff of the centre are tactful and pleasant.	11	15	16	5	1	Agree
		21.6%	29.4%	31.4%	9.8%	2%	
4	The staff clothes and looks are suitable with their work.	14	17	11	4	1	Agree
		27.5%	33.3%	21.6%	7.8%	2%	
5	The nurses always do the tests during dialysis.	10	20	14	3	1	Agree
		19.6%	39.2%	27.5%	5.9%	2%	
6	The employees are in their places always and you are easily available.	14	14	20	1		Agree
		27.5%	27.5%	39.2%	2%		
7	Nurses satisfied the patients and no need to co patients during dialysis.	11	9	4	13	12	Disagree
		21.6%	17.6%	7.8%	25.5%	23.5%	
8	The patients and co-patients complaints and suggestion find the care from the center.	3	11	18	12	5	Natural
		5.9%	21.6%	35.5%	23.5%	9.8%	
9	The service received from providers is enough satisfied.	8	17	20	3	1	Agree
		15.7%	33.3%	39.2%	5.9%	2%	

Table No. (8)

Source: Sample taken from (BMCKD)

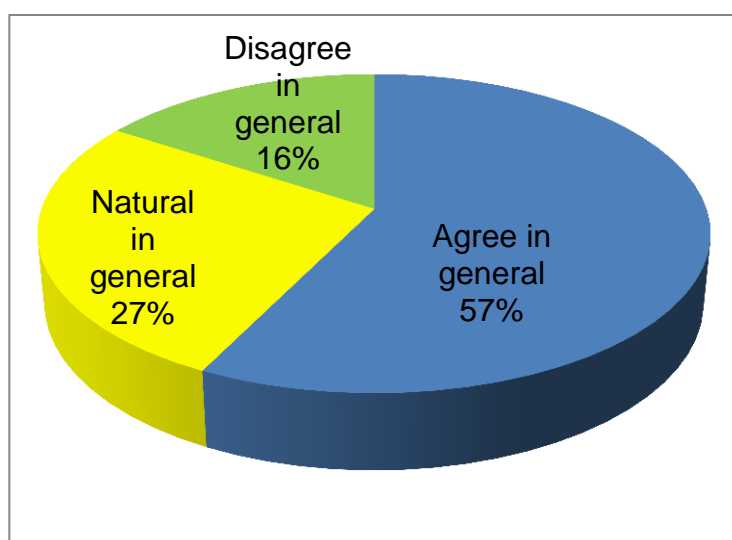
Through the results of analysis on the above table the ("strong agree" and "agree") calculated as general, also ("strong disagree" and "disagree") calculated as general, the process in the table below:

Statement	Agree in general	Natural in general	Disagree in general	Total
Total	250	117	69	436
Percentage	57.34%	26.83%	15.83%	100%

Table No. (9)

Source: Sample taken from (BMCKD)

Figure No.(7): Figure of the statements results



Source: Sample taken from (BMCKD)

Through the results on the table and the Figure above, the agree in general is greater than disagree in general and natural in general, this means the most of the results on this hypothesis is indicating to agreement except:

- The result of the statement number seven is disagree, this mean (Nurses **not** satisfied the patients and **need** to co-patients during dialysis).

The third hypothesis: The Top Management Commitment Improved Quality of Service Provided

Number	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly Disagree	Result
		Individuals					
		Percentage %					
1	The general climate in the center makes patient happy and comfortable.	12	25	8	2	1	Agree
		23.5%	49%	15.7%	3.9%	2%	
2	The top management is committed to pay salaries and bonuses for staff.	5	26	12	3	1	Agree
		9.8%	51%	23.5%	5.9%	2%	
3	You notice the culture which said that changes make you happy and comfortable in the center.	4	12	7	22	2	Disagree
		7.8%	23.5%	13.7%	43.1%	3.9%	
4	The top management of the center put a clear strategy for improving services.	5	7	27	7	1	Natural
		9.8%	13.7%	52.9%	13.7%	2%	
5	The patients and co-patients can easily meet the top management to provide their complaints and suggestions.	5	23	13	4	2	Agree
		9.8%	45.1%	25.5%	7.8%	3.9%	
6	The top management put clear plans to handle the complaints and suggestion.	5	9	18	14	1	Natural
		9.8%	17.6%	35.3%	27.5%	2%	
7	The top management gives enough time to employees to ask and to enquire.	7	18	14	6	2	Agree
		13.7%	35.3%	27.5%	11.8%	3.9%	

Table No. (10)

Source: Sample taken from (BMCKD)

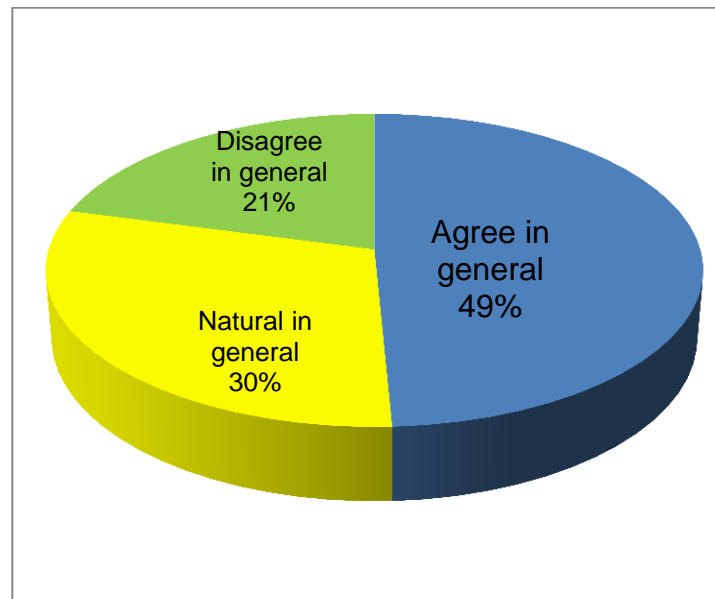
Through the results of analysis on the above table the ("strong agree" and "agree") calculated as general, also ("strong disagree" and "disagree") calculated as general, the process of calculation is shown in the table below:

Statement	Agree in general	Natural in general	Disagree in general	Total
Total	163	99	68	330
Percentage	49.39%	30.00%	20.61%	100%

Table No. (11)

Source: Sample taken from (BMCKD)

Figure No. (8): Figure of the statements results:



Source: Sample taken from (BMCKD)

Through the results on the table and the figure above the "agree" in general is greater than "disagree" in general and natural in general, this means the most of the results on this hypothesis is indicating agreement except:

- The result of the statement number three which is disagree; this means (You don't notice the culture which shows that changes make you happy and comfortable in the center).
- The result of the statement number four is natural; this means most of the research population has no idea on (The top management of the center put a clear strategy for improving services).
- The result of the statement number six is natural, this mean most of the research population have no idea on (The top management put clear plans to handle the complaints and suggestion).

Reliability and constancy test for sample:

For reliability and constancy calculated Cronbach' Alpha value witch is equal 0.877, this value is consider high, the constant is equal 0.936, also consider high, this mean the sample was delivered to the population of the research randomly and the replying for choices was fair.

Practical application by Chi-square test:

The first Hypotheses: Application of Quality Improved the Quality of Service:

No.	Statement	Mean	Std. Deviation	Chi. value	D. F	P. value
1	Quality is affecting directly proportional on service provided.	2.1569	.90272	47.725	4	0.000
2	Implementation of quality improved the quality of services.	1.8824	.65260	57.00	3	0.000
3	The time patient spends before meeting the doctor is long.	2.7000	1.21638	10.60	4	0.031
4	The waiting and resting rooms are available in the center.	2.0000	.82462	15.902	3	0.001
5	You face by difficulties to go from place to place in the center.	4.0980	1.13587	37.529	4	0.000
6	The important places and persons are available and you are easily found.	3.0784	.97659	28.118	4	0.000
7	The places and key personal are well known and easy to reach	2.2745	.98140	27.137	4	0.000
8	Computerized system is used in taking appointments with doctors and in taking laboratories results.	3.0392	1.31089	6.549	4	0.162

Table No. (12)

Source: Sample taken from (BMCKD)

Through the results of Chi-square on the above table, most of the P. value(Sig.) for statements are less than the Level of significance 5%.It mean statistically no significant on these statements. Except the P. value (Sig.) of statement No. (8) is equal 16.2% greater than the Level of significance 5%.Itmean statistically significant, this mean (Computerize system don't used in taking promises with doctors and in taking laboratories results).

The Second hypothesis: Periodical Training of the Staff Affected Quality of Service:

No.	Statement	Mean	Std. Deviation	Chi. value	D.F	P. value
1	The receptionist understands his work and does it accurately.	2.2500	.97849	72.00	4	0.000
2	The medical staff responds quickly to the patient call.	1.9388	.87579	17.20	3	0.001
3	The staff of the center are tactful and pleasant.	2.3750	1.02366	17.42	4	0.002
4	The staff clothes are suitable with their work.	2.1702	1.02828	19.26	4	0.001
5	The nurses always do the tests during dialysis.	2.2708	.93943	25.54	4	0.000
6	The employees are in their places always and you are easily available.	2.1633	.87433	15.74	3	0.001
7	Nurses satisfied the patients and no need to co patients during dialysis.	3.1224	1.53613	5.184	4	0.269
8	The patients and co-patients complaints and suggestion find the attention from the center.	3.1020	1.06546	14.57	4	0.006
9	The service received from providers is enough satisfied.	2.4286	.91287	28.86	4	0.000

Table No. (13)

Source: Sample taken from (BMCKD)

Through the results of Chi-square on the above table, most of the P. value(Sig.) for statements are less than the Level of significance 5%.It mean statistically no significant on these statements. Except the P. value(Sig.) of statement No. (7) Is equal 26.9% greater than the Level of significance 5%.Itmean statistically significant, this mean (Nurses not satisfied the patients and need to co patients during dialysis).

The third hypothesis: the Top Management Commitment Improved Quality of Service Provided:

No.	Statement	Mean	Std. Deviation	Chi. value	D.F	P. Value
1	The general climate in the center make patient happy and satisfied.	2.0625	.88501	39.29	4	0.000
2	The top management is committed to pay salaries and bonuses for the staff	2.3404	.84124	43.96	4	0.000
3	You notice the culture which said that changes make you happy and comfortable in the center	3.1277	1.11545	27.15	4	0.000
4	The top management of the center put a clear strategy for improving services	2.8298	.89246	43.75	4	0.000
5	The patients and co patients can easily meet the top management to provide their complaints and suggestions	2.4681	.95214	32.04	4	0.000
6	The top management put clear plans to handle the complaints and suggestion	2.9362	1.00875	19.70	4	0.001
7	The top management give enough time employees to ask and to enquiring	2.5319	1.03946	17.79	4	0.001

Table No. (14)

Source: Sample taken from (BMCKD)

Through the results of Chi-square on the above table, most of the P. values(Sig.)are less than the Level of the significance 5%.It means statistically no significance on these statements.

Chapter Five:

The Results and Recommendations

Results and Recommendations

The Results

First: Results of Descriptive Statistics:

The First Hypothesis Results: Most of the statements results in this hypothesis were agreement except:

- The result of the statement number five is disagree, this mean (You **don't** faced by difficulties to go from place to place in the center).
- The result of the statement number six is natural, this mean most of the sample have no idea on (the important places and persons are available and you are easily found).
- The result of the statement number eight is disagree, this mean (Computerize system **not** used in taking promises with doctors and in taking laboratories results).

The Second Hypothesis Results: Most of the statements results in this hypothesis were agreement except:

- The result of the statement number seven is disagree, this mean (Nurses **not** satisfied the patients and **need** to co-patients during dialysis).

The Third Hypothesis Results: Most of the statements results in this hypothesis were agreement except:

- The result of the statement number three is disagree, this means (You **don't** notice the culture which says that changes make you happy and comfortable in the center).
- The result of the statement number four is natural, this mean most of the sample have no idea on (The top management of the center put a clear strategy for improving services).
- The result of the statement number six is natural; this means that most of the samples have no idea on the statement (The top management put clear plans to handle the complaints and suggestion).

Second: Results of Chi-Squire Test:

The First Hypothesis Results: Most of the P. values (Sig.) are less than the Level of the significance 5% except:

-The P. value (Sig.) of statement number eight is equal 16.2% greater than the level of significance 5%,it statistically significant, this mean (Computerize system **don't** used in taking promises with doctors and in taking laboratories results).

The Second Hypothesis Results: Most of the P. values (Sig.) are less than the Level of the significance 5% except:

-The P. value(Sig.) of statement number seven is equal 26.9% greater than the Level of significance 5%,itstatistically significant, this mean (Nurses **not** satisfied the patients and **need** to co patients during dialysis).

The Third Hypothesis Results: Most of the P. values (Sig.) are less than the Level of the significance 5%, this means no statistically significance in.

Recommendation:

This study recommends that further researches will help solving limitation of quality of service provided by BMCKD:

- 1- Implementation of clear Quality Management System (QMS).
- 2- This research is will be useful if it is made in a large scope which covers many centers and hospitals of kidney diseases.
- 3- Further researches need to study the renal failure patients relationships and psychiatric situation and other factors affecting them such as economic, environment, society culture and political situation.
- 4- It is necessary to assess the view of center customer about the satisfaction of the service.

Finally:

Change take place in an accelerated rate today and tomorrow will be different from today. Therefore Sudanese hospitals and medical centers for kidney disease must develop a new strategy to meet this change successfully.

Assessment of Quality of Services

The services provided from hospitals and medical centres in our public sector are low quality, because this sector is not productive so employees gain low salaries and they need to join other in private sector's jobs to improve their incomes. This is affected directly on the time they spend in their public job and their loyalty to their work in general health care services. The dialysis operations going on to the renal failure patients are given for free from the World Health Organization (WHO), and the government supports to other devices those needed for dialysis. But the employees have only their salaries and no bonus; because government only pays for two dialysis operations per week for each patient.

The strong complain from all patients is that nurses are not available during dialysis operation, and they need co-patient, although the right procedure is that the nurses and sisters with their sterile uniform must be close to patients, for helping and solving problems may occur during dialysis. Co-patients may be a source of contamination and other accidental symptoms.

If ministry of Health improves the situation of the staff in that sector they will like their job and they will be more loyal to their work, also they will be available all the time on their job and they will not need to join another work. In spite of their deadly sickness; the patients will be more comfortable and satisfied.

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&

Appendix

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Appendix

Questionnaire:

1st Hypotheses: Application of Quality Improved the Quality of Service

No.	Object	Strongly agree	Agree	Natural	Disagree	Strongly disagree
1	Quality is affecting directly proportional on service provided.					
2	Implementation of quality improved the quality of services.					
3	The time patient spends before meeting the doctor is long.					
4	The waiting and resting rooms are available in the center.					
5	Customers face by difficulties to go from place to place in the center.					
6	The important places and persons are available and you are easily available.					
7	The places and key personal are well known and easy to reach.					
8	Computerize system is used in taking appointments with doctors and in taking laboratories results.					

2nd Hypotheses: Periodical Training of the Staff Affected Quality of Service

No.	Object	Strongly agree	Agree	Natural	Disagree	Strongly disagree
1	The receptionist understands his work and does it accurately.					
2	The medical staff responds quickly to the patient call.					
3	The staff of the center are tactful and pleasant.					
4	The staff clothes are suitable with their work.					
5	The nurses always do the tests during dialysis.					
6	The employees are in their places always and you are easily available.					
7	Nurses satisfied the patients and no need to co patients during dialysis.					
8	The patients and co-patients complaints and suggestion find the attention from the center.					
9	The service received from providers is enough satisfied.					

3rd Hypothesises : the Top Management Commitment Improved Quality of Service Provided

No.	Object	Strongly agree	Agree	Natural	Disagree	Strongly disagree
1	The general climate in the center make patient happy and satisfied.					
2	The top management committed to pay salaries and bonuses for the staff					
3	You notice the culture which said that changes make you happy and comfortable in the centre					
4	The top management of the centre put a clear strategy for improving services					
5	The patients and co patients can easily meet the top management to provide their complaints and suggestions					
6	The top management put clear plans to handle the complaints and suggestion					
7	The top management give enough time employees to ask and to enquiring					