"QUALITY OF LIFE AMONG DIALYSIS PATIENTS IN A SELECTED KIDNEY CENTER IN STATE OF KUWAIT"

THE THESIS SUBMITTED TO THE MIDDLE EAST UNIVERSITY FZE

IN PARTIAL FULFILMENT OF THE REQUIREMENT

FOR THE AWARD OF DEGREE OF M.Sc. (NURSING) –

MEDICAL SURGICAL NURSING

By

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SEPTEMBER 2016

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Education for global integration

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CERTIFICATE

This is to certify that the work titled, **"QUALITY OF LIFE AMONG DIALYSIS PATIENTS IN A SELECTED KIDNEY CENTER IN STATE OF KUWAIT"** is a bonafide work done by **MOCHAMAD ROBBY FAJAR CAHYA** at middle east university Kuwait, towards the partial fulfillment of the University rules and regulations for the award of the Degree of M.Sc. (Nursing), Medical Surgical Nursing, (Branch-I) during the academic period 2014-2016.

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LIST OF ABBREVIATIONS

CAPDP	Continuous Ambulatory Peritoneal Dialysis Programs
CRD	Chronic Renal Disease
CRF	Chronic Renal Failure
DOPPS	Dialysis Outcomes and Practice Patterns Study
ESRD	End Stage Renal Disease
HD	Hemodialysis
QoL	Quality of Life
SD	Standard Deviation

Chapter 1

THE PROBLEM AND ITS BACKGROUND

Introduction

In this particular study, the researcher determined the quality of life among dialysis patients in a selected kidney center in State of Kuwait. According to the article of William C. Shiel Jr. (2015) explained that kidney dialysis is a procedure that is a substitute for many of the normal functions of the kidneys. Dialysis allows patients with kidney failure a chance to live productive lives. There are two types of dialysis: hemodialysis and peritoneal dialysis. Each type of dialysis has advantages and disadvantages. Patients can often choose the type of long term dialysis that best matches their needs. The kidneys are responsible for filtering waste products from the blood. Dialysis is a procedure that is a substitute for many of the normal functions of the kidneys. The kidneys are two organs located on either side in the back of the abdominal cavity. Dialysis can allow individuals to live productive and useful lives, even though their kidneys no longer work adequately. Statistics from 2010 showed approximately 414,000 patients were receiving dialysis in the United States. More than an additional 179,000 patients had a functioning kidney transplant for end stage renal disease. Dialysis helps the body by performing the functions of failed kidneys.

With the many problems mentioned and identified regarding the quality of life among dialysis patients, the researchers will determine the roots of the problems associated with the medical factors affecting the dialysis patients that are not properly emphasized. Without proper observance, many worst scenarios will be linked on medical and health aspects that may hamper the the quality of life of people with certain diseases and illnesses Thus, the researchers have the desire to discover what is wrong in the health governance of people and the medical system at large to discover ways to improve the problems existing in the society today.

Background of the Study

For Muslims illness, suffering and dying are considered part of life and a test from Allah (God). Consequently, the way Muslim people in Kuwait perceive their own QOL might be different from others. Given that no studies were found in the literature examining the QOL in dialysis patients from Kuwait; it was very important to study the QOL sample of dialysis patients in the country. Studying the impact of religion on how Kuwait dialysis patients and other residents of Kuwait perceive QOL is important. Nurses and other health care professionals deal with several issues pertinent to QOL in dialysis patients almost on daily basis, yet little is known about the determinants of QOL in dialysis patients from Kuwait.

The current study determined the quality of life among dialysis patients in State of Kuwait. It provided background information about the emergence of dialysis that can help patients with kidney failures for treatment and remission of the said disease to help the proponents in the process of this research study to discover and recommend the strengthening of possible ways to improve the medical treatments of the disease.

Based on the history of dialysis being stated, the study was made possible to determine the quality of life among dialysis patients in State of Kuwait and to improve more the health and medical science in the treatment of the said illnesses. At the same time, it will provide a background information about the emergence of dialysis that can help patients with kidney failures for treatment and remission of the said disease to help the proponents in the process of this research study to discover and recommend the strengthening of possible ways to improve the medical treatments of the disease.

Research Locale

The study was conducted at Mubarak Al-Abdulla Al-Jaber Al-Sabah Dialysis Center (MAAAJASDC) located in State of Kuwait. It is a modern 100 bed capacity hemodialysis center, operated by Mubarak Al-Kabeer Hospital under the Ministry of Health. It is designed and equipped with the latest technology in diagnostic care and treatment for hemodialysis and peritoneal

dialysis. It has multi-national health care team members that provide high quality patient care standards based on evidence-based practice, innovation, education, and collaboration. The machines used for hemodialysis patients are Gambro Artis Physio while Baxter machines and Fresenius machines are for peritoneal dialysis patients. It has 5 separate units for patients with MRSA, Hepatitis B negative, 2 units for Hepatitis C positive as well as a one isolation room consisting of patients with Hepatitis B positive and Hepatitis C positive. Services provided by the center are: laboratory tests and X-ray periodically whenever the need arises, provides all the medicines needed by kidney patients, medical consultations required by kidney patients, nursing care during hemodialysis, the transfer of patients to specialized hospitals in case they need to belong to non-consulting kidney disease, does nutritional, social and psychological counseling to patients and provides community awareness of kidney disease and methods of prevention and treatment by issuing a message quarterly as well as through the establishment of events seminars and issuing bulletins and communicate over the phone.

Statement of the Problem

This research study determined the quality of life among dialysis patients in a selected kidney center in State of Kuwait. Specifically, it aimed to answer the following research questions:

1. What is the demographic profile of respondents in terms of:

    1.1 Age,

1.2 Gender,

1.3 Civil status,

1.4. Educational attainment,

1.5 Occupation,

1.6 Duration of hemodialysis,

1.7. Frequency of hemodialysis,

1.8 Schedule of Dialysis and,

1.9 Religious Practices?

2. To what extent are the respondents satisfied in their quality of life in terms of the following indices:

2.1 Health and functioning,

2.2 Social and economic,

2.3 Psychological/spiritual, and

2.4 Family?

3. To what extent are the following indices important to the respondents' quality of life?

3.1 Health and functioning,

3.2 Social and economic,

3.3 Psychological/spiritual, and

3.4 Family?

4. What is the overall quality of life of respondents?
5. Is there a significant relationship between the demographic profile of respondents and their extent of satisfaction and importance in their quality of life?
6. Is there a significant relationship between the extent of satisfaction and extent of importance in the patient's quality of life indices?
7. Based on the findings of the study, what can be recommended?

Hypotheses

The following hypotheses were formulated for testing at 0.05 level of significance;

1. There is no significant relationship between the demographic profile of the respondents and their extent of satisfaction and importance in their quality of life.
2. There is no significant relationship between the extent of satisfaction and extent of importance in their quality of life.

Significance of the Study

The result of the study would benefit the following:

Kidney Center. Results of this study will further allow the health care system of the kidney center to provide adequate support among dialysis

patients to experience a life of high quality through counseling and patient education.

Nursing Education and Training. Findings of the study would provide important information about the quality of life among dialysis patients in a selected kidney center in State of Kuwait and the satisfaction and importance of the medical treatment in life. This would assist the nursing education in establishing methods, enhancement of skills and disseminating information that would help patients to lead more productive lives and implementing nursing interventions according to patients' needs and concerns.

Dialysis Patients. Findings of this study will help dialysis patients come to understand what the chronic illness means to them, its implications for their life, and the possibilities provided through hemodialysis treatment.

Dialysis Nurses. Results will help nurses to understand the different factors and stages involved in the crisis of a physical illness along with its treatment which may help in adapting new healthy coping strategies. Also, it gives the nurses the chance to gain in-depth knowledge based on what is important in maintaining and improving the quality of life among dialysis patients in a selected kidney center in State of Kuwait.

Future researchers. Findings of the study will serve a reference for researchers conducting similar studies.

Scope and Limitation of the Study

This research study determined the quality of life among dialysis patients in a selected kidney center in State of Kuwait. A total of 50 dialysis patients were selected thru total enumeration as respondents in this study. An adopted survey questionnaires, the Quality of Life Index Dialysis Version III by Ferrans and Power was utilized in data collection. For data analysis, frequency and percentage distribution mean and Pearson–r were utilized. Strict ethical principles like securing hospital permit, autonomy, informed consent and confidentiality were strictly observed. Study was conducted from March to April 2016.

Definition of Terms

The following terms were operationally and conceptually defined.

End Stage Renal Disease (ESRD) is defined by Hanes (2010) which said that it is the final stage of chronic renal failure with a irreversible deterioration in renal function in which the body's ability to maintain metabolic and fluid and electrolyte balance fails.

Hemodialysis is a therapy that filters waste, removes extra fluid and balances electrolytes (sodium, potassium, bicarbonate, chloride, calcium, magnesium and phosphate). In hemodialysis, blood is removed from the body and filtered through a man-made membrane called a dialyzer, or artificial kidney, and then the filtered blood is returned to the body.

Quality of Life (QoL) according to the definition of Smeltzer (2010) said that it is the patient's perception of their physical wellness, emotional well-being, social status, and self-care/functional or the level of functioning and capacity to care for oneself. This includes the variables namely health and functioning, social/economic, psychological/spiritual and family that has an over-all impact on the patient's quality of life.

Health and functioning is an individual's ability to perform activities that include the physiological processes that support life and is the most fundamental determinant of health status.

Social and economic which defined by Hanes (2010) that relates to the ability of the individual to interact in the normal or usual way in society and can be used as a measure of quality of care. It also assesses the ability to perform certain tasks and is often influenced by biological function.

Psychological / spiritual is a state of a complexity in the feeling of an individual relating to the physical and psychological changes that influence thought and behavior.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents various pertinent data sources regarding related literature and studies regarding the quality of life among dialysis patients in a selected kidney center in State of Kuwait. The following theoretical insights as a basis that will help the researcher in supporting the development of the current research study.

Quality of Life

In the study of El- Reshaid et.al (2015) examined that the prospective one conducted at Al-Amiri Hospital and including all new cases of chronic renal disease (CRD) seen at the capital area of Kuwait between 1 January 1999 and 30 December 2003. Diagnosis of CRD was based on clinical, laboratory, and radiological features. Kidney biopsies were done when indicated. A total of 271 cases of chronic renal failure (CRF) were diagnosed, of whom 143 were women. The median age was 40 years (range, 5 to 80 years; mean +/- SD: 40 +/- 14). The most common cause of CRF was glomerulonephritis (32%), of which systemic lupus erythematosis and vasculitis constituted 5% and 4%, respectively. Diabetic glomerulosclerosis was the second leading cause of CRD (24%), followed by tubulointerstitial disease (11%) and nephroangiosclerosis (10%). Less frequent causes included renovascular/ischemic disease (6%), obstructive nephropathy (3%),

and adult polycystic kidney disease (3%). One hundred and seven patients had 121 incidents of acute deterioration of underlying renal disease. This was mostly due to drugs (22%), infection (21%), and volume depletion (13%). Anti-inflammatory drugs were the most common drugs (63%) responsible for the acute decline in renal function. By the end of the study, 18 (7%) patients died, 55 (20%) required maintenance dialysis, and 40 (15%) had received a kidney allograft. Diabetic patients did not differ from non-diabetic with regard mortality, although had more renal replacement therapy (p = .002). Using the Cox regression model, analysis of the relative risk factors likely to contribute to mortality, viz. age, gender, original kidney disease, fitness for transplantation, and mode of presentation, did not show significant factors except for less hazard to death in those diagnosed early with CRD (i.e., on routine testing; relative risk 0.06, p = .01). In conclusion, our study indicates that early diagnosis and management of CRD can improve the patient's quality of life and decrease the cost of frequent hospitalization, morbidity, and even mortality associated with end-stage renal disease.

However, Wen J. Liu et. al (2013) examined that the National Medical Research Register (NMRR registration no. 11-827-10135) and approved by the Medical Research Ethics Committee of Malaysia. This study is a collaborative effort between National Renal Registry, Malaysia and the Psychiatry Department of International Islamic University of Malaysia. Funding comes from the research grant of the Ministry of Science, Technology and

Innovation of Malaysia. There is a growing interest to use quality of life as one of the dialysis outcome measurement. Based on the Malaysian National Renal Registry data on 15 participating sites, 1569 adult subjects who were alive at December 31, 2012, aged 18 years old and above were screened. Demographic and medical data of 1332 eligible subjects were collected during the administration of the short form of World Health Organization Quality of Life questionnaire (WHOQOL-BREF) in Malay, English, and Chinese language, respectively. The primary objective is to evaluate the quality of life among dialysis patients using WHOQOL-BREF. The secondary objective is to examine significant factors that affect quality of life score. Mean (SD) transformed quality of life scores were for physical, psychological, social relations, environment domains, and combined overall quality of life and general health, respectively. Peritoneal dialysis group scored significantly higher than hemodialysis group in the mean combined overall quality of life and general health score. Independent factors that were associated significantly with quality of life score in different domains include gender, body mass index, religion, education, marital status, occupation, income, mode of dialysis, hemoglobin, diabetes mellitus, coronary heart disease, cerebral vascular accident and leg amputation. Subjects on peritoneal dialysis modality achieved higher combined overall quality of life and general health score than those on hemodialysis. Religion and cerebral vascular accident were

significantly associated with all domains and combined overall quality of life and general health.

Health-Related QoL of End-Stage Renal Disease Patients Undergoing Hemodialysis

According to the study of Fukuhara S et.al (2013) explained that the assessing health-related quality of life (HRQOL) can provide information on the types and degrees of burdens that afflict patients with chronic medical conditions, including end-stage renal disease (ESRD). Several studies have shown important international differences among ESRD patients treated with hemodialysis, but no studies have compared these patients' HRQOL. Our goal was to document international differences in HRQOL among dialysis patients and to identify possible explanations of those differences. We examined data from the Dialysis Outcomes and Practice Patterns Study (DOPPS), a prospective, observational, international study of hemodialysis patients. We performed a cross-sectional analysis of DOPPS data from the United States, five countries in Europe (France, Germany, Italy, Spain, and the United Kingdom), and Japan. Linear mixed models were used to analyze differences in HRQOL, using the KDQOL-SFTM. Norm-based scores were used to minimize cultural response bias. Linear regression analysis was used to adjust for confounding factors. Other variables included demographic variables, comorbidities, primary cause of ESRD, complications of ESRD and treatment, and socioeconomic status. In all generic HRQOL subscales, patients on all

three continents had much lower scores than their respective population norm values. Patients in the United States had the highest scores on the mental health subscale and the highest mental component summary scores. Japanese patients reported better physical functioning than did patients in the United States or Europe, but they also reported the greatest burden of kidney disease. Overall, these differences remained even after adjusting for possible confounders. On all three continents, ESRD and hemodialysis profoundly affect HRQOL. In the United States, the effects on mental health are smaller than in other countries. Japanese hemodialysis patients perceived that their kidney disease imposes a greater burden, but their physical functioning was significantly higher. Different distributions of socioeconomic factors and major comorbid conditions could explain little of this difference in physical functioning. Other possible factors, such as quality of dialysis and related health care, deserve careful study.

On the other journal study of Thokozani Masina et.al (2015) explained that the Haemodialysis in Malawi consumes a disproportionate amount of the national health budget, costing approximately $20,000 per patient per year. Adjunctive therapeutic agents for end stage kidney disease and laboratory services to measure standard dialysis outcomes are not routinely available. Therefore, alternative outcome measures of the efficacy of haemodialysis in Malawi are required. We measured health related quality of life of adult

patients in Malawi treated with haemodialysis for end stage kidney disease. We performed a cross-sectional study of patients receiving haemodialysis for end stage kidney disease at 4 dialysis centres in Malawi between 24/10/2012 and 30/11/012. Patients were included if they were >18 years of age and had been receiving haemodialysis for >3 months. We used the Kidney Disease Quality of Life Instrument Short Form to assess health related quality of life. We recruited 22 of 24 eligible patients (mean age 44.8 ± 16.0 years, 59.1 % male, median duration on haemodialysis 12 months (Inter-quartile range 6–24 months)). Overall health related quality of life was low (mean score 59.9 ± 8.8, maximum possible score 100) with the lowest scores recorded for physical health component summary score (50.4 ± 22.8) compared to mental health component summary (61.3 ± 23.0) and kidney disease component summary (67.9 ± 13.2). Low household income (<$4000 per year) was associated with lower mental health component scores (adjusted $r2 = 0.413$, $p = 0.033$). Quality of life of haemodialysis patients in Malawi can be easily measured using a validated questionnaire and provides an alternative and important measure of the efficacy of haemodialysis therapy. Physical health scores were particularly low and this may affect income generating capacity. Increased efforts are required to improve the quality of life of haemodialysis patients in Malawi with a particular focus on the burden of physical symptoms.

End-Stage Renal Disease

According to the study of Al- Eisa et.al (2014) investigated the Prior to the establishment of the pediatric nephrology service in Kuwait in 1995, no accurate registry of end-stage renal disease in children was available due to management by various adult nephrologists. In this study we analyzed our experience with renal replacement therapy in children, as the only center in the country offering this service for the past 8 years. The records included all children less than 16 years of age with end-stage renal disease treated in the pediatric nephrology unit over a period of 8 years (January 1995 to December 2002). Of the 48 children boys comprises 52% and the overall mean age at institution of dialysis was 94.4 months. Causes of renal disease included congenital structural anomalies in 52%, including obstructive uropathy in 16.6%, vesicoureteric reflux in 16.6%, and renal dysplasia/hypoplasia in 18.7%. Hereditary nephropathy was diagnosed in 35.4%, including primary hyperoxaluria in 10.4%, nephronophthisis in 2%, autosomal-recessive polycystic renal disease in 8%, and glomerulopathies in 14.5%. Other etiologies constituted 14%. Renal replacement therapy was necessary in 43 patients: 46% by peritoneal dialysis and 43% by hemodialysis. The mortality rate in the dialyzed group was 16%. Twenty-four patients received kidney transplants from, cadaveric donors in 19 cases. Genetic factors contributed to the high incidence of end-stage renal disease, which is most likely due to the common practice of consanguineous marriages in our country.

In the study of Sheikh M et.al (2002) investigated that the Ischemic renal disease (IRD) is a frequent cause of end-stage renal disease. Its prevalence is mainly known from autopsy or retrospective arteriographic studies. This prospective study was conducted in 115 subjects selected from 732 patients with advanced chronic renal failure (CRF). Only patients with clinical features suggestive of IRD were selected for this study. In addition to detailed clinical and laboratory evaluation, captopril renal scintigraphy was performed in selected cases. All subjects underwent renal arteriography and all were followed up for Renovascular disease was seen in 15 patients and significant bilateral renal artery disease leading to IRD was observed in 13 (11.3%). Hence the prevalence of IRD in the advanced CRF patients was 1.7%. The majority of patients with IRD (8 [61%]) were above 46 years of age and there were more men than women (10:3). Atherosclerotic renovascular disease was the most common (10 [77%]), even though arthritis and fibromuscular dysplasia were also observed. Serum creatinine at time of presentation was significantly higher in patients with IRD compared to those who did not have IRD. Corrective procedures were performed in 5 patients. After treatment the improvement in serum creatinine in patients with IRD at 3 and 6 months was significantly different compared to those who were not treated. Hyperlipidemia, coronary artery disease and peripheral vascular disease were more prevalent in patients who had IRD compared to those with renal failure. The incidence of diabetes mellitus were similar in both groups.

This study denotes a lower prevalence of IRD in the advanced CRF population; they had more severe renal failure at presentation but specific corrective treatment delayed progression of renal disease significantly.

Demographic Profile that affects Quality of Life

Age

In the study of Krzysztof Laudanski et. al (2013) explained the aim of the present study was to compare the experience elderly and younger patients in terms of emotional status, disease perception, methods of coping with the end-stage renal disease (ESRD) stress, and health-related quality of life in 2 different settings of renal replacement therapy: hemodialysis (HD) and . Specifically, we hypothesized that younger people will more frequently use goal-oriented strategies to cope with illness-related stress and elderly patients will use more strategies related to the control of emotion. A total of 69 HD patients, 40 CAPD patients, and 89 healthy volunteers were analyzed. The Situation and Trait Anxiety Inventory, the Profile of Mood States, the Cognitive Stress Appraisal Questionnaire, and the Nottingham Health Profile were used to assess anxiety, long-term emotional status, coping mechanisms, and health-related quality of life. Data were collected on several biochemical and demographic variables. Our study revealed that younger and elderly people on dialysis faced quite different problems. Younger people in both RRT groups

had statistically higher assessment of ESRD as loss or challenge and they more frequently used distractive and emotional preoccupation coping strategies. Depression, confusion, and bewilderment dominate the emotional status of both patient populations, especially in the younger cohort. Both HDyoung and CAPDyoung patients complained more about lack of energy, mobility limitations, and sleep disturbances as compared to their elderly HD and CAPD counterparts. There are different needs and problems in younger and elderly patients on renal replacement therapy. Younger people required more ESRD-oriented support to relieve their health-related complaints to the level observed in their peers and needed extensive psychological assistance in order to cope with negative emotions related to their disease. Reduced mortality and morbidity, prolongation of the patient's life, and better clinical outcomes of renal replacement therapy (RRT) are the hallmarks of modern treatment for end-stage renal disease (ESRD). Additionally, non-clinical measures of the success of RRT are frequently assessed to determine the overall success of therapy. Such a holistic assessment of the patient's well-being emphasizes the idea of Health-related Quality of Life (HRQoL). It encompasses both clinical and non-clinical aspects of RRT and depends on age, education, gender, focus of control, lifestyle, everyday activity, personal perspectives, private life experiences, long-term goals, and many others. One of the fastest growing segments of RRT beneficiaries is elderly people. In the last 10 years, the number of elderly needing RRT has doubled. Recently,

some investigators have started addressing the question of HRQoL and age, but none has a comprehensive description of the psychological processes used to deal with ESRD-related stress in different modalities of RRT with emphasis on elderly individuals. Existing data are conflicting, with studies showing less favorable, more favorable, or unchanged perception of HRQoL in elderly as compared to younger populations in the setting of RRT. A survey of patient attitudes about RRT showed that 84% of elderly patients would choose dialysis treatment again. Surprisingly, the remaining 16% of patients view treatment as less favorable than almost inevitable death. These patients perceive their HRQoL as significantly worse after beginning RRT. One plausible explanation is the different circumstances related to modality of treatment. Most of the elderly patients are enrolled in hemodialysis therapy (HD). Continuous ambulatory peritoneal dialysis (CAPD) is geared toward patients who are professionally active, eager to take care of themselves, and younger. An alternative explanation is that outcome of the perception of disease and subsequent coping process with ESRD-related stress is age-dependent.

On the study of Ann M. O'Hare et. al (2016) examined that the Chronic kidney disease (CKD) is common among the elderly. However, little is known about how the clinical implications of CKD vary with age. We examined the age-specific incidence of death, treated end-stage renal disease (ESRD), and

change in estimated glomerular filtration rate (eGFR) among 209,622 US veterans with CKD stages 3 to 5 followed for a mean of 3.2 years. Patients aged 75 years or older at baseline comprised 47% of the overall cohort and accounted for 28% of the 9227 cases of ESRD that occurred during follow-up. Among patients of all ages, rates of both death and ESRD were inversely related to eGFR at baseline. However, among those with comparable levels of eGFR, older patients had higher rates of death and lower rates of ESRD than younger patients. Consequently, the level of eGFR below which the risk of ESRD exceeded the risk of death varied by age, ranging from 45 ml/min per 1.73 m2 for 18 to 44 year old patients to 15 ml/min per 1.73 m2 for 65 to 84 year old patients. Among those 85 years or older, the risk of death always exceeded the risk of ESRD in this cohort. Among patients with eGFR levels <45 ml/min per 1.73 m2 at baseline, older patients were less likely than their younger counterparts to experience an annual decline in e. In conclusion, age is a major effect modifier among patients with an, challenging us to move beyond a uniform stage-based approach to managing CKD. Chronic kidney disease (CKD) is common in the elderly,1,2 leading some professional organizations to recommend routine age-based screening for CKD in the primary care setting3; however, relatively little is known about the clinical course of CKD in older individuals. Most previous studies of CKD and current recommendations for its management have not distinguished between patients of different ages, and efforts to identify risk factors for progression of

CKD have generally focused on patient characteristics other than age 4–17. We hypothesized that the frequency of clinically significant outcomes among patients who meet National Kidney Foundation criteria for stages 3 to 5 CKD would differ substantially across age groups. We tested this hypothesis among a national cohort of 209,622 patients who were receiving care in the Department of Veterans Affairs. A total of 668,820 person-years were available for analysis of time to death and time to treated ESRD. From the time of cohort entry through September 30, 2004, 9227 (4.4%) patients were treated for ESRD. Dialysis was the initial modality in all but 47 patients, who received a transplant before starting long-term dialysis. Overall, 5774 (63%) cases of ESRD occurred among cohort patients who were ≥65 yr and 2601 (28%) occurred among patients who were ≥75 yr. During the same period, 45,772 (21.8%) patients died without ever being treated for ESRD. An additional 2925 (1.4%) patients died af-ter starting treatment for ESRD. As expected, patients with the lowest levels of eGFR at baseline experienced both the highest rates of death and the highest rates of treated ESRD during follow-up. However, among patients with comparable levels of eGFR at baseline, trends across age groups in rates of death and treated ESRD were in opposite directions: Among patients with comparable levels of baseline eGFR, rates of death were higher and rates of treated ESRD were lower for older than for younger patients. Among patients who were younger than 45 yr,

the incidence of treated ESRD was greater than that of death at all exceed risk for death.

Gender

According to the study of Idan Goldberg and Ilan Krause (2016) investigated that the Chronic Kidney Disease (CKD) is a common disease worldwide and is associated with high rates of morbidity and mortality. This review discusses several aspects of the relationship between gender and CKD. While the prevalence of CKD tends to be higher in women, the disease is more severe in men, who also have a higher prevalence of end-stage renal disease. Most of the evidence in the current literature suggests a higher progression rate and mortality risk of CKD in men compared with women, except in post-menopausal women and diabetic patients. However, the decrease in glomerular filtration rate and the increase in the level of albuminuria are more prominent mortality risk factors among women. Sex hormones are thought to play a major role in the biological mechanisms associated with variability in CKD prevalence and characteristics between men and women. Animal studies have demonstrated the harmful influence of testosterone and protective influence of oestrogen on several biological processes that are involved in kidney injury. However, the role of sex hormones in explaining gender-related differences in CKD in humans has not yet been established. In summary, gender has an important influence on several aspects of CKD. Further research is needed to find additional

gender-related characteristics in CKD and to identify the mechanisms of sexual dimorphism in CKD. Chronic kidney disease (CKD), defined by reduced estimated glomerular function rate (eGFR) and/ or albuminuria levels, is a worldwide health problem due to the significant rate of morbidity and mortality associated with it. CKD is associated with an increased risk of all-cause mortality and cardiovascular mortality, and progression to end stage renal disease (ESRD). To establish better prevention strategies and enable early detection, much effort has been made to identify risk factors associated with CKD development. In this respect, various studies have been conducted to assess the effect of gender on the prevalence, progression, and characteristics of CKD. In this review, the main aspects of gender influence on CKD are discussed. When addressing the difference between CKD in men and women, we must take note of the fact that eGFR (commonly used in studies) is based on a patient's sex, among other variables. The two most common equations for assessing eGFR, the MDRD (Modification of Diet in Renal Disease) and CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equations, both use sex as a variable. They are based on the assumption that for a given creatinine level, men will have higher levels of kidney function than women due to higher muscle mass and increased creatinine generation among men. Thus, in the lack of studies using the gold standard measurement of glomerular filtration rate (GFR) (which is the

measurement of inulin), results regarding gender influence on CKD are often biased due to the use of sex dependent equations.

According to the study of Po Ya Chang et. al (2016) examined that the risk factors for chronic kidney disease (CKD), such as hypertension, hyperglycemia, albuminuria, renal structure, and sex hormones, have been reported to have different effects on males and females. Thus, CKD progression may differ depending on sex. In addition to CKD management, treatment at earlier stages can reduce complications and prevent disease progression as well as high medical expenses at late stages. We examined the differences in predictive risk factors for renal progression between male and female patients with early CKD. This case–cohort study recruited patients aged 18 years or older treated in the outpatient departments of 8 hospitals in Taiwan between August 2008 and September 2014. In total, 1530 patients were included in the analysis. Renal progression was defined as decline based on baseline estimated glomerular filtration rate. To examine the predictive risk factors for renal progression, we constructed a subset multivariate logistic model with stepwise variable selection by using 10 for variable retention. The numbers of male and female patients with CKD exhibiting renal progression were and respectively. After adjusting for all the potential confounders, stepwise logistic regression analysis showed that main independent predictive risk factors for the male patients were proteinuria odds ratio confidence interval age anemia and poor control of blood pressure.

However, the main independent predictive factors for the female patients were poor glycemic control, poor blood pressure control, and family income. In conclusion, this study demonstrated that proteinuria was the most crucial risk factor for male patients, whereas poor glycemic control was the main risk factor for female patients. Poor blood pressure control was a shared risk factor for male and female patients. The prevalence of chronic kidney disease (CKD) is high and rapidly increasing worldwide. In the United States, the percentage of patients with CKD increased from 11.96% (1988–1994) to (2007–2012), accounting for >20 million people. In addition, CKD is associated with an increased risk of end-stage renal disease (ESRD), dialysis, renal transplantation, and cardiovascular comorbidity. Thus, effectively preventing or delaying CKD progression improves survival and quality of life. CKD progression may differ depending on sex. Male patients show a substantially higher prevalence of CKD and incidence rate of ESRD than those observed in female patients. A survey conducted by the Japanese Society for Dialysis Therapy indicated sex differences in mean age at the start of dialysis. Men with diabetes have a higher risk of nephropathy than women with diabetes do. By contrast, women have a higher risk of accelerated disease progression than do men. Furthermore, a survey conducted in the United States reported that the percentages of male and female patients with CKD and among those with an estimated glomerular filtration rate and among those with stage 3, and among those with stage 4, and among those with stage 5, respectively. Sex

differences in CKD progression are influenced by various risk factors such as hypertension, hyperglycemia, albuminuria, dyslipidemia, body mass index, lifestyle factors, and renal structure and sex hormones. Duru et al demonstrated that African-American men have a higher risk of CKD progression than African-American women do because of the poorly controlled hypertension among these males. Women with hyperglycemia might experience more vascular and renal target organ damage than men do. Albuminuria incidence and decreases in the eGFR might be greater among men with diabetes than among women with diabetes.

Civil status

In the study M. W. Khattak et. al (2012) explained that the association of marital status with access to renal transplantation. We analyzed data from the USRDS. In patients with ESRD aged (mean age of first marriage in the US), we analyzed the association of marital status with two outcomes: likelihood of being placed on the waiting list for renal transplantation or first transplant, likelihood of receiving kidney transplant in patients already listed. We analyzed marital status as a categorical variable: not married (including never been married and widowed); divorced or separated; and currently married. Subgroups based on age, race, sex, donor type and diabetic status were also analyzed. After adjustments for the included independent variables and compared to individuals never married or widowed, those who were

divorced/separated and currently married had a higher likelihood of being placed on the transplant waiting list. Once listed, married individuals had higher chances of getting transplanted as well. This trend was consistent in most of the subgroups studied. We demonstrated that being married is associated with better access to renal transplantation compared to those who were never married/widowed. Key words: Access, disparities, ESRD, marital status, outcome, renal allograft, renal transplantation Abbreviations: CKD, chronic kidney disease; DMMS, dialysis morbidity and mortality study; ESRDS, end stage renal disease; HR, hazard ratio; PRA, pre-transplant panel reactive antibody; SAS, statistical analysis software; UNOS, United Network for Organ Sharing; USRDS, United States Renal Data System. Received 02 June 2010, revised 23 August 2010 and accepted for publication 10 September 2010 Background Kidney transplantation is the treatment of choice in patients with ESRD due to better quality of life, increased life expectancy and decreased economic cost as compared to maintenance hemodialysis. It is the goal of policy makers to bring equity (but not necessarily equality) in access to the transplantation services. In order to achieve this goal it is important to identify the objective barriers, bias, discrepancies and disparities among the different populations in regard to transplant access. There is evidence to suggest that disparities exist in access to renal transplantation based on age, gender, race educational level, demographic and economic factors (5,6,10). The interesting and positive impact of marital status on general health, longevity, substance

abuse, depression, cardiovascular diseases, cancer and hospitalized patients outcomes has been documented in the past. In addition, the beneficial effect of being married on the renal graft survival has been shown, but its role in access to renal transplantation is not yet studied. To the best of our knowledge, our group is the first one to study the role of marital status in access to renal transplantation. Since there is evidence of positive impact of marriage on health outcome, social networking and possible spousal donation, we hypothesized that subjects who are currently married and even those who are divorced/separated are more readily listed for renal transplantation and more likely to receive a transplant after listing as compared to unmarried individuals. In this study we aimed to evaluate the association of marital status and access to transplantation. 2624 Marital Status and Transplant Access Methods Study population and data collection. We collected and analyzed data from the United States Renal Data System (USRDS), including data directly provided to USRDS by UNOS. Data regarding patient marital status were collected from DMMS (dialysis morbidity and mortality study), CASEMIX, MEDEVID and ADEQUACY files. Transplant data were extracted from the TXUNOS_KI (transplant details collected by UNOS since 1988), and WAITLIST_KI files. Patients with acute kidney failure who were on dialysis initially and then recovered renal function were excluded from the analysis. Patients less than 27 years of age (mean age of first marriage in the United States) (26) were also not included in the study. Incident and prevalent ESRD patients on

dialysis with known marital status during or after January 1, 1990 were included in the study. The follow-up period was through September 1, 2007. For recipients of multiple transplants, the first procedure was considered to be the transplant of interest.

On the study of Natalia Alencar de Pinho (2015) examined that the chronic kidney disease (CKD) has taken on the status of public health concern in recent years, due to its increased prevalence among the world's population and its impact on morbidity and mortality in affected patients. Mainly a result of the growing epidemic of cardiovascular risk factors, chronic kidney disease causes frequent hospitalizations and high socioeconomic cost. In 2011, there were 91,314 individuals on dialysis in Brazil, corresponding to a prevalence of 475 pmp. We have less patients on renal replacement therapy when compared to developed countries. One explanation for this discrepancy may be the low participation of dialysis centers in the census; however, the most alarming hypothesis rests on the poor access to healthcare services. It is believed that 50-70% of Brazilians who have chronic kidney disease die without being submitted to any kind of treatment. Data on morbidity and mortality of chronic renal failure patients in Brazil is still very restricted to the dialysis population. In fact, kidney failure treated with dialysis or transplantation is the outcome of chronic kidney disease that most stands out. However, cardiovascular diseases are often associated with chronic kidney disease, which is of great importance when we consider that chronic kidney

patients are more likely to die of cardiovascular disease than evolving into kidney failure. Thus, little is known on the prevalence, morbidity and mortality of early-stage chronic kidney disease in Brazil. Faced with this problem, this study aims at identifying the prevalence and factors associated with chronic kidney disease in individuals who have undergone hospitalization in a university hospital. This was an exploratory, cross-sectional and quantitative study, carried out between December of 2010 and June of 2013. The sample consisted of adult patients (age 18 years) admitted to the internal medicine ward of a university hospital in São Paulo, Brazil, during the year of 2009. We collected data retrospectively from the medical records of each patient and by means of an instrument designed for this purpose. We also collected sociodemographic and anthropometric information, health history, lifestyle, medical diagnostics and hospitalization outcomes. Pregnant women, patients staying less than 24 hours in the clinical wards, those without serum creatinine measured in at least two occasions during the hospital stay and patients who progressed during hospitalization to acute kidney injury according to AKIN criteria (increased serum creatinine equal to or higher than 0.3 mg/dL in the patients without clinical diagnosis of CKD) or those on medical diagnosis of acute renal failure were taken off the study. CKD was defined as the presence of a medical diagnosis of CKD reported on at least one occasion in the medical chart. For sample size calculation we used the CKD prevalence estimation of 13%, as described by Coresh et al. as a representative sample

of the US population, with a 5% variation, 5% type I error and 80% test power. Under these parameters, the size of the representative sample of the population of patients admitted to the internal medicine ward would be 386 individuals. The CKD prevalence value suggested for the sample calculation is higher than those described in studies carried out with Brazilian populations. However; we believe that our sample had a higher frequency of CKD because it is an older population and with comorbidities - although the CKD criterion was based solely on the presence of medical diagnosis in medical records. The records were randomly chosen by a randomization tool available in Microsoft Excel. We assessed the association between categorical variables and the group with CKD using the chi-square test, likelihood ratio test or Fisher's exact test. For quantitative variables, we used the Student t-test to compare the means of normally distributed variables or the Mann-Whitney test to compare the interquartile distributions. The variables that were statistically significant in the univariate analysis and reported in the literature as a potential risk factor for chronic kidney disease were used to adjust the multiple logistic regression model. P values < 0.05 were considered statistically significant. According to the hospital's admissions record, 1,422 patients were admitted to the internal medicine ward during the study period. After adopting the exclusion criteria, 105 subjects with CKD were identified, accounting for a prevalence of 12.7% within the 826 records analyzed. Among CKD patients, 27 (25.7%) had stage 5 CKD under dialysis. Finally, 386

patients were included in the final sample, 105 with CKD and 281 without CKD.

Educational Attainment

According to the study of Yen M et.al (2012) investigated that the physical, knowledge and quality of life outcomes of an educational intervention for patients with early stage chronic kidney disease. A comprehensive predialysis education care team can be effective in slowing the progression of chronic kidney disease. A single group repeated measures design was used to evaluate the effects of the intervention. Participants were recruited through health department community health screen data banks. A pre-dialysis, team-delivered educational intervention covering renal function health care, dietary management of renal function and the effects of Chinese herb medication on renal function was designed and implemented. Data were collected at baseline, six and 12 months. Study outcomes included physical indicators, knowledge (renal function protection, use of Chinese herbs and renal function and diet) and quality of life. Data were analysed using repeated measure anova to test for change over time in outcome variables. Sixty-six persons participated in this study. The predialysis educational intervention showed significant differences at the three time points in overall knowledge scores, waist-hip ratio, body mass index and global health status. Knowledge measures increased at month 6 and decreased at month 12. The primary

indicator of renal function, glomerular filtration rate, remained stable throughout the 12 months of follow-up, despite the relatively older mean age of study participants. A predialysis education care team can provide effective disease-specific knowledge and may help retard deterioration of renal function in persons with early-stage chronic kidney disease. The intervention dose may need to be repeated every six months to maintain knowledge effects. A predialysis educational program with disease-specific knowledge and information is feasible and may provide positive outcomes for patients. Topics on the uses of Chinese herbs should be included for people who are likely to use alternative therapies.

In the study of Andy I. Choi et. al (2012) examined that the socio-economic inequalities in health status and life expectancy have been documented for decades in the United States. In a landmark study, Kitagawa and Hauser described educational disparities in mortality beginning in the 1960s; since then a large number of studies have documented educational gaps associated with worse health outcomes. Recent studies that have examined longitudinal trends in social inequalities have raised the concern that education-related gaps in life expectancy appear to have widened. These reports have provided the basis for national programs to eliminate health disparities in the United States such as Healthy People 2010.Whereas the 1980s and 1990s were periods of improvement in overall life expectancy and

educational attainment in the general population, survival improvements did not occur evenly across education groups. There was little change in median survival among less-educated blacks and whites, compared with substantial increases in life expectancy among the more educated. The widening of these inequalities has occurred largely because of a greater decline in heart disease mortality among higher versus lower socioeconomic groups. Although education is generally believed to be associated with improved health, several important gaps in our knowledge exist. The majority of studies in this area have focused on white and black race, while Hispanic and Asian populations have been poorly represented. Hispanics are a rapidly growing segment of the US population, and only 45-75% of Hispanics have completed high school; thus, the health implications of educational attainment in this subgroup require evaluation. Furthermore, while the United States government has invested heavily in programs such as the Healthy People 2010 initiative and the expansion of Medicaid to improve the health of disadvantaged populations, no recent studies have provided information to assess the current state of varying levels of educational attainment and health status, and thereby the potential impact of recent efforts to close the gap. Finally, few prior studies accounted for individual-level clinical information, which may confound the association between education and health. We conducted this study to determine the association between educational attainment with chronic diseases and survival in a national sample of participants of a health screening program. We

hypothesized that higher education would be associated with lower mortality risk, particularly among ethnic minorities and younger adults, and that these findings would be mediated by a lower prevalence of chronic diseases.

Occupation

In the study of Sofia Rubinstein et. al (2013) assessed that the chronic kidney disease (CKD) is a major health problem in the United States. With a prevalence of 13.1% and growing, it is associated with major health care expenditures, totaling $41 billion in 2010, which accounts for 17% of the total Medicare spending for the year. The leading causes of CKD include poorly controlled diabetes, hypertension, chronic glomerulonephritis, and polycystic kidney disease. Other risk factors include older age, cardiovascular disease, smoking, obesity, hyperlipidemia, chronic urinary tract obstructions, malignancy, and socioeconomic status. There has been a significant amount of interest in occupation as a risk factor for CKD, given the size of the associated risk and the fact that occupational factors are uniquely preventable. However, the epidemiological evidence for delineating the complex interactions between occupational risk factors for CKD is scarce. Reports on occupational risk factors have focused on the exposures to nephrotoxins, including lead, mercury, glycol ethers, organic solvents, copper, chromium, tin, mercury, welding fumes, silicon-containing compounds, and grain dust. Nevertheless, occupational effect is not limited to nephrotoxins. In fact,

individuals at risk are not only those who are in occupations with the highest burden of nephrotoxin exposure. Lower socioeconomic status appears to be independently associated with increased risk for CKD. Additionally, high-stress behaviors have been found to be associated with increased sympathetic activity that in turn, has been found to be associated with higher risk for initial stage renal disease as well as advanced stage renal failure. The quantitative burden of CKD associated with occupational exposure is unknown. The reported extent of occupational effects on CKD has been suggested to be underestimated. It was reported that of all occupation-related CKD deaths, about are attributable to silica, organic solvents, lead, and cadmium exposures. Occupations such as cashier, sales representative, carpenter, and manager have been found to be associated with the increased mortality risk for CKD. Job settings in hospitals, eating and drinking places, and construction sites have also been found to be associated with the risk of developing CKD. It is thus essential to identify specific occupations associated with CKD for the further understanding of the mechanism of how these occupations increase CKD risk. There has not been a population-based study that examines a comprehensive list of occupations in order to identify the high-risk occupations in the United States. Therefore, the purpose of this study was to examine the US general population to identify high-risk occupations for CKD. The working hypothesis was that different types of occupations are associated with a different level of risk of developing CKD.

According to the study of Todd R. Sponholtz et.al (2016) discussed that there is increasing interest in occupational risk factors for chronic kidney disease (CKD). This stems from observations of elevated CKD prevalence in low- and middle-income countries, particularly in rural agricultural communities such as El Salvador, Nicaragua, India, and Sri Lanka, where the predominant risk factors observed in the US (e.g., obesity, diabetes, and hypertension) are typically absent in patients and environmental and occupation exposures are hypothesized to play a larger role. The impact of occupational risk factors on CKD in the US requires greater understanding as well, where it has been estimated that nearly 4 million Americans are exposed to known or suspected nephrotoxins in the workplace. Approximately 11.5% of US adults have CKD, and its prevalence is increasing in the US and in many other countries. Overall Medicare expenditures for CKD reached $41 billion in 2010 according to the US Renal Data System [US Renal Data System]. The percentage of CKD deaths in the US thought to be attributable to occupational exposures was 8.2 to 14.5%, based on exposure to silica, solvents, and metals, the well-recognized occupational risk factors for CKD. Occupational factors may be modifiable. Therefore, a greater understanding of occupational causes of kidney disease can prevent CKD morbidity and mortality. In epidemiologic studies, identification of workplace risk factors can come from linking large occupational cohorts with limited, specific exposures to death registries to see whether exposed workers were more likely to die from the disease of interest.

Alternatively, a case-control design, in which the experiences of diseased and non-diseased subjects are compared, provides a means to potentially examine a wider range of past occupations and exposures. To our knowledge, no prior case-control study of incident CKD in the US has examined full occupational histories. Such a study can identify novel etiologic factors or add information to known or suspected ones. In this analysis, we examined a range of occupational exposures and a history of having worked in specific industries in a well-characterized case-control study with a diverse sample from North Carolina to identify occupational factors associated with CKD risk overall and within subtypes of CKD. This case-control study of incident CKD has been described in detail elsewhere. Briefly, patients with a first diagnosis of CKD were identified from four North Carolina medical centers (1980-82). Eligible patients were between 30 and 79 years of age, residents of North Carolina, and had one of the following International Classification of Disease. A new, sustained elevation of serum creatinine was also required. Ten percent of case records were independently reviewed, with 93% concordance. Patients were excluded for preexisting renal disease, systemic or familial conditions with known effects on the kidney, and external causes of kidney disease. Cases were classified as hypertensive nephrosclerosis (19%), diabetic nephropathy (19%), glomerulonephritis (13%), or interstitial nephritis (19%). Cases with insufficient clinical evaluations or advanced and unclassifiable disease were categorized as renal insufficiency (22%) or

end-stage renal disease (ESRD). Potential control subjects were identified through random digit dialing (65 years of age) and Health Care Financing Administration Medicare listings (≥65 years of age). Controls were residents of North Carolina and frequency-matched to cases by age years, sex, race, and proximity to study hospitals. Of 4,268 potential cases, reasons for not meeting eligibility criteria were preexisting renal disease, missing age or residence information, not meeting clinical criteria above, and renal failure due to extrarenal causes, as detailed earlier. There were 709 cases who met inclusion criteria. Among agreed to participate, an overall response rate of 78%. Contact was made with 608 of 717 potential controls. 520 (86%) agreed to participate, for an overall response rate of Four controls reporting a history of CKD were excluded.

Schedule of Dialysis

In the study of Nicholas Janus et. al (2012) assessed that the infectious diseases are the second most common cause of death in end-stage renal disease (ESRD) patients . Patients with chronic kidney disease (CKD) are immunocompromised and haemodialysis (HD) patients are at high risk for several infections, due to exposure to blood products. CKD patients present impaired cell-mediated and humoral immunity, reducing activities of the immune system cells (B-cell, T-cell, monocytes, macrophages) leading to a lower seroconversion rate, a lower peak of antibody titers and a quicker

decline of antibody levels in these patients as compared with healthy subjects. Usual schedules of vaccination may thus be ineffective. The aim of this paper is to review the studies on the use of vaccines in ESRD patients, in order to determine whether dosage adjustment is necessary in these patients. All of these studies tried to improve the immune response by vaccinating with higher doses than the standard 10– 20 μg. One study compared 40 μg versus 20 μg in 121 patients with moderate renal insufficiency (at Months 0, 1, 6 in a three-shot schedule). Seroconversion rate was superior in patients with a high dose of 40 μg than in patients with a standard dose of 20 μg. However, this was not statistically significant for the three- or four-shot vaccination schedule. The authors recommended the use of three doses of 20 μg in patients with renal impairment. A fourth dose could be administered in patients who failed to respond. Another study compared intradermal (ID) and intramuscular (IM) vaccination in ESRD patients. The ID group of patients received 5 μg of vaccine on a bimonthly schedule, while the IM group of patients were administered 40 μg on a four-dose vaccination schedule. Most patients reached a high seroconversion rate, 97.6% for the ID group and 90.5% for the IM group. The authors recommended using 5 μg every 2 weeks up to a peak antibody titer >1000 IU/l or for a total duration of administration of 18 months. Another suggestion was to use standard 20 μg doses repeatedly. One study tried to raise the protective rate among ESRD patients by using 20 μg every month until they reached 100 UI/l of antibody titers, or up to 10 doses. After 5

months, seroconversion rate reached 42%; after 12 months it was 70%. Early vaccination of patients before they start dialysis has been used in order to improve the response rate. One of the largest studies performed on this topic included 61 RI patients. The authors concluded that patients not yet on dialysis had a better immune response to HBV vaccine than dialysis patients.

On the other journal study of Carolyn Chi et.al (2012) explained that the Vaccination of Dialysis Patients and Patients with Chronic Kidney Disease (CKD) Determination of chronic kidney disease is important to the vaccine provider because incidence or severity of some vaccine-preventable diseases is higher in persons with altered immunocompetence therefore, certain vaccines (e.g., inactivated influenza vaccine and pneumococcal vaccines) are recommended specifically for persons with immune compromise. In addition, vaccines might be less effective during a period of altered immunocompetence. Inactivated vaccines administered during a period of altered immunocompetence might need to be repeated. Because secondary antibody responses are less affected by immune compromise than primary antibody responses, immunization strategies should be formulated early in the course of progressive renal disease to maximize likelihood of vaccine-induced immunity. This approach is particularly important if transplantation and chronic immunosuppressive therapy are being considered. Live vaccines might need to be deferred if severe immune compromise is present; persons with altered

immunocompetence might be at increased risk for an adverse reaction after administration of live, attenuated vaccines because of uninhibited replication. However, the majority of persons with CKD (regardless of CKD stage) have sufficient immune function to safely receive all live vaccines for which an inactivated vaccine is not an alternative. Dosage and Schedule For patients undergoing hemodialysis and for other immunosuppressed patients, higher vaccine dosages or an increased number of doses are recommended. One formulation of hepatitis B vaccine designed for hemodialysis patients and other immunocompromised adult's patients contains an increased dosage and is administered in a 3 dose schedule. The other available formulation of hepatitis B vaccine is administered at a double standard dosage in a 4 dose schedule for hemodialysis patients and other immunocompromised adults patients administered in 1 or 2 injections, . "If an adult patient begins the vaccine series with a standard dose before beginning hemodialysis treatment, then moves to hemodialysis treatment before completing the series, complete the series using the higher dose recommended for hemodialysis patients. No specific recommendations have been made for higher doses for pediatric hemodialysis patients. If a lower than recommended vaccine dose is administered to either adults or children, the dose should be 3 repeated. Immunogenicity and Duration of Immunity Compared with immunocompetent adults, hemodialysis patients are less likely to have protective levels of antibody after vaccination with standard vaccine dosages; protective levels of

antibody developed in of adult hemodialysis patients who received doses of either vaccine in various dosages and schedules. Higher seroprotection rates have been identified in patients with chronic renal failure, particularly those with mild or moderate renal failure, who 4 were vaccinated before becoming dialysis dependent.

Duration of hemodialysis

According to the study of Swati Jain et.al (2014) investigated that the most important human asset which determines the living efficiency of an individual. Since beginning, mankind has sought for good health. Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Diseases of various kinds influence the health of individuals and are broadly classified into two types-communicable and non-communicable diseases. A shift in the prevalence of disease is now evident such that the communicable diseases which were the major reason for fatality are now on the downfall with the contrary rise of non-communicable diseases. Changes in diet, sedentary lifestyle and rapid population aging in developing countries like India have caused an increase in the major non-communicable diseases (NCDs)—such as cardiac problems, cancers, diabetes, psychiatric disorders, and chronic respiratory diseases. These are now quickly adding to the worldwide burden of disease and have become the leading cause of death globally killing more people each year than all other

causes combined. In the global burden of disease study for 1990, which estimated the distribution of deaths by region, non-communicable diseases ranked first as the cause of death in developed countries, as well as in many developing countries and the world as a whole. Thus, addressing the problems and issues connected with non-communicable diseases will lead to major health gains worldwide. Kidneys are one of the most important excretory organs and renal diseases pose a major health problem of modern world. The most frequent aetiology of chronic renal failure includes diabetes mellitus, hypertension, glomerulonephritis, polycystic kidney disease and pyelonephritis. In the last 3 to 4 decades; improvements in dialysis and transplantation have reduced morbidity and mortality among patients with end-stage renal disease. Hemodialysis therapy is usually a long duration therapy with usual frequency of once, twice or more than twice a week increasing the stress level amongst the patients. Despite the fact that the hemodialysis therapy have increased the survival rate among the patients affected by renal disease, there has been growing concerns regarding the other systemic diseases in these patients, due to lack of their ability to control water and electrolyte balance and filtrate waste products. Also, dental health among the patients undergoing haemodialysis therapy have been found to be poor due to their debilitated state, neglect of oral hygiene, manifestations of systemic conditions and immunosupression as shown in the studies done by Parkar S.M. and Malekmakan L et al.,. The specific effects of chronic renal disease and renal replacement therapy on

periodontal tissues include gingival hyperplasia, increased level of plaque, calculus and destructive periodontal disease. The findings have been reported by Torkzaban P, Joseph R and Ertugrul F et al.,. Other effects on oral health include bad odour/metallic taste due to increased concentration of fluid intake and salivary gland alteration, paleness of the mucosal membranes due to anaemia, uremic stomatitis, gingival bleeding due to platelet dysfunction and the effects of anticoagulants, enamel hypoplasia, erosions on the surface of the teeth because of acidic regurgitation and vomiting induced by uremia, pulp obliteration due to calcium and phosphorus metabolism, changes in maxillary bone and increased risk of fractures. Furthermore, the severity of dental diseases have been found to be directly correlated with the duration of hemodialysis. There is limited literature available to evaluate the effect of duration of hemodialysis therapy and the underlying kidney disease on dental health status of the patients undergoing hemodialysis. Hence, the present study aimed to assess the effect of duration of hemodialysis and the underlying kidney disease on the Dental health status of patients undergoing hemodialysis at various dialysis centres of multispeciality hospitals in Delhi and to make appropriate recommendations and suggestions for improving their oral health.

On the study of Stênio Medeiros Queiroz et.al (2013) investigated that the chronic kidney disease (CKD) is a global public health problem. The

disease is characterized by a slow, progressive and irreversible decline in the number of functional nephrons, which results in a decrease of glomerular filtration rate and in the accumulation of various, often toxic, substances that are normally excreted by the kidneys, causing uremic syndrome as well as disturbances in normal homeostatic mechanisms that control the water-electrolyte balance in the organism[1]. Diabetes mellitus, hypertension, glomerulonephritis, and renal cystic disease are the most common causes of kidney failure, whose incidence and prevalence have increased over the last few years. CKD is defined when kidney function decreases by 5 to 10% of its original capacity. Treatment includes hemodialysis (HD) or continuous ambulatory peritoneal dialysis (CAPD) as replacement of renal filtration, and a kidney transplant as definitive therapy. Patients with CKD show a broad spectrum of oral manifestations that affect the soft or hard tissues, including xerostomia, uremic breath, uremic stomatitis, radiographic changes of the jaw bones, and accumulation of calculus on the teeth, periodontitis, and other less frequent abnormalities. Some of these conditions are more severe in patients undergoing dialysis than in healthy individuals. The duration of dialysis can influence the prevalence of oral abnormalities observed may be related to worsening of oral health. With respect to bone alterations commonly observed in these individuals, bone metabolism disorders caused by altered blood levels of calcium (Ca) and phosphorus (P) in response to lack of activation of vitamin D by the kidneys promote the development of secondary hyperparathyroidism,

contributing to alveolar bone loss by changing the normal skeletal remodeling, in addition to favoring the development of intra-osseous lesions such as brown tumor. These oral conditions can become a source of infection since patients with CKD are highly susceptible due to the immunodeficiency caused by uremia. After transplantation, the persistence of oral infections may be a cause of morbidity in patients on immunosuppressive therapy. It is therefore important that dentists are aware of the main conditions affecting the oral cavity of these patients in order to prevent or treat them before transplantation. The objective of the present cross-sectional cohort study was to evaluate cross through clinical, biochemical and radiographic oral conditions in a Brazilian population with CKD that was preparing for a kidney transplant, investigating the influence of dialysis duration and status on bone metabolism the prevalence and severity of the changes found.

Frequency of Dialysis

According to the study of Mahenda Agraharkar et.al (2013) assessed that although there are guidelines for the initiation of hemodialysis and for the care of patients on maintenance hemodialysis and peritoneal dialysis, there is very little in the literature regarding the recovery of renal function. This is mainly because renal failure patients who are labeled as dialysis dependent rarely regain their renal function. Even when they do, it may not be clinically evident, and such marginal renal recovery hardly justifies cessation of dialysis.

There are case reports that cite delayed recovery of renal functions in dialysis dependent patients who have had ischemic nephropathy secondary to renal artery stenosis. When the renal artery occlusion to the solitary kidney was surgically repaired as late as six months after initiation of dialysis, the patient showed recovery of renal function. Kato and his colleagues have reported recovery of renal function in their dialysis dependent patient who had cholesterol embolization to the kidneys causing loss of renal functions, while Morales and his colleagues reported spontaneous recovery of renal function in their patient who supposedly had renal failure due to FSGS associated with human immunodeficiency virus (HIV) infection. Both of these conditions are widely believed to cause irreversible renal failure. Urologic conditions such as inadvertent ligation of the renal vein of a single functioning kidney and chronic obstructive uropathy due to chronic ureteric obstruction especially in a single functioning kidney, can also reveal evidence of delayed resolution of renal failure upon relieving the obstruction, as cited by Cancarini and Shokeir and their colleagues. Alkhunaizi and his colleague reported a case of acute renal failure due probably to secondary oxalosis related to excessive ingestion of vitamin C. Their patient also had delayed renal recovery, which they attributed to slow removal of oxalates by aggressive hemodialysis. Probably the most reported dialysis dependent cases that eventually regained renal functions are vasculitis related acute renal failure patients and those with accelerated hypertension, who were later noted to have an adequate amount of renal

functions to evade dialysis therapy. Sekkarie and colleagues reviewed 10-year data of 7404 patients from the Michigan Kidney Registry to evaluate the rate and associated factors for recovery of renal function. They observed that in patients with glomerulonephritis associated with a systemic illness, vasculopathies had threefold to fourfold higher recovery rates. White race, older age, and later year of ESRD were associated with significantly higher recovery rates. They also observed that in approximately 48% of those who regained renal function, recovery occurred within 6 months of initiating dialysis therapy, 74% within 1 year, and lasted at least 1 year in 75% of such cases. However, they did not allude to the factors that forewarned the physicians about recovery of renal function. These authors cautioned the physicians to be vigilant before declaring them as having ESRD. Spanish medical literature, however, addresses the issue of recovery of renal function. Two different authors proposed periodic monitoring of residual renal functions at least once in two months. In the United States, in contradistinction to the peritoneal dialysis patients, residual renal function in hemodialysis patients is usually not monitored. In our hemodialysis facilities, urine output is neither routinely measured nor residual renal function estimated. The only indication that alerted the physician was marginal decrement in the pre-dialysis serum creatinine in a patient who requested reducing the treatment time due to intolerance to dialysis procedure. All except one of our patients had symptoms on dialysis such as nausea, vomiting, hypotension and leg cramps. In our

institution approximately 1% to 2% of the patients recover renal function. This may be an underestimation because only those patients who had severe symptoms on dialysis and requested a reduction in dialysis time, prompted us to re-evaluate their renal functions. Most of the symptoms are presumably secondary to excessive ultrafiltration on dialysis. There probably are more patients who are not subjected to significant fluid removal during dialysis, and therefore may not exhibit symptoms on dialysis. Such patients may continue to receive dialysis for undetermined period of time that they do not need. Our second patient may be a representation of such group. Six of the 8, i.e. 75% percent of our patients who came off dialysis had a glomerulopathy listed as the cause of renal failure, which is supposedly an irreversible cause of renal failure. Clearly, these patients may have had an acute component of renal failure that either was ignored or was considered to be irreversible. One might argue that during multidisciplinary mandatory monthly patient care conferences (PCC), the decreasing values of BUN and creatinine should attract the attention of the caregivers to the possibility of RR. However, this does not seem to be the case as low BUN and creatinine can also be attributed to worsening of nutritional status. This may be perceived to be due to under-dialysis that may prompt even more aggressive dialysis that the patient does not tolerate. In some instances, such as our last patient, the creatinine may start to fall precipitously only after the cessation of dialysis. This possibly could not be evident until the dialysis was withheld. All these

patients explicitly expressed a significant improvement in their quality of life after the cessation of dialysis. The most significant difference was observed in patient number four, who despite his GFR being less than 10 ml/min, could not tolerate hemodialysis session. He remained most symptomatic immediately following dialysis, experiencing better health the following day, but again cyclically worsening after dialysis. He remained off-dialysis for only 9 months but enjoyed his dialysis-free life during these 9 months. Although most of these patients had such symptoms for several months, their residual renal function was never estimated, and even if it were, that would not have made much difference because there are no guidelines for the interpretation of these results. The creatinine if not in a steady state, cannot be used for creatinine clearance utilizing the conventional formulae. The Cockroft and Gault formula, employing the predialysis serum creatinine, has its own limitations. In addition, progressive decline in serum creatinine is an independent indicator of poor nutritional status. This, as mentioned earlier is often attributed to inadequate dialysis, and the patient therefore can be subjected to more aggressive dialysis, which is poorly tolerated and can make the patient more miserable.

On the other article of National institute of diabetes and digestive and kidney disease (2017) elaborated that the diagnosis of kidney disease means that a person’s kidneys are damaged and cannot filter blood the way they should. This damage can cause wastes to build up in the body. Kidney

disease can cause other health problems, such as heart disease. If you have kidney disease, it increases your chances of having a stroke or heart attack. Major risk factors for kidney disease include diabetes, high blood pressure, and family history of kidney failure. People with CKD are at high risk for CVD, and the presence of CKD often complicates CVD treatment and prognosis. The prevalence of CVD is 69.6 percent among persons ages 66 and older who have CKD, compared to 34.7 percent among those who do not have CKD. Atherosclerotic heart disease is the most frequent CVD linked to CKD; its prevalence is more than 40 percent among people ages 66 and older. The percentage of people who undergo cardiovascular procedures is higher among those with CKD than among those without CKD. In 2013, the unadjusted rate of AKI hospitalizations in the Medicare population fell by 4.9 percent. This decrease was observed across all age and race groups. For Medicare patients ages 66 and older with an AKI hospitalization in 2011, the cumulative probability of a recurrent AKI hospitalization within 2 years was 48 percent. Among Medicare patients ages 66 and older with a first AKI hospitalization, the in-hospital mortality rate in 2013 was 9.5 percent (or 14.4 percent when including discharge to hospice), and less than half of all patients were discharged to their home.

Religious Practices

On the study of Carolina Costa Valcanti et.al (2012) investigated that the Chronic Renal Failure (CRF) is accompanied by a complex clinical picture,

different etiologies and high morbidity levels. According to the Brazilian Nephrology Society, in 2009, 77.589 patients were under dialysis treatment in Brazil; in 2010, this figure increased to 92.091 patients. It is considered a traumatic event, with significant psychic consequences that affect patients' experience. Available treatments for this disease only provide for the partial replacement of the renal function, mitigating disease symptoms and preserving life, but none of them is curative. In addition, the treatment process is perceived as a difficult and painful experience; although it is essential for the life of CRF patients, treatment transforms their daily life, their routine, eating habits, among other aspects, causing changes in their physical and emotional integrity. Such experiences also involve significant changes in social and family life, which trigger dependence on Social Security and the loss of autonomy. Hence, CRF patients have to adapt not only to the disease and its treatment, but also to the many resulting physiological, psychosocial and spiritual problems. In this context, many patients stick to faith and religion as a way to find support and relief for their suffering. Religion and spirituality are increasingly emphasized constructs in health care, as they can be perceived as a way to find meaning for life, to have hope and be in peace amidst severe events like the chronic illness. It should be highlighted that religion can be understood as a partial expression of one's own spirituality, practiced through traditions, ceremonies and sacred readings. Religion is transmitted through cultural heritage and accompanied by dogmas and doctrines; spirituality, then,

can be defined as a person's essence, as a search for meaning and purpose in one's life. Experts who assess and document the effects of spirituality and religion in health have appointed a positive relation among various aspects of physical and mental wellbeing, and have also considered that these can provide support in difficult situations, traumatic events and/or stress. In that context, both spirituality and religion can be understood as important disease coping strategies. Coping refers to a set of cognitive and behavioral strategies, which individuals use to cope with stress situations. When using religious resources as an alternative to cope with adverse health conditions, the patient is using religious coping, which can be defined as the use of religious beliefs to understand and deal with the stressing agents of life. The study of religious/spiritual coping should be broad and based on a functional view of religion and its functions in coping. Thus, five key-functions of religion can be identified: search for meaning, control, spiritual comfort, intimacy with God and with others and the search to transform life. Based on each of these five basic functions, religious coping methods or strategies can be identified. Although the religious coping concept entails positive connotations, it can be positive as well as negative; similarly, religious/spiritual coping strategies can be classified as positive and negative. Religious/spiritual coping comprises measures that exert beneficial effects on individuals, like seeking protection from God or a greater connection with transcendental forces, seeking comfort or help in religious literature, among others. Negative religious/spiritual coping,

then, is related to measures that cause harmful consequences for individuals, like questioning God's existence, delegating the solution of problems to God, defining the stress condition as a punishment from God, among others. It is important for health professionals, especially nurses, who are constantly at the patients' side, to understand the meaning of spirituality and religion for them and how significant events like CRF can influence the way they deal with this experience, so that these phenomena can truly be part of holistic care in clinical practice. Thus, religious/spiritual coping methods can serve as significant support factors in coping with kidney failure and hemodialysis and, therefore, they can be an important tool in patients' spiritual assessment and, at the same time, be effective to help them use available resources in a better way. Based on this context, the aim of this study was to investigate the use of religious/spiritual coping in patients with chronic renal failure under hemodialysis.

According to the study of Eli Ávila Souza Júnior et.al (2015) assessed that the chronic kidney disease is a disease with high morbidity and mortality. The daily life of affected patients includes negative feelings, fear of prognosis, disability, and economic dependence, as well as challenges related to changes in self-image. Religion and spirituality can be important resources in dealing with these difficulties. To test this hypothesis a qualitative, descriptive study was undertaken at the Hospital das Clínicas Samuel Libânio, Pouso

Alegre/MG, in order to verify from the point of view of both doctors and patients if they believe that religion influences the treatment of the disease. For doctors, religion represents a strength and a comfort when facing any disease. Patients, however, identify religion with the hope that they will get better. While the significance of religion in their lives was different between the groups, both agreed that it represents a beneficial factor in the life of patients, providing relief, support and optimism. Chronic kidney failure is a disease with high morbidity and mortality rates. It is characterized by a progressive decline in renal function and by its chronicity, which leads to physical, social and emotional limitations, which significantly affect the quality of life of patients. In "The epidemiology and prevention of chronic kidney disease in Brazil," Sesso. Warns that the incidence and prevalence of advanced stages of the disease have increased both in Brazil and worldwide. The available treatment options for the disease achieve only partial replacement of renal function, relieving symptoms and preserving life, although none are curative. In addition, the therapeutic process is difficult and painful, which, although essential for maintaining the life of the chronic kidney disease sufferer, makes his or her daily routine and eating habits extremely challenging, as well as causing changes in physical and emotional integrity, among other aspects of life. Such experiences involve significant changes in social and family life, and can end up triggering dependency on social care and a loss of autonomy. In general, patients report increasing physical limitations, provoked by fatigue and

constant pain which prevents them from performing certain tasks. Daily contact with these patients can reveal the expression of negative feelings, such as anxiety, insecurity, panic, depression, discouragement, a feeling of being attached to the dialysis machine, fear related to the limitations resulting from their situation, the effects of the disease and the changes in how they live and how they are as people, with possible changes in quality of life. A study conducted by the Universida de Federal do Rio Grande do Sul (UFRGS) in 2011, entitled “Perceptions and changes in the quality of life of patients undergoing hemodialysis” found changes in the quality of life of those suffering from this disease, as can be seen in the words of one of the participants of the study: “*I had a very intense, physically active life; I was a physical education teacher. So it was a very complicated experience, I was going to the gym, going to dance class, it was my life, it was my greatest achievement*, *now I find myself kind of useless, sometimes I’m at home, I have too much free time and at the same time, I cannot find anything that occupies me and makes me feel happy*. *For me, it was very complicated, all of a sudden you feel weak because of the anemia, and you’re not able to do lots of things you used to do, you’re trapped in a machine to survive*”. Patients with chronic kidney disease must adapt not only to the disease and its treatment, but also to numerous physiological, psychosocial and spiritual problems arising from the condition. In this difficult environment, many cling to faith and religion as a source of support and relief from their suffering. Religion and spirituality are becoming

more and more important in health care, as they are commonly perceived as a way to give meaning to life and provide hope and a way to find peace in the midst of serious events such as chronic illness. Today, an association between greater religiosity or spirituality of patients and greater general well-being has been found in cases of mental illness ; lower prevalence of depression, drug abuse and suicide; a better quality of life; a more appropriate way to deal with a disease (coping); lower mortality; less time spent in hospital; and better immune system functioning. With so many benefits, it is important to evaluate the relationship with religion and spirituality in dialysis patients.

Quality of Life in Arab Emirates

According to the article of Faisal Masudi, (2012) assessed that the middle East in terms of quality of life, followed by Abu Dhabi, a new survey suggests. According to HR consultancy Mercer's annual report, the two emirates are top in City Infrastructure as well among Middle Eastern cities. However, they don't fare so well in overall global rankings. Out of the 221 cities rated worldwide, Dubai ranks 73 for Quality of Living and 34 for City Infrastructure. Abu Dhabi is rated 78 and 72 respectively. Still, Dubai beats Geneva (47), Miami (48), San Francisco (55), Barcelona (57), Rome (72) and Kuala Lampur (77). Meanwhile, Vienna retained its top spot in Quality of Life and Baghdad has again come in last. In infrastructure, Singapore is the best city while Port-au-Prince is the worst, the study notes. Recent violence in the Middle East has seen rankings

plunge, with Damascus tumbling 18 points to 197; Manama sliding 13 places to 126; and Cairo falling six steps to 141. The ratings are compared using New York as a base city, and weigh factors like political and social stability, education, public services and housing, among others. Infrastructure, and its effect on life quality, was scaled for the first time. The results are intended to help governments understand what factors affect residents' quality of living, and designed for multinational companies to "compensate employees fairly when placing them on international assignments," Mercer said in a statement yesterday. Zaid Kamhawi, Mercer's IPS Business Leader in the Middle East, said: "It's no surprise that there's a near perfect correlation between a city's infrastructure ranking and the overall quality of living ranking. "The constant pace of progress and development found in Dubai and Abu Dhabi is in no doubt major contributing factors to their position as top-ranking cities in the region."Ali Rashid, a 33-year-old Emirati engineer in Sharjah, said he was not surprised at the findings. "The UAE is a second home to millions of expats, they like to come here and enjoy its opportunities and lifestyle. The infrastructure here is also world-class, so that makes life easier for all of us. I don't think any other city in the region can compare to Abu Dhabi and Dubai, they're really doing a lot to keep ahead of competition for investment and caring for residents."

On the other hand, in the article of Essam Al Tamimi (2014) elaborated the country was founded, few people would have believed that the UAE would look the way it now does. Oil had only just begun contributing to the UAE economy, which had previously been dependent on fishing and the pearl industry. At this time the UAE had hardly any economic strength, however it did have determination and strong leadership. Since then, the UAE has emerged as the most stable and secure country in the Middle Eastern region, attracting foreign investment and human talent. The UAE government has long recognized the importance of investing and having a firm strategy for improving its citizen's welfare through education, healthcare, security and training. This, together with the UAE leadership's determination to make the UAE an active member of the international community, has enabled the UAE to enjoy prosperity, growth and friendly relationships with almost the entire world. A simple review of the progress of the UAE over the past 43 years, including the huge investment currently taking place, shows how much attention the UAE has given to improving the quality of life in the country, and the fact that the government recognizes the need to constantly improve and progress public services to create a better UAE. The UAE has made tremendous efforts in establishing and investing in schools, hospitals, transport, training of the judicial system, separation of powers, training across public and private sectors, and zero tolerance on corruption, crime, and terrorism. This has not only improved the quality of life in the UAE and created

a new well-educated, well-trained generation, but it has also made the UAE one of the safest and most desirable countries to live in amongst the region and internationally. Most importantly perhaps, the trust and stability that the UAE has within its government and leadership provides the local and international community with confidence in the country's long-term future and its ability to deliver on its ever more ambitious plans. The UAE's current leadership provides a wonderful formula for future growth. The UAE has succeeded where unfortunately others have failed, in investing in the creation and the existence of a well-rounded and functioning human society. It has done this by recognizing that it is important to invest in the basics to establish the fundamentals of any society. Having recognized the importance of investing in its people from day one, the UAE has consistently and gradually increased investment throughout its 43 years, creating the UAE we know today. These principles are not new or alien to other peoples. They are principles that contributed to the success and growth of old or modern societies, and formed a fundamental part of the Islamic religion. However wherever in the world you look, it is recognized that security, education, health, training, rule of law, are needs of any society. Fortunately the UAE, through its inspired leaders, has been able to implement these principles and achieve more than anyone could have imagined 43 years ago. The determination of the current government will allow the UAE to continue advancing and leading the region for many more years to come.

Synthesis

In the study of El- Reshaid et.al (2005) examined the prospective one conducted at Al-Amiri Hospital and including all new cases of chronic renal disease (CRD) seen at the capital area of Kuwait between 1 January 1999 and 30 December 2003 which was also affirmed according to the study of Fukuhara S et.al (2003) which explained that the assessing health-related quality of life (HRQOL) can provide information on the types and degrees of burdens that afflict patients with chronic medical conditions, including end-stage renal disease (ESRD).

However, Wen J. Liu et. al (2013) examined the National Medical Research Register (NMRR registration no. 11-827-10135) and approved by the Medical Research Ethics Committee of Malaysia which also agreed in the another journal study of Thokozani Masina et.al (2016) which explained that the Haemodialysis in Malawi consumes a disproportionate amount of the national health budget, costing approximately $20,000 per patient per year.

In addition, in the study of Krzysztof Laudanski et. Al (2013) explained the aim of the present study was to compare the experience elderly and younger patients in terms of emotional status, disease perception, methods of coping with the end-stage renal disease (ESRD) stress, and health-related quality of life in 2 different settings of renal replacement therapy: hemodialysis (HD) and continuous ambulatory peritoneal dialysis programs (CAPD) which was also stated in the study of Ann M. O'Hare et. al (2007) which examined

that the Chronic kidney disease (CKD) is common among the elderly. However, little is known about how the clinical implications of CKD vary with age.

According to the study of Idan Goldberg and Ilan Krause (2016) investigated the Chronic kidney disease (CKD) is a common disease worldwide and is associated with high rates of morbidity and mortality which was also assessed according to the study of Po Ya Chang et. al (2016) which examined that the risk factors for chronic kidney disease (CKD), such as hypertension, hyperglycemia, albuminuria, renal structure, and sex hormones, have been reported to have different effects on males and females.

Meanwhile, in the study M. W. Khattak et. al (2010) explained the association of marital status with access to renal transplantation which was also explained in the study of Natalia Alencar de Pinho (2015) which examined the chronic kidney disease (CKD) has taken on the status of public health concern in recent years, due to its increased prevalence among the world's population and its impact on morbidity and mortality in affected patients.

At the same time, according to the study of Yen M et.al (2008) investigated that the physical, knowledge and quality of life outcomes of an educational intervention for patients with early stage chronic kidney disease which however, in the study of Andy I. Choi et. al (2011) examined that the socioeconomic inequalities in health status and life expectancy have been documented for decades in the United States.

In the study of Sofia Rubinstein et. al (2013) assessed the chronic kidney disease (CKD) is a major health problem in the United States. With a prevalence of 13.1% and growing, it is associated with major health care expenditures, totaling $41 billion in 2010, which accounts for 17% of the total Medicare spending for the year. The leading causes of CKD include poorly controlled diabetes, hypertension, chronic glomerulonephritis, and polycystic kidney disease which according to the study of Todd R. Sponholtz et.al (2016) discussed that there is increasing interest in occupational risk factors for chronic kidney disease (CKD). This stems from observations of elevated CKD prevalence in low- and middle-income countries, particularly in rural agricultural communities such as El Salvador, Nicaragua, India, and Sri Lanka , where the predominant risk factors observed in the US (e.g., obesity, diabetes, and hypertension) are typically absent in patients and environmental and occupation exposures are hypothesized to play a larger role .

According to the study of Swati Jain et.al (2014) investigated the most important human asset which determines the living efficiency of an individual. Since beginning, mankind has sought for good health by which in the study of Stênio Medeiros Queiroz et.al (2013) investigated the chronic kidney disease (CKD) is a global public health problem.

According to the study of Mahenda Agraharkar et.al (2003) assessed the Although there are guidelines for the initiation of hemodialysis and for the care of patients on maintenance hemodialysis and peritoneal dialysis, there is

very little in the literature regarding the recovery of renal function by which in the other article of National institute of diabetes and digestive and kidney disease (2017) elaborated that the diagnosis of kidney disease means that a person's kidneys are damaged and cannot filter blood the way they should.

On the study of Carolina Costa Valcanti et.al (2012) investigated the chronic renal failure (CRF) is accompanied by a complex clinical picture, different etiologies and high morbidity levels which was also elaborated according to the study of Eli Ávila Souza Júnior et.al (2015) which assessed that the chronic kidney disease is a disease with high morbidity and mortality.

Theoretical Framework

This research study was anchored by the Quality of Life Theory. According to the study of Soren Ventegodt et.al. (2013), the Quality of life (QOL) means a good life. A good life is the same as living a life with a high quality. This may seem evident, but it is necessary to make such a simple clarification, because medical jargon often uses very narrow concepts of the quality of life (for example, side effect profiles). Medical advertisements often depict the quality of life as one factor among many, on a par with other improvements that a certain medical product promises. In this work, the quality of life belongs on the highest, most common level of life. All great religions and philosophies have a notion of a good life ranging from saying that a good life is attained by practical codes of conduct to requests to engage in a certain positive attitude

to life or to search into the depths of your own being. Notions about a good life are closely linked to the culture of which you are a part. When people in a Western culture view a good life, the cultural conditioning makes them tend to include happiness, fulfillment of needs, functioning in a social context, etc.

The theory of Quality of Life is a very applicable theory to be used in this particular research study because of its basic characteristics on philosophical approaches of spiritual and religious ideals towards positive attitude despite any serious medical condition which can still achieve the quality of life every individual is deserved. Through this, it will help the researcher to attain the main objective of this research study to determine the quality of life among dialysis patients in State of Kuwait.

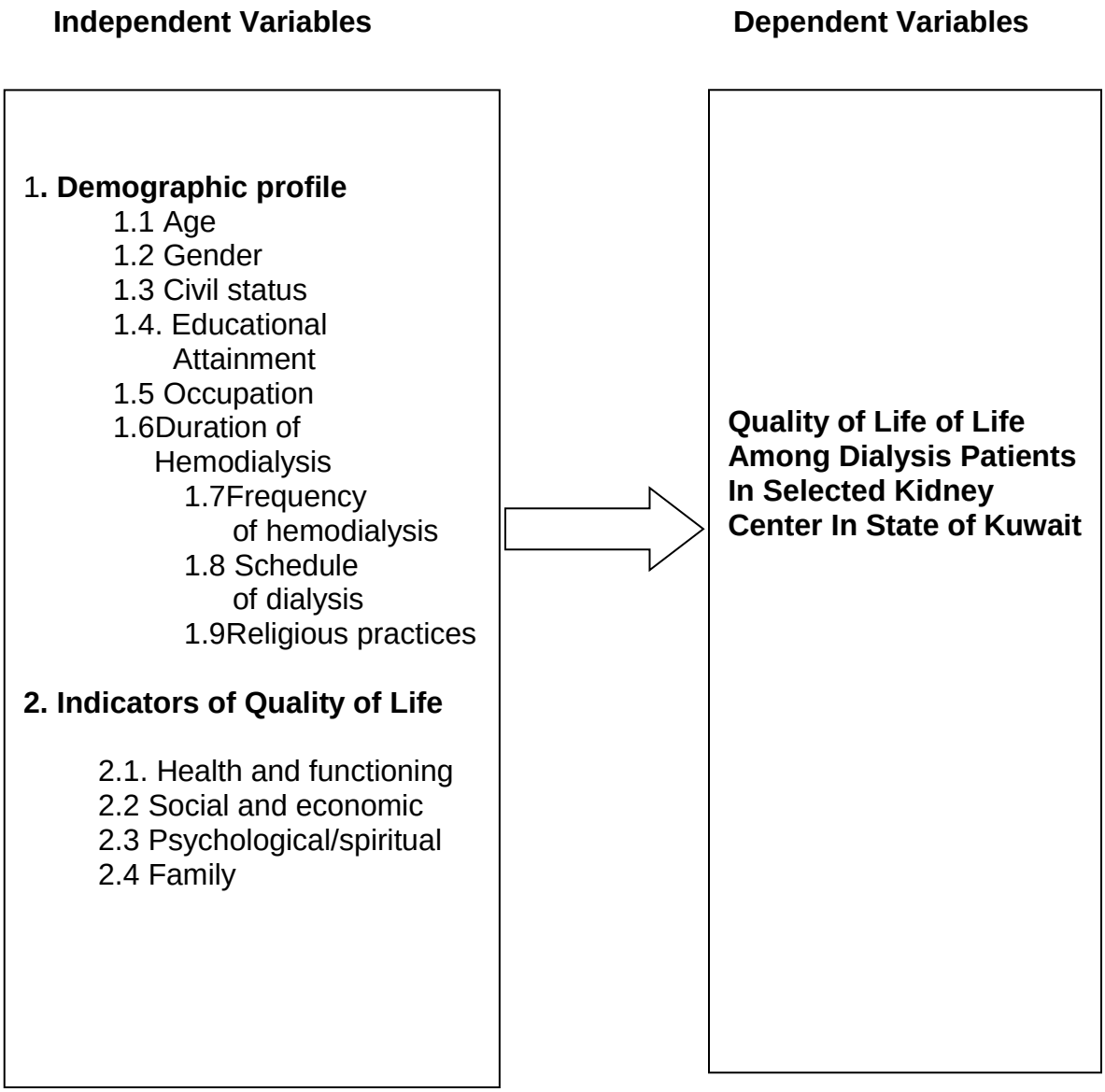

Figure 1

Research Paradigm

Chapter 3

METHODOLOGY

This chapter presents the research methodology of the study used by the researchers in this particular research investigation process in gathering data to determine the quality of life among dialysis patients in a selected kidney center in State of Kuwait.

Research Design

The researcher utilized a descriptive correlational design type of research. According to Gabriella Belli (2008), descriptive type of research design is a non-experimental research in which the primary focus for the research is to describe some phenomenon or to document its characteristics. Such studies are needed in order to document the status quo or do a needs assessment in a given area of interest. This method is applicable to this study because the researchers are subjected to describe the results of the study to describe the variables and assesses the quality of life among dialysis patients in a selected kidney center in State of Kuwait. At the same time, correlational research will be utilized by the researcher. According to the downloaded file of Andy Schmitz (2012) said that correlational research is a research designed to discover relationships among variables and to allow the prediction of future events from present knowledge. It is applicable in the study since the

relationship between quality of life in terms of extent of satisfaction and importance will be identified.

The method that was used by the researcher is quantitative research. According to Babbie, Earl R. (2010) said that quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. In quantitative research, your goal is to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population. This approach was very applicable in the study because of the bigger population.

Participants of the Study

This research study determined the quality of life among dialysis patients in a selected kidney center in State of Kuwait, a total of 50 dialysis patients were selected thru total enumeration.

Instrumentation

In gathering the data for this study, the researcher utilized survey questionnaire as a device u to measure the inquiries of the study. In this particular research study, the researcher specifically adopted and used the Quality of Life Tool - Index Version III by Carol Estwing Ferrans and Marjorie J. Powers (1994 and 1998). The researcher asked for permission in the utilization of the tool. This survey questionnaire is composed of the following parts:

Part 1 of the questionnaire is the demographic profile and information of the respondents in terms of age, gender, civil status, educational attainment, occupation, duration of hemodialysis, frequency of hemodialysis, schedule of Dialysis, and religious practices;

Part 2 of the questionnaire is the tool measured the quality of life of patients with end stage renal diseases, the questionnaire contains variables namely health and functioning; social and economic; psychological/spiritual; and family. The instrument contains two parts, each containing thirty-four items: the first measuring satisfaction with certain aspects of life and the second measuring the importance of those same aspects. The following items correspond to health and functioning, 1,2,3,4,5,6,7,8,12,17,18,19,26 and 27 while for social and economic subscale includes items 14,16,20,21,22,23,24,and 25, for psychological/spiritual subscale, items are 28,29,30,31,32,33,and 34 while for the family subscale includes items

9,10,11,13 and 15.Ratings are used to weight the satisfaction responses, so that scores reflect the respondent's satisfaction with the aspects of life they value. The items rated most important have a larger impact on the scores than those of less importance.

The instrument consisted of five pages for English questionnaire and a four pages for Arabic questionnaire with three parts which are the (1) Demographic profile of the respondents, and (2) Satisfaction in areas of life, and (3) Importance in areas of life. The questionnaire proper specifically the assessment of the respondents on the extent of satisfaction and importance in a particular area of life. It is written in English and Arabic language format with total number of nine (9) questions for demographic profile of the respondents, thirty four (34) questions for satisfaction in a particular areas of life, and another thirty four (34) questions for importance in a particular areas of life for which are answerable by numeric method from 1 to 6 based on likert rating scale. At the same time, this questionnaire will be validated for content through a pilot study composed of Professors and Faculty members that know about the study.

Data Gathering Procedures

The researcher first secured permit from the selected dialysis center in Kuwait. After the release of the permit, the researcher explained the nature and purpose of the study to the respondents. Informed consent was secured, ensuring all respondents that all data collected were treated with strict

confidentiality. The distribution of questionnaire and interviews were done after the dialysis sessions ensuring that all respondents were capable of answering the questionnaire. Enough time was given in consideration with the general welfare of the respondents.

Statistical Treatment of Data

The following statistical treatments were utilized;

Frequency and Percentage. This was used to interpret data for problem number 1 regarding the respondent's demographic profile in terms of age, gender, civil status, educational attainment, occupation, duration of hemodialysis, frequency of hemodialysis, schedule of dialysis, and religious practices.

Weighted mean. This was used to interpret data for problem statements numbers 2 and number 3 regarding the assessment of the respondents on the extent of satisfaction and importance in a particular area of life in terms of health, health care, amount of energy have for everyday activities, ability to take care of oneself without help, likelihood to get a kidney transplant, changes to have had in life to make in life because of kidney failure (such as diet or need for dialysis), amount of control have over life, chances of living as long as would like, family's health, children, family's happiness, sex life, spouse, lover, or partner, friends, emotional support get from family, emotional support get from people other than family, ability to take care of

family responsibilities, or useful you are to others, amount of worries in life, neighborhood, home, or apartment, or place where live, job (if employed), not having a job (if unemployed, retired, or disabled), education, how well you take care of financial needs?, things do for fun, chances for a happy future, peace of mind, faith in God, achievement of personal goals, happiness in general, life in general, personal appearance, and self in general;

A 6-point rating scale was used to describe the computed means as follows:

Scale	Weighted Mean			Verbal Interpretation
1	1.00	-	1.49	Very unimportant
2	1.50	-	2.49	Moderately unimportant
3	2.50	-	3.49	Slightly unimportant
4	3.50	-	4.49	Slightly important
5	4.50	-	5.49	Moderately important
6	5.50	-	6.00	Very important

Pearson-R correlation. This was used to interpret data for problem number 4 regarding the significant relationship between the demographic profile on the assessment of the respondents in extent of satisfaction and importance in a particular areas of life.

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter discussed the results of the data gathered about the quality of life among dialysis patients in a selected kidney center in State of Kuwait.

Demographic Profile of the Respondents

Table 1 shown below presents the personal profile of dialysis patients as respondents in selected kidney center in State of Kuwait showing their characteristics by age, gender, civil status, educational attainment occupation, duration of hemodialysis, frequency of hemodialysis, schedule of dialysis and religious practices.

The table below shows the demographic profile of the respondents. It shows that the age of respondents ranges from 18 to 65 with a mean of 25. Results show that majority of the respondents were female (35 or 70 %), married (29 or 58%), college graduate (20 or 40%), and unemployed (27 or 54%. Majority were undergoing hemodialysis 3 times per week for 3 1/2 hours and in the 2nd shift (23 or 46%). There were multiple responses for the religious practices and was gathered during dialysis while most of the respondents adhered to prayer times (21 or 42%).

Table 1

Profile of the Respondents

Profile	*Frequency*	*Percent*
Age (years)		
18-30	*20*	*40*
31-65	*30*	*60*
Total	***50***	***100***
Gender		
Female	*35*	*70*
Male	*15*	*30*
Total	***50***	***100***
Civil status		
Single	*13*	*26*
Married	*29*	*58*
Separated	*6*	*12*
Widowed	*2*	*4*
Total	***50***	***100***
Educational Attainment		
Elementary	*9*	*18*
High school	*17*	*34*
College	*20*	*40*
Postgraduate degree	*4*	*8*
Total	***50***	***100***
Occupation		
Employed	*23*	*46*
Unemployed	*27*	*54*
Total	***50***	***100***
Duration of hemodialysis		
3 hours	*9*	*18*
3 1/2 hours	*31*	*62*
4 hours	*10*	*20*
Total	***50***	***100***
Frequency of hemodialysis		
2 times per week	*9*	*18*
3 times per week	*41*	*82*
Total	***50***	***100***
Schedule of hemodialysis		
1st shift	*21*	*42*
2nd shift	*23*	*46*
3rd shift	*10*	*20*
Total	***50***	***100***
Religious Practices		
Prayer times (5x a day)	*21*	*42*
Reads Quran	*13*	*26*
Goes to the mosque	*9*	*18*
Fasting during Ramadan/Eid	*7*	*14*
Total	***50***	***100***

Extent of Satisfaction of the Respondents in their Quality of Life

Table 2 shows the extent of satisfaction of patients with their quality of life in terms of health and functioning. Results show that the respondents were slightly satisfied in all items of health and functioning most especially in the ability to take care of your family responsibilities with a mean of 4.40 which is the highest mean in this particular area. The two items that got the lowest means are the health with a mean score of 3.72 and their health care with a mean score of 3.74. The over-all mean is 4.05 which is interpreted as slightly satisfied.

Table 2

Extent of Satisfaction in the Quality of Life in terms of Health and Functioning

Item No.	***Mean***	***Interpretation***
1.Your health	*3.72*	*Slightly Satisfied*
2.Your health care	*3.74*	*Slightly Satisfied*
3.The amount of energy you have for everyday activities	*4.20*	*Slightly Satisfied*
4.Your ability to take care of yourself without help	*4.10*	*Slightly Satisfied*
5. The likelihood you will get a kidney transplant	*4.20*	*Slightly Satisfied*
6. The changes you have had to make in your life because of kidney failure (such as diet and need for dialysis)	*3.76*	*Slightly Satisfied*
7. The amount of control you have over your life	*4.02*	*Slightly Satisfied*
8. Your chances of living as long as you would like	*3.76*	*Slightly Satisfied*
12. Your sex life	*4.26*	*Slightly Satisfied*
17. Your ability to take care of your family responsibilities	*4.40*	*Slightly Satisfied*
18. How useful you are to others	*4.12*	*Slightly Satisfied*
19. The amount of worries in your life	*4.12*	*Slightly Satisfied*
26. The things you do for fun	*3.86*	*Slightly Satisfied*
27. Your chances for a happy future	*3.76*	*Slightly Satisfied*
SUBMEAN	***4.05***	***Slightly Satisfied***

Legends: 5.50 - 6.00 = Very Satisfied 4.50 - 5.49 = Moderately Satisfied 3.50 - 4.49 = Slightly Satisfied
2.50 - 3.49 = Slightly Dissatisfied 1.50 - 2.49 = Moderately Dissatisfied 1.00 - 1.9 = Very Dissatisfied

The table shows that health of most of the respondents is very much affected by the medical condition that the respondents are suffering now that shows that most of them were slightly satisfied with their quality of life pertaining to their health. Due to the consequences of the said illness, according to them they have lessen the capacity to take good care of their health because they were more inclined with their situation and the treatment that they were undergoing and they merely relied so much with prayers and the effectiveness of the treatment being administered to them.

According to the article of St. Amant (2017) said that in managing the stress of family responsibilities set aside time to engage in healthy activities that you enjoy or that help you relax. Identify hobbies, increase exercising or eating healthy foods. Making time for yourself will help you better manage stressful situations and allow you to better care for the whole family. Also, find something that makes you laugh – humor is important, and laughter can really make life a whole lot easier. Some people deal with stress by engaging in unhealthy behaviors, such as smoking, drinking, comfort eating, or yelling and becoming irritable. Remember that stress is inevitable. What makes the biggest difference is how you manage that stress. Enlist and accept help from others including friends and family. Identify ways your family can help with specific needs that must be met like providing a meal or babysitting so you can find time to take a break and rejuvenate. Take time to connect with your friends and family when you are feeling overwhelmed. Remind yourself that

each morning offers a new start and take things one step at a time. Realize that there is no one perfect way to parent. Staying optimistic lowers stress. Delay or say no to the unimportant tasks, and make appointments for more important tasks, such as spending quality time with a spouse or child. Keeping the family and yourself organized reduces stress. Put family health information in separate folders; get family members to keep laundry in color coded baskets; keep book bags in assigned bins. Harried searching for things adds to mom's stress. Enlist your children's help in developing an organization plan for your household – if they are involved in the planning, they will be more likely to follow through. If you feel overwhelmed by stress or the unhealthy behaviors you use to cope, you may want to talk with a psychologist who can help you address the emotions behind your worries, better manage stress and change unhealthy behaviors.

On the other hand, in the article of Euro Med (Nd) said that when serious illness or disability strikes a person, the family as a whole is affected by the disease process and by the entire health care experience.3 Patients and families have different needs for education and counseling. Because each person in a family plays a specific role that is part of the family's everyday functioning, the illness of one family member disrupts the whole family. When a family member becomes ill, other family members must alter their lifestyle and take on some of the role functions of the ill person, which in turn affects

their own normal role functioning. If the person who does most of the family's cooking has surgery and can't shop or prepare meals for several weeks, other family members must take on this responsibility in addition to the tasks they already do. When a working parent is up most of the night trying to console a child with an ear infection, the parent not only loses sleep, but must either arrange for emergent child care or take a day off from work. If a man who is the primary income producer in a family has a heart attack, his wife may have to return to work, increase working hours if she is already employed, or become the family's breadwinner. Middle aged adults whose children have just left home may need to alter their plans and goals to accommodate care needs for aging parents. Illness may cause additional strain as the result of economic problems and interruptions in career development. If the patient is a young child, there may be additional strain to the family if there are siblings whose needs must also be met. Illness in the middle stage of family life, when adolescents are trying to break away from family ties and parents are going through their own mid-life transitions, may put further strain on what is already a time of potential family turmoil. Illness in later age may have an impact not only on grown children but also on the older couple who had anticipated a time of enjoyment together and are less able to care for each other because of their own physical limitations associated with aging.

Table 3 shows the extent of satisfaction of the patients with their quality of life in terms of social and economic. Results show that the respondents were slightly satisfied in all items of social and economic most especially in their job with a highest mean of 4.24. How well one can take care of one's financial needs was ranked by respondents as the lowest mean of 3.76. The over-all mean in this area is 4.07 which is interpreted as slightly satisfied.

Table 3
Extent of Satisfaction in the Quality of Life in terms of Social and Economic

Item No.	***Mean***	***Interpretation***
14. The emotional support you get from your family	*4.16*	*Slightly Satisfied*
16. The emotional support you get from people other than your family	*4.14*	*Slightly Satisfied*
20. Your neighborhood	*4.14*	*Slightly Satisfied*
21. Your home, apartment or place where you live	*3.8*	*Slightly Satisfied*
22. Your job (if employed)	*4.24*	*Slightly Satisfied*
23. Not having a job (if unemployed, retired or disable)	*4.1*	*Slightly Satisfied*
24. Your education	*4.2*	*Slightly Satisfied*
25. How well you can take care of your financial needs	*3.76*	*Slightly Satisfied*
SUBMEAN	***4.07***	***Slightly Satisfied***

Legends: 5.50 - 6.00 = Very Satisfied 4.50 - 5.49 = Moderately Satisfied 3.50 - 4.49 = Slightly Satisfied
2.50 - 3.49 = Slightly Dissatisfied 1.50 - 2.49 = Moderately Dissatisfied 1.00 - 1.9 = Very Dissatisfied

According to Bisk (2016) said that for the first time in several years, the number of employees who say they are satisfied with their current job took a big jump, rising from 81% in 2013 to 88% in 2016, according to the Employee Job Satisfaction and Engagement Report by the Society for Human Resource

Management (SHRM). The improving economy was one factor in the high level of satisfaction, since employers have been more willing and able to boost salaries, benefits and perks for their workers. Additionally, as the labor market stabilized, job seekers took advantage of new opportunities for positions that best fit their skills and interests.

Most organizations strive for employee satisfaction, but not all attain this goal. That's why it's important for human resources professionals to know more about the factors that can increase employee satisfaction, and how it fits into a company's overall success.

According to the article of The National Kidney Foundation (2016) discussed that many people with chronic kidney disease (CKD) or kidney failure work full time or part time. Some go to school or take care of their homes and families. Others do volunteer work, have hobbies, or have regular exercise routines. If you have kidney disease or kidney failure, you may have questions about working. Many people who start dialysis or have a transplant want to go back to work. Some people feel it helps them get their lives get back to normal. Others may take a little time off to get used to dialysis or recover from transplant surgery. Some people continue to work full time as they begin treatment. Others switch to a part-time or flexible schedule. Some people ask for jobs that are less physically demanding. You may need to work different hours to go to hemodialysis. Or you may need a clean,

private area where you can do peritoneal dialysis. You should feel free to talk to your employer about job changes that might make it easier for you to work. Remember, your employer probably won't know what changes you might need if you don't ask for them. Your employer may not know much about kidney disease or how it may affect your abilities. There might be concerns about how much work you can do and how much time off you will need. There could also be concerns about how much your health benefits will cost the company. You may want to ask your doctor or another member of your healthcare team to talk with your employer about these. A little information about your illness, abilities, and limitations can do a lot to ease an employer's concerns. Here are a few of the topics you and your employer may want to discuss the Changing your work schedule to allow for dialysis and healthcare visits, Making up time taken off for medical reasons, Physical limitations, if any What to do in case of an emergency. Employers may not know about tax credits they can get for making changes to the workplace.

Table 4 shows the extent of satisfaction of the patients with their quality of life in terms of psychological/spiritual. Results show that the respondents were slightly satisfied in all items of psychological/spiritual most especially in their peace of mind with the highest mean of 3.94. The item stating about their life in general has the lowest mean score of 3.66. The over-all mean in the area of psychological and spiritual is 3.80 and interpreted as slightly satisfied.

Table 4
Extent of Satisfaction in the Quality of Life in terms of Psychological/Spiritual

Item No.	***Mean***	***Interpretation***
28. Your peace of mind	*3.94*	*Slightly Satisfied*
29. Your faith in Allah	*3.82*	*Slightly Satisfied*
30. Your achievement of personal goals	*3.70*	*Slightly Satisfied*
31. Your happiness in general	*3.78*	*Slightly Satisfied*
32. Your life in general	*3.66*	*Slightly Satisfied*
33. Your personal appearance	*3.90*	*Slightly Satisfied*
34. Yourself in general	*3.80*	*Slightly Satisfied*
SUBMEAN	***3.80***	***Slightly Satisfied***

Legends: 5.50 - 6.00 = Very Satisfied 4.50 - 5.49 = Moderately Satisfied 3.50 - 4.49 = Slightly Satisfied
2.50 - 3.49 = Slightly Dissatisfied 1.50 - 2.49 = Moderately Dissatisfied 1.00 - 1.9 = Very Dissatisfied

According to the article of Kidney Buzz (Nd) elaborated that if a Chronic Kidney Disease patient refuses Dialysis their blood gets toxic, they lose their appetites, they get lots of nausea and vomiting, they lose memory, they go into a coma, and basically they die, suggested Dr. Andrew Levine (Nephrologist). While it keeps patients alive, Dialysis is far from an ideal option for most. No one that conducts Dialysis has to be reminded of how difficult the treatment

can be. It impacts a patient's quality of life and peace of mind. That is why KidneyBuzz.com has identified a few basic strategies which patients can immediately use, with the assistance of their Healthcare Teams, to help directly improve their health outcomes and quality of life. When a patient is first diagnosed with Kidney Failure or told that they must begin Dialysis, it feels like the world is crashing down around them. The first thing patients often think is that they will soon die. Juan Martinez (Dialysis patient) said, “People think, ‘Oh Dialysis. Oh, that’s the end or whatever’ And I have been learning and I ask questions. And they tell me you can live 15, 20 years being on Dialysis, as long as you take care of yourself." While it is not the case for everyone, the life expectancy for Dialysis patients has been increasing and some patients report that they have conducted Dialysis for over 30 years. Dialysis is not a death sentence.

Table 5 indicates the extent of satisfaction of the patients with their quality of life in terms of family. Results show that the respondents were slightly satisfied in all items most especially in their family’s happiness with a highest mean of 4.26. Being satisfied with family’s health got the lowest mean of 3.80. Over-all the respondents were slightly satisfied in the area of family with a mean score of 4.13.

Table 5
Extent of Satisfaction in the Quality of Life in terms of Family

Item No.	***Mean***	***Interpretation***
9. Your family's health	*3.80*	*Slightly Satisfied*
10. Your children	*4.16*	*Slightly Satisfied*
11. Your family's happiness	*4.26*	*Slightly Satisfied*
13. Your spouse, lover or partner	*4.24*	*Slightly Satisfied*
15. Your friends	*4.20*	*Slightly Satisfied*
SUBMEAN	***4.13***	***Slightly Satisfied***

Legends: 5.50 - 6.00 = Very Satisfied 4.50 - 5.49 = Moderately Satisfied 3.50 - 4.49 = Slightly Satisfied
2.50 - 3.49 = Slightly Dissatisfied 1.50 - 2.49 = Moderately Dissatisfied 1.00 - 1.9 = Very Dissatisfied

In the study by Committee on the Learning Health Care System in America (2013) said that informed and engaged patients, invested in their own health care as well as in the improvement of the broader health care system, are crucial to a learning system. Patients bring unique and important perspectives on their own care, on the experience in health care organizations, and on the coordination and cooperation among various elements of their care. Unfortunately, patients, their families and other caregivers, and the public all too often are not meaningfully engaged in care or as partners in its improvement. Moving to the vision of a system centered on people's needs and preferences has the potential to bring multiple benefits for patients, the health care system, and the nation. As noted, more than 10 years after *Crossing the Quality Chasm* highlighted the crucial role of patient-centered care, such care still is not the norm, and patients continue to find the health care system uncoordinated and stressful to navigate. A 2011 survey of public views of the health care system found that patients have difficulty accessing care, experience poor care coordination, and want a system that is more integrated and patient-centered. Seven of 10 adults

surveyed reported difficulty in making doctor's appointments when they needed them, getting advice over the phone, or receiving care after hours. Nearly half of adults reported problems with care coordination, notification of test results, and communications between primary care providers and specialists, and one-third said the health care system was poorly organized (Stremikis et al., 2011). The lack of patient focus is particularly evident in patient communications, especially about care options. Surveys of patients who have recently made a medical decision have found that those patients often did not receive critical information about the risks and benefits of the treatment and intervention choices under consideration (Fagerlin et al., 2010; Lee et al., 2011, 2012; Sepucha et al., 2010). These patients also reported that their clinicians stressed the benefits of interventions more than they discussed the risks, and asked patients about their preferences only half of the time (Zikmund-Fisher et al., 2010). Because modern health care often offers multiple interventions for a given condition, each with its own benefits, side effects, and costs, identifying the most valuable intervention for each patient requires both that patients be well informed about the options and that clinicians be aware of their patients' individual circumstances, preferences, and needs.

An article by Herbert Pardes (2016) discussed that family support is critical. Family can be very helpful in not discouraging patients from work. Patients

with CKD can travel, work, and have prospects of a lengthy life. There are CKD patients who have lived more than 40 years after diagnosis. That said, patients and their families need both physical and psychological space. Some patients manifest great anger, and it takes the care team as well as the family to be able to help patients deal with that anger. Occasionally, a caring spouse can become a needy spouse, requiring more team support to get through that crisis. Attention must be given to the care partners as well as the entire family. There must be relief for them and understanding of how valuable they are. Group therapy can be very helpful. So, how can we do this better? How can we bring as many caring people as possible into the situation to maximize the general welfare of the individual with CKD? Efforts should focus on strengthening quality of life by expanding the individual's interests and the opportunity for enjoyment and good social contact. We are clearly asking patients to do a lot, including taking on a tough diet, taking multiple medications, and altering their daily lives. We must treat all of our patients as human beings with all of the feelings, worries, good times, and bad times that all of us experience and do everything that we can to enhance their overall feeling of wellness, involvement, and importance. It is well suggested that the patient should feel that the various professional and nonprofessional caretakers are partners. We are in this together and will strive for the best possible life, much happiness, and positive experiences and developments in the setting of these very demanding challenges.

Extent of Importance of the Respondents in the Quality of Life

Table 6 shows the extent of importance that patients give on the indices of quality of life in terms of health and functioning. Having control over your life was the lowest mean of 4.32 and was considered slightly unimportant. On the other end, their health has the greatest mean of 5.14 and was considered also as moderately important. Over-all, the mean in the area of importance of health and functioning is 4.71 which are interpreted as slightly important.

Table 6

Extent of Importance in the Quality of Life in terms of Health and Functioning

Item No.	*Mean*	*Interpretation*
1. Your Health?	*5.14*	*Moderately Important*
2. Your Health care	*4.92*	*Moderately Important*
3. Having enough energy for everyday activities	*5.00*	*Moderately Important*
4. Taking care of yourself without help	*4.68*	*Moderately Important*
5. Getting a kidney transplant	*4.38*	*Slightly Important*
6. The changes you have had to make in your life because of kidney failure (such as diet and need for dialysis)	*4.24*	*Slightly Important*
7. Having control over your life	*4.32*	*Slightly Important*
8. Living as long as you would like	*4.52*	*Moderately Important*
12. Your sex life	*4.80*	*Moderately Important*
17. Taking care of your family responsibilities	*4.82*	*Moderately Important*
18. Being useful to others	*4.58*	*Moderately Important*
19. Having no worries	*4.66*	*Moderately Important*
26. The things you do for fun	*4.98*	*Moderately Important*
27. Your chances for a happy future?	*4.92*	*Moderately Important*
SUBMEAN	***4.71***	***Moderately Important***

Legends: 5.50 - 6.00 = Very Important 4.50 - 5.49 = Moderately Important 3.50 - 4.49 = Slightly Important
2.50 - 3.49 = Slightly Unimportant 1.50 - 2.49 = Moderately Unimportant 1.00 - 1.9 = Very Unimportant

According to World Health Organization (2016) elaborated that better health is central to human happiness and well-being. It also makes an

important contribution to economic progress, as healthy populations live longer, are more productive, and save more. Many factors influence health status and a country's ability to provide quality health services for its people. Ministries of health are important actors, but so are other government departments, donor organizations, civil society groups and communities themselves. For example: investments in roads can improve access to health services; inflation targets can constrain health spending; and civil service reform can create opportunities - or limits - to hiring more health workers. WHO's work on 'Health and development' tries to make sense of these complex links. It is concerned with the impact of better health on development and poverty reduction, and conversely, with the impact of development policies on the achievement of health goals. In particular, it aims to build support across government for higher levels of investment in health, and to ensure that health is prioritized within overall economic and development plans. In this context, 'health and development' work supports health policies that respond to the needs of the poorest groups. WHO also works with donors to ensure that aid for health is adequate, effective and targeted at priority health problems.

According to the study conducted by Jennifer Finnegan-John and Veronica J. Thomas (2013) investigated that End-stage renal disease (ESRD) is a debilitating, chronic condition whereby the kidney

failure requires artificial means of excretion for survival. The primary means to achieve this are by peritoneal dialysis or haemodialysis (done several times weekly). Consequently, patients with ESRD undergo a number of lifestyle, dietary, and fluid restrictions in order to accommodate their illness. These lifestyle restrictions significantly impact on social functioning with patients performing a balancing act to ensure maintenance of vitamin, iron, and protein levels. Such restrictions can impact on patients' illness beliefs, sense of personal control leading to anxiety and depression, inhibiting coping, and adjustment. Kimmel et al. investigated the impact of psychosocial factors on behavioural compliance and survival in urban haemodialysis patients. Depression was related to decreased adherence to treatment. Depression is strongly recognized as a common psychological problem in haemodialysis patients. The rate of psychiatric disorders in a population of ESRD patients was considerably higher than in a population with other chronic medical conditions. Chilcot et al. reported that 20–30% of ESRD patients have significant depressive symptoms compared to the lifetime prevalence of depression in the general population of approximately 16%. Depression can complicate long-term conditions, potentially becoming more resistant to treatment over time. Depressed patients are found to be three-times as likely to be noncompliant with treatment recommendations as nondepressed patients. Additional stressors associated with ESRD include biochemical imbalance, physiological changes, neurological disturbances, cognitive

impairment, and sexual dysfunction. All can potentially play a role in depression. A qualitative study by Gregory et al. found patients with ESRD receiving haemodialysis developed a new identity and sense of self. This new and evolving emotional/psychological state indicated that patient's became cognisant of a new set of circumstances: an uncertain future, demands of illness, dependence of machinery, medication, and healthcare providers. Kimmel et al. found that perception of illness intrusion is linked to poorer survival rates. Illness representations predicted nonadherence to fluid restrictions amongst haemodialysis patients. Compared to other chronic illnesses, haemodialysis patients assessed their physical health as markedly diminished. Illness perceptions are significant predictors of coping, adjustment, and outcome. Additionally, within a sample of UK renal patients, patients' perceptions of treatment control predicted survival independently of survival risk factors, including comorbidity, illustrating the negative impact of maladaptive illness perceptions on clinical outcomes. Griva et al. found that treatment and illness perceptions were formed as a function of different ESRD treatment.

Table 7 shows the extent of importance the patients give on the indices of quality of life in terms of Social and Economic. Results show that the respondents consider all items are moderately important most especially the emotional support you get from your family with the highest mean of 5.08. The

education has the lowest mean score of 4.54. The over-all mean in this area is 4.89 which is interpreted as slightly important.

Table 7
Extent of Importance in the Quality of Life in terms of Social and Economic

Item No.	*Mean*	*Interpretation*
14. The emotional support you get from your family	*5.08*	*Moderately Important*
16. The emotional support you get from people other than your family	*5.06*	*Moderately Important*
20. Your neighborhood	*5.00*	*Moderately Important*
21. Your home, apartment or place where you live	*4.92*	*Moderately Important*
22. Your job (if employed)	*5.04*	*Moderately Important*
23. Not having a job	*4.86*	*Moderately Important*
24. Your education	*4.54*	*Moderately Important*
25. How well you can take care of your financial needs	*4.64*	*Moderately Important*
SUBMEAN	***4.89***	***Moderately Important***

Legends: 5.50 - 6.00 = Very Important 4.50 - 5.49 = Moderately Important 3.50 - 4.49 = Slightly Important
2.50 - 3.49 = Slightly Unimportant 1.50 - 2.49 = Moderately Unimportant 1.00 - 1.9 = Very Unimportant

According to Positive social support (family or friends) plays an important role in one's ability to make healthier choices. Social support means being able to access people that a person can rely upon if needed. The support of family and friends during a crisis has long been seen to have a positive emotional effect on people. However, this support also has a physical benefit as well. During stressful times, people tend to experience higher blood pressure and heart rates. However, the presence of friends or family members has been shown to reduce these rates among people during difficult periods. In terms of chronic disease, the support of family or friends has been shown to lessen the chance that one will become sick or die from heart disease. Research conducted at Brigham Young University and the University

of North Carolina showed that people who did not have strong social support were 50% more likely to die from illness than those who had such support. Family and friends are also important for those who have been diagnosed with chronic disease such as heart disease, high blood pressure and diabetes. Having such support systems is beneficial in helping patients follow a physician's recommendations. Strong social support will help patients adhere to their medical regimen by reminding them to keep their medical appointments, monitor their blood sugar and blood pressure, take their medicines, get regular exercise and eat healthier foods. Finally, family and friends can also provide practical support, such as rides to the doctor or pharmacy, going to the supermarket, and offering childcare during health care visits. The encouragement of friends and co-workers can motivate people who have been ill to take steps to be more active and get back to work more quickly than those who do not have a strong support system.

Meanwhile, in the article by Beth Israel Deaconess Medical Center (2017) stated that the care and challenges related to your illness and having a dialysis access surgery raises its own set of emotional and coping issues - for you, your loved ones, caregiver(s) and friends. Our behavioral health team, which includes a psychologist, social workers and a psychiatrist, if needed, has created a special program to address a unique circle of need. We help you understand the physical, emotional and financial impact of your disease and

the impact on your family, including children. Together we develop strategies to handle the many special challenges associated with your illness, access surgery and care. Our behavioral health program helps enhance care quality and patient outcomes by supporting patients and their families, before, during and after dialysis access surgery. Studies show that emotional health and well-being play an important role in recovery and improved physical health. We know that factors such as depression and anxiety can impact quality of life. Patients with untreated depression are at higher risk of relapsing to substance abuse, not taking their medications, and not attending to their physical health needs.

Table 8 shows the extent of importance the patients give on the indices of quality of life in terms of psychological/spiritual. Results show that the respondents gave the highest mean on Achieving your personal goals (Mean = 5.64) followed by *Being satisfied with life* (Mean = 5.62) and Your personal appearance (Mean = 5.06) which are both interpreted as very important. On the other hand, the items which obtained the lowest mean is Are you to yourself (Mean = 5.06), Your peace of mind (Mean = 5.32), and Your faith in Allah (Mean = 5.44). Are you to yourself has the lowest mean of while Achieving your personal goals has the highest mean. The over-all mean is 5.44 which is interpreted as moderately important.

Table 8
Extent of Importance in the Quality of Life in terms of Psychological/Spiritual

Item No.	*Mean*	*Interpretation*
28. Your peace of mind	*5.32*	*Moderately Important*
29. Your faith in Allah	*5.44*	*Moderately Important*
30. Achieving your personal goals	*5.64*	*Very Important*
31. Your happiness in general	*5.48*	*Moderately Important*
32. Being satisfied with life	*5.62*	*Very Important*
33. Your personal appearance	*5.54*	*Very Important*
34. Are you to yourself	*5.06*	*Moderately Important*
SUBMEAN	***5.44***	***Moderately Important***

Legends: 5.50 - 6.00 = Very Important 4.50 - 5.49 = Moderately Important 3.50 - 4.49 = Slightly Important
2.50 - 3.49 = Slightly Unimportant 1.50 - 2.49 = Moderately Unimportant 1.00 - 1.9 = Very Unimportant

Table 9 shows the extent of importance the patients give on the indices of quality of life in terms of family. Results show that the respondents consider family's happiness, spouse, lover or partner, and family's health as very important while friends and children considered as moderately important. It also shows that importance of friends has a lowest mean score of 5.40 and the importance of family's happiness has a mean of 5.70. It shows that the respondents value the family's happiness the most.

Table 9
Extent of importance in the quality of life in terms of Family

Item No.	*Mean*	*Interpretation*
9. Your family's health	*5.66*	*Very Important*
10. Your children	*5.42*	*Moderately Important*
11. Your family's happiness	*5.70*	*Very Important*
13. Your spouse, lover or partner	*5.56*	*Very Important*
15. Your friends	*5.40*	*Moderately Important*
SUBMEAN	***5.55***	***Very Important***

Legends: 5.50 - 6.00 = Very Important 4.50 - 5.49 = Moderately Important 3.50 - 4.49 = Slightly Important
2.50 - 3.49 = Slightly Unimportant 1.50 - 2.49 = Moderately Unimportant 1.00 - 1.9 = Very Unimportant

Overall Quality of Life

Table 10 shows the measure of the overall quality of life of the respondents in terms of the extent of satisfaction and extent of importance. Results show that the respondents have the highest satisfaction in terms of two areas which are Social/economic (Mean = 4.07) and family (Mean = 4.13) while respondents have the lowest measure of quality of life in terms of Psychological/spiritual (Mean = 3.80). Over-all the respondents considered their quality of life as slightly satisfied (Mean = 4.01).

In terms of the extent of importance, results show that the respondents have the highest importance in terms of quality of life in two areas which are family (Mean = 5.55) and Psychological/spiritual (Mean = 5.44) while the respondents have the lowest measure of quality of life in terms of health and functioning (Mean=4.71).Over-all the respondents considered their quality of life as moderately important (Mean = 5.15).

Table 10
Overall Extent of Satisfaction and Importance

	Satisfaction		***Importance***	
Variable	***Mean***	***Interpretation***	***Mean***	***Interpretation***
Health and functioning	*4.05*	*Slightly Satisfied*	*4.71*	*Moderately Important*
Social/economic	*4.07*	*Slightly Satisfied*	*4.89*	*Moderately Important*
Psychological/spiritual	*3.80*	*Slightly Satisfied*	*5.44*	*Moderately Important*
Family	*4.13*	*Slightly Satisfied*	*5.55*	*Very Important*
Overall	***4.01***	***Slightly Satisfied***	***5.15***	***Moderately Important***

As shown in the table, both the Social/economic and Family subscales were rated high in this study because personally they considered this as the most satisfying in their quality of life due to the factors that they are mostly benefiting from it despite battling with the disease. The presence of the people around them and other activities that give them supports and diversion during their sickness alleviate the pains and bad feelings. The help of financial supports and family in trying times like this helps the patient a lot to fight the disease. These two domains provided resources to cope with what would otherwise be a poorer quality of life according to the respondents of the study. According to the Stice, Ragan, & Randall (2004) said that for adolescents, family support is the most important element in their lives. As part of their growth experience, adolescents usually expect a lot of things from their parents. Inadequate support from the parents will likely increase the chance of getting depression among adolescents who get into unfortunate situation with their parents. This occurs because adolescent usually become confused when they expect to get plenty of help and positive reinforcement from their parents, but it does not happen. Beside family support, peer support also is very important factor for adolescents. Children can expect a lot from their friends. Peer support can be considered as an alternate method of getting social support if the adolescents receive inadequate attention from their parents. This social support method is not as reliable as family support because young children could easily withdraw from their own friends if they become

depressed. Another problem arises in this area, when the depressed students isolate themselves from public gatherings. This would prevent those suffering adolescents from getting any social support at all (Stice et al., 2004). Receiving social support is very essential for adolescents to become successful with themselves and achieve a satisfactory level at school. At the same time, a social support and physical health are two very important factors help the overall well-being of the individual. A general theory that has been drawn from many researchers over the past few decades postulation that social support essentially predicts the outcome of physical and mental health for everyone. There are six criteria of social support that researchers use to measure the level of overall social support available for the specific person or situation (Cutrona, Russell, & Rose, 1986). First, they would look at the amount of attachment provided from a lover or spouse. Second, measuring the level of social integration that the individuals involved with, it usually comes from a group of people or friends. Third, the assurance of worth from others such as positive reinforcement that could inspires and boosts the self-esteem. The fourth criterion is the reliable alliance support that provided from others, which means that the individual knows they can depend on receiving support from family members whenever it was needed. Fifth, the guidance of assurances of support given to the individual from a higher figure of person such as a teacher or parent. The last criterion is the opportunity for

nurturance. It means the person would get some social enhancement by having children of their own and providing a nurturing experience.

Relationship between Demographic Profile and Extent of Satisfaction and Importance with the Quality of Life

Table 11 shows the results of the test of correlation between the demographic profile and extent of satisfaction and importance in the patient's quality of life indices.

Table 11
Significant Relationship between Demographic Profile and Extent of Satisfaction and Importance with the Quality of Life

Variables	***r-value***	***p-value***	***Interpretation***	***Decision***
Age	*0.469*	*0.354*	*No Significant Relationship*	*Accepted*
Gender	*0.664*	*0.456*	*No Significant Relationship*	*Accepted*
Civil Status	*0.907*	*0.156*	*No Significant Relationship*	*Accepted*
Educational Attainment	*0.144*	*0.147*	*No Significant Relationship*	*Accepted*
Occupation	*0.086*	*0.165*	*No Significant Relationship*	*Accepted*
Duration of dialysis	*1.562*	*0.985*	*No Significant Relationship*	*Accepted*
Frequency of dialysis	*0.896*	*0.753*	*No Significant Relationship*	*Accepted*
Schedule of dialysis	*1.743*	*0.492*	*No Significant Relationship*	*Accepted*
Religious Practices	*0.872*	*0.832*	*No Significant Relationship*	*Accepted*

The table shows that demographic variables have no significant relationship with the extent of satisfaction and extent of importance in the quality of life. According to the study of Muhammad Anees (2014) was aimed to determine the demographic factors affecting Quality Of Life (QOL) of

hemodialysis (HD) patients. This observational study was conducted at Shalamar Hospital, Lahore. Patients of End Stage Renal Disease (ESRD) and on maintenance HD for more than three months were included during the period March to June 2012. Patient of ESRD not on dialysis and Acute Renal Failure were excluded. One hundred and twenty five patients who fulfilled the criteria were included. Demographic data containing age, sex, residence, socio economic status, education, mode of traveling for dialysis, total time consumed in dialysis were collected by the investigators. QOL index was measured using 26 items, WHO QOL BREF. There were 89 (71.2%) male and 36(28.8%) female patients. Environmental domain score was highest (p=0.000) than all other domains in HD Patients. In overall analysis age, marital status and total time consumed in getting HD effect QOL significantly (p=<0.05). In domain wise analysis, male has better QOL in social relationship domain than female. Age has negative relationship with physical health and psychological health domain. QOL of unmarried and literate patients is significantly better (p=<0.05) in physical health domain. Employed patients have better QOL in physical, psychological and social relationship domain (p=<0.05) than unemployed patients. Patients of residence of rural areas have better QOL in physical and environment domain. Financial status of HD patients affect QOL in social domain. Distance covered to reach hospital effect QOL in psychological domain (p=<0.05). Patients traveling in private transport have better QOL in environmental domain (p=<0.05). Total time consumed in

getting HD effect social relation in QOL (p=<0.05). According to linear regression model, marital status is positive predictor and unemployment is negative predictor of QOL in physical health domain. Age is negative predictor of QOL in psychological domain, monthly income is positive predictor of QOL in domain. Unemployment is positive predictor of QOL in social relation domain. Monthly income and place of residence is positive predictor of QOL in environment domain. It is therefore conclude that gender, age, marital status, unemployment, residence of rural area, economical status, distance covered to reach hospital, mode of transport, total time consumed in getting HD, effect QOL in HD patient. Education level is a positive factor for improving QOL of HD patients.

Extent of Satisfaction and Extent of Importance in the Patient's Quality of Life Indices

Table 12 shows the results of the test of correlation between the extent of satisfaction and extent of importance in the patient's quality of life indices.

Table 12
Significant Relationship between the Extent of Satisfaction and Extent of Importance in the Patient's Quality of Life Indices

Variables	***r- value***	***p-value***	***Interpretation***	***Decision***
Health and Functioning	*0.994*	*0.021*	*No Significant Relationship*	*Accepted*
Social/economic	*0.977*	*0.021*	*No Significant Relationship*	*Accepted*
Psychological/spiritual	*-0.105*	*-0.021*	*No Significant Relationship*	*Accepted*
Overall	*0.622*	*0.021*	*No Significant Relationship*	*Accepted*

Results show that there is no significant relationship between the extent of satisfaction and extent of importance the respondents given to all the variables tested. Also there is no significant correlation between overall satisfaction and overall importance given. The table implies that the measures of patient satisfaction and importance may be influenced by the effects of illness and moderated by the effects of available treatments. The perception of the respondents on their quality of life can be correlated to the overall quality of life score obtained from all the respondents in this study which is slightly satisfied and moderately important. Furthermore, in this study it was expected that there is a strong motivations among the respondents to fight the said illness and achieve the quality of life they deserved for personal growth and development.

According to the book of Mukadder Mollaoğlu (2013) explained that Quality of life (QoL) is a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life. What makes it challenging to measure is that, although the term “quality of life” has meaning for nearly everyone and every academic discipline, individuals and groups can define it differently. Philosophers were concerned with the nature of human existence and defined the “good life”, ethicists debated the shift in health-care decision-making for the concept of “sanctity of life” to “QoL” and social utility, environmentalists have placed emphasis upon attributes and conditions of the physical and biological environment, economists were

concerned with the allocation of resources to achieve alternating goals, psychologists considered human needs and their fulfillment, whereas sociologists have advanced a social systems approach in which indicators of QoL are seen as variables in the total system and its subsystems. Physicians focused on health- and illness-related variables and nurses, on keeping with the discipline's holistic approach, took the broadest view in defining life quality, yet because of their frequent preoccupation with the physiological status, they tend to contaminate their operationalization of the concept with disease-specific items. And within these disciplines, scientists have defined QoL from different perspectives, such considerations as objective indicators, subjective view, life goals, needs satisfaction, and components of life. WHO defines Quality of Life as individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.

Chapter 5

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presented the summary of the findings, conclusions and the recommendations derived from the study.

A descriptive correlational method was utilized to determine the quality of life among 50 dialysis patients selected using total enumeration, in a selected kidney center in State of Kuwait. An adopted survey questionnaire, the Quality of Life Index Dialysis Version III by Ferrans and Powers was utilized. Data were analyzed using the following, frequency and percentage distribution, mean, and Pearson correlation coefficient.

Summary of Findings

The important findings of this study were summarized as follows:

1. Profile of the patients as Respondents

Most of the respondents were female, married, college graduate, and unemployed and abide to their Islamic religious practices. Also, most of the participants belong to the age group of 31-65 years old. Majority of them were compliant in their dialysis treatment of 3 times per week and are usually conducted during 2nd shift of the day.

2. Extent of Satisfaction of quality of life of patients

All respondents were slightly satisfied in all variables of quality of life namely, health and functioning, social and economic, psychological/spiritual and family.

3. Extent of Importance quality of life of patients

Results showed that respondents consider health and functioning, social/ economic and psychological/spiritual domains as moderately important, while family was interpreted as the very important.

4. Quality of life

The overall quality of life of the respondents on both areas of extent of satisfaction and importance were all rated as slightly satisfied and moderately important.

5. Significant relationship between the demographic profile and the extent of satisfaction and importance in the patient's quality of life indices

There is no significant statistical relationship found out between the demographic profile such as age, gender, civil status, educational attainment, occupation, duration of dialysis, frequency of dialysis, schedule of dialysis and religious practices with the extent of satisfaction and importance in the patient's quality of life indices which made to the acceptance of the null hypothesis.

6. Significant relationship between the extent of satisfaction and extent of importance in the patient's quality of life indices

There is no significant relationship between the respondent's extent of satisfaction and importance in all variables tested thus the null hypothesis is accepted.

Conclusions

The following conclusions were drawn based on the above findings:

1. The quality of life among dialysis patients mostly affected different factors that includes health and functioning, social/economic and psychological/spiritual and family that are slightly satisfying and moderately important according to the respondents of the study;

2. Despite battling with the disease, the results show that all variables such as health and functioning, social/economic and psychological/spiritual and family are equally satisfying but in terms of importance, the family is the most important variable.

Recommendations

From the above findings and conclusions, the following recommendations were forwarded:

1. Must have a regular or as prescribed by the physician with the proper scheduling of the treatment for kidney dialysis of the patients for proper monitoring and management;

2. Must maintain an overall psychological care among patients and non-patients to treat and avoid the possible acquisition of the said disease for a manageability and sustainability of quality of life;
3. Patients should determine some agencies and institutions that provides support and assistance to the elongating health problems on kidney failures and impairment to obtain help and diminish the suffering in the long run;
4. Everybody must maintain a well-balanced health and lifestyle that will help to avoid acquiring the disease;
5. Future studies utilizing more samples is encourage.

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APPENDIX A

PERMIT TO CONDUCT THE STUDY

February 2016

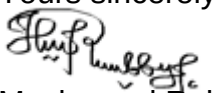
Remedios Magno
Headnurse
Mubarak Al-Abdulla Al-Jaber Al-Sabah Dialysis Center
State of Kuwait

Dear Ma'am,

Assailamu'alaikum Warahmatullahi Wabarakatuh!
The undersigned is a graduate student of Middle East University FZE taking up Master Science of Nursing (MSN). I am presently working on my thesis entitled "**Quality of Life Among Dialysis Patients in a Selected Kidney Center In State of Kuwait "**.The study aims to assess the health related quality of life on patients with end stage renal disease.

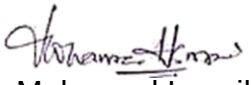
It is in this light that I ask your good office for permission to administer questionnaires to at least 50 dialysis patients which will serve as respondents to my study. Rest assured that all data will be handled with utmost confidentiality.

Yours sincerely,



Mochamad Robby Fajar Cahya
MSN Student

Noted by:



Mohamad Ismail
Thesis Adviser

APPENDIX B

LETTER TO RESPONDENTS and INFORMED CONSENT

February 2016

Dear Sir/Ma'am,

Assailamu'alaikum Warahmatullahi Wabarakatuh!

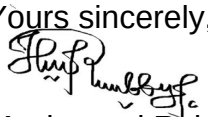
I am a graduate student of Middle East University FZE taking up Master Science of Nursing (MSN). I am currently working on my thesis entitled "**Quality of Life Among Dialysis Patients in a Selected Kidney Center In State of Kuwait "**. The aim of this study is to establish what is important in respect of Quality of Life for people living in Kuwait to identify the physical, psychological, social, and cultural influences on the quality of life of persons suffering from kidney failure and undergoing dialysis treatment. The findings from this study will be used to inform the services provided to people who are on dialysis.

To establish what is important for people living in Kuwait considerable number of patients from different age groups are required to participate in the study. Participation will involve completing a Quality of Life tool, and a brief questionnaire. This will take about 10-20 minutes of your time.

Participants may choose not to participate; you can disclose any information without fear of consequences. If you choose to participate, you will be asked to sign a consent form indicating you have received information about the research project and have volunteered to participate.

Thank you for your time and your generous contribution to the project.

Yours sincerely,



Mochamad Robby Fajar Cahya
MSN Student

Noted by

Mohamad Ismail
Thesis Adviser

INFORMED CONSENT

Research: "Quality of Life Among Dialysis Patients in a Selected Kidney Center In State of Kuwait ".

Study Procedures:

If you choose to participate, you will be asked to complete two questionnaires, a demographic profile about you and a Quality of Life tool. These will take you 10-20 minutes approximately to complete.

Risks:

No potential risk is expected from your participation in this study.

Benefits:

By participating in this study you will give us the information needed for us to examine quality of life is relevant to patients undergoing hemodialysis in a selected kidney center in State of Kuwait. The data will also be used to establish patients on dialysis in State of Kuwait value different things in relation to Quality of Life. The research findings will be used to improve the health care of dialysis patients.

Reassurance:

Participation in this is study is your personal choice. If you choose not to participate, I will respect your decision and nobody has the right to question you about it. Consent is indicated by completing the questionnaire.

Confidentiality:

Any information resulting from this study will be kept strictly confidential. All documents will be identified only by code number and kept in a locked filing cabinet. Computer files will be passwod. No names will be collected on the data sheet. You will not be identified by name in any reports of the completed

study.

You have the right to refuse to participate in the study or to answer only questions you feel that you are comfortable with. Please be reassured that confidentiality and anonymity will be always maintained and that participation is voluntary.

Research findings

Participation in this research project requires that you fill out the questionnaire to the best of your ability. The results of this questionnaire are for research purposes only and will not in any way affect the care you receive . Your identity will not be asked at any point within the questionnaire. If you choose not to participate in this project it will not affect your care or your treatment. You may ask questions at any time about the questionnaire during the week of the project. A written summary of the findings will be published in the study.

Consent:

I consent to participate in this study.

Patient Signature Date

Investigator Signature Date

APPENDIX C

QUALITY OF LIFE TOOL - INDEX VERSION III

Demographic Information

Name: _____

1. Age: _____

2. Gender: 1. Male _____, 2. Female _____

3. Civil status: ____ 1.Single (Never Married), ____ 2.Married, ____

3Separated, ____4.Widowed

4. Educational Attainment: ____1. Elementary

____ 2.High School Graduate

____ 3.College

____ 4.Completed Graduate Degree

5. Occupation: _____1.Employed

_____ 2.Unemployed

6. Duration of Dialysis

_____1) 3 Hours

_____2) 3 ½ Hours

_____3) 4 hours

7. Frequency of Hemodialysis

____1) 2x/week

____2) 3x/week

8 .Schedule of Dialysis

____ 1.) 1st shift

____2.) 2nd shift

____3.) 3rd shift

9. Religious Practices

1) Prayer times
2) Read Quran
3) Going to Mosque
4) Fasting

Ferrans and Powers
QUALITY OF LIFE INDEX©
DIALYSIS VERSION - III

PART 1. For each of the following, please choose the answer that best describes how ***satisfied*** you are with that area of your life. Please mark your answer by circling the number. There are no right or wrong answers.

HOW *SATISFIED* ARE YOU WITH:	Very Dissatisfied	Moderately Dissatisfied	Slightly Dissatisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied
1. Your health?	1	2	3	4	5	6
2. Your health care?	1	2	3	4	5	6
3. The amount of energy you have for everyday activities?	1	2	3	4	5	6
4. Your ability to take care of yourself without help?	1	2	3	4	5	6
5. The likelihood you will get a kidney transplant?	1	2	3	4	5	6
6. The changes you have had to make in your life because of kidney failure (such as diet and need for dialysis)?	1	2	3	4	5	6
7. The amount of control you have over your life?	1	2	3	4	5	6
8. Your chances of living as long as you would like?	1	2	3	4	5	6
9. Your family's health?	1	2	3	4	5	6
10. Your children?	1	2	3	4	5	6
11. Your family's happiness?	1	2	3	4	5	6
12. Your sex life?	1	2	3	4	5	6
13. Your spouse, lover, or partner?	1	2	3	4	5	6
14. Your friends?	1	2	3	4	5	6
15. The emotional support you get from your family?	1	2	3	4	5	6

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HOW *SATISFIED* ARE YOU WITH:	Very Dissatisfied	Moderately Dissatisfied	Slightly Dissatisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied
16. The emotional support you get from people other than your family?	1	2	3	4	5	6
17. Your ability to take care of family responsibilities?	1	2	3	4	5	6
18. How useful you are to others?	1	2	3	4	5	6
19. The amount of worries in your life?	1	2	3	4	5	6
20. Your neighborhood?	1	2	3	4	5	6
21. Your home, apartment, or place where you live?	1	2	3	4	5	6
22. Your job (if employed)?	1	2	3	4	5	6
23. Not having a job (if unemployed, retired, or disabled)?	1	2	3	4	5	6
24. Your education?	1	2	3	4	5	6
25. How well you can take care of your financial needs?	1	2	3	4	5	6
26. The things you do for fun?	1	2	3	4	5	6
27. Your chances for a happy future?	1	2	3	4	5	6
28. Your peace of mind?	1	2	3	4	5	6
29. Your faith in God?	1	2	3	4	5	6
30. Your achievement of personal goals?	1	2	3	4	5	6
31. Your happiness in general?	1	2	3	4	5	6
32. Your life in general?	1	2	3	4	5	6
33. Your personal appearance?	1	2	3	4	5	6
34. Yourself in general?	1	2	3	4	5	6

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PART 2. For each of the following, please choose the answer that best describes how ***important*** that area of your life is to you. Please mark your answer by circling the number. There are no right or wrong answers.

HOW *IMPORTANT* TO YOU IS:	Very Unimportant	Moderately Unimportant	Slightly Unimportant	Slightly Important	Moderately Important	Very Important
1. Your health?	1	2	3	4	5	6
2. Your health care?	1	2	3	4	5	6
3. Having enough energy for everyday activities?	1	2	3	4	5	6
4. Taking care of yourself without help?	1	2	3	4	5	6
5. Getting a kidney transplant?	1	2	3	4	5	6
6. The changes you have had to make in your life because of kidney failure (such as diet and need for dialysis)?	1	2	3	4	5	6
7. Having control over your life?	1	2	3	4	5	6
8. Living as long as you would like?	1	2	3	4	5	6
9. Your family's health?	1	2	3	4	5	6
10. Your children?	1	2	3	4	5	6
11. Your family's happiness?		2	3	4	5	6
12. Your sex life?	1	2	3	4	5	6
13. Your spouse, lover, or partner?	1	2	3	4	5	6
14. Your friends?	1	2	3	4	5	6
15. The emotional support you get from your family?	1	2	3	4	5	6
16. The emotional support you get from people other than your family?	1	2	3	4	5	6

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HOW *IMPORTANT* TO YOU IS:	Very Unimportant	Moderately Unimportant	Slightly Unimportant	Slightly Important	Moderately Important	Very Important
17. Taking care of family responsibilities?	1	2	3	4	5	6
18. Being useful to others?	1	2	3	4	5	6
19. Having no worries?	1	2	3	4	5	6
20. Your neighborhood?	1	2	3	4	5	6
21. Your home, apartment, or place where you live?	1	2	3	4	5	6
22. Your job (if employed)?	1	2	3	4	5	6
23. Having a job (if unemployed, retired, or disabled)?	1	2	3	4	5	6
24. Your education?	1	2	3	4	5	6
25. Being able to take care of your financial needs?	1	2	3	4	5	6
26. Doing things for fun?	1	2	3	4	5	6
27. Having a happy future?	1	2	3	4	5	6
28. Peace of mind?	1	2	3	4	5	6
29. Your faith in God?	1	2	3	4	5	6
30. Achieving your personal goals?	1	2	3	4	5	6
31. Your happiness in general?	1	2	3	4	5	6
32. Being satisfied with life?	1	2	3	4	5	6
33. Your personal appearance?	1	2	3	4	5	6
34. Are you to yourself?	1	2	3	4	5	6

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APPENDIX D

QUALITY OF LIFE TOOL ARABIC VERSION

Quality of Life Index مقياس نوعية الحياة

(Dialysis Version III نموذج غسيل الكلى)

الجزء الأول: يرجى وضع دائرة حول الإجابة الملائمة لكل مما يلي وفقا لما تراه مناسبا لوصف **مدى رضاك** عن نواحي مختلفة من حياتك. الرجاء وضع دائرة حول الرقم الذي يمثل رأيك علما بأنه لا توجد إجابة صحيحة أو خاطئة.

كم أنت راض عن:	غير راض جدا	غير راض بشكل متوسط	غير راض قليلا	راض قليلا	راض بشكل متوسط	راض جدا
1. صحتك؟	1	2	3	4	5	6
2. الرعاية الصحية التي تتلقاها؟	1	2	3	4	5	6
3. مدى طاقتك على القيام بالنشاطات اليومية؟	1	2	3	4	5	6
4. قدرتك على رعاية نفسك بنفسك؟	1	2	3	4	5	6
5. احتمالية حصولك على زرع الكلى؟	1	2	3	4	5	6
6. التغيرات التي طرأت على حياتك بسبب الفشل الكلوي (مثل الحمية والحاجة إلى الغسيل الكلوي)؟	1	2	3	4	5	6
7. مدى سيطرتك على حياتك؟	1	2	3	4	5	6
8. فرصك لعيش الفترة الزمنية التي تتمناها؟	1	2	3	4	5	6
9. صحة عائلتك؟	1	2	3	4	5	6
10. أطفالك؟	1	2	3	4	5	6
11. سعادة عائلتك؟	1	2	3	4	5	6
12. حياتك الجنسية؟	1	2	3	4	5	6
13. زوجك أو شريك حياتك؟	1	2	3	4	5	6
14. أصدقاؤك؟	1	2	3	4	5	6
15. الدعم المعنوي الذي تتلقاه من عائلتك؟	1	2	3	4	5	6

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كم أنت راض عن:	غير راض جدا	غير راض بشكل متوسط	غير راض قليلا	راض قليلا	راض بشكل متوسط	راض جدا
16. الدعم المعنوي الذي تتلقاه من الآخرين خارج عائلتك؟	1	2	3	4	5	6
17. قدرتك على القيام بالواجبات العائلية؟	1	2	3	4	5	6
18. مدى فائدتك للآخرين؟	1	2	3	4	5	6
19. مقدار الضغط النفسي أو القلق الذي تعانيه في حياتك؟	1	2	3	4	5	6
20. جيرانك؟	1	2	3	4	5	6
21. بيتك أو منزلك أو مسكنك؟	1	2	3	4	5	6
22. عملك (إذا كنت تعمل)؟	1	2	3	4	5	6
23. عدم حصولك على عمل (إذا كنت لا تعمل، أو متقاعد، أو غير قادر على العمل)؟	1	2	3	4	5	6
24. تحصيلك العلمي؟	1	2	3	4	5	6
25. قدرتك على تدبير أمورك المالية؟	1	2	3	4	5	6
26. الأنشطة التي تسلي بها نفسك؟	1	2	3	4	5	6
27. فرصك لتحقيق مستقبل سعيد؟	1	2	3	4	5	6
28. راحة بالك أو استقرارك النفسي؟	1	2	3	4	5	6
29. إيمانك بالله عز وجل؟	1	2	3	4	5	6
30. تحقيقك للأهداف الشخصية؟	1	2	3	4	5	6
31. سعادتك بشكل عام؟	1	2	3	4	5	6
32. حياتك بشكل عام؟	1	2	3	4	5	6
33. مظهرك الشخصي؟	1	2	3	4	5	6
34. نفسك بشكل عام؟	1	2	3	4	5	6

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الجزء الثاني: يرجى وضع دائرة حول الإجابة الملائمة لكل مما يلي وفقا لما تراه مناسبا لوصف **مدى أهمية** كل من النواحي التالية من حياتك. الرجاء وضع دائرة حول الرقم الذي يمثل رأيك علما بأنه لا توجد إجابة صحيحة أو خاطئة.

كم هو مهم بالنسبة لك:	غير مهم جدا	غير مهم بشكل متوسط	غير مهم قليلا	مهم قليلا	مهم بشكل متوسط	مهم جدا
1. صحتك؟	1	2	3	4	5	6
2. الرعاية الصحية التي تتلقاها؟	1	2	3	4	5	6
3. توفر طاقة كافية لديك للقيام بالنشاطات اليومية؟	1	2	3	4	5	6
4. رعاية نفسك بنفسك؟	1	2	3	4	5	6
5. الحصول على زراعة الكلى؟	1	2	3	4	5	6
6. التغيرات التي طرأت على حياتك بسبب الفشل الكلوي (مثل الحمية والحاجة لغسيل الكلى)؟						
7. القدرة على ضبط أمورحياتك؟	1	2	3	4	5	6
8. العيش للفترة الزمنية التي تتمناها؟	1	2	3	4	5	6
9. صحة عائلتك؟	1	2	3	4	5	6
10. أطفالك؟	1	2	3	4	5	6
11. سعادة عائلتك؟	1	2	3	4	5	6
12. حياتك الجنسية؟	1	2	3	4	5	6
13. زوجك أو شريك حياتك؟	1	2	3	4	5	6
14. أصدقاؤك؟	1	2	3	4	5	6
15. الدعم المعنوي الذي تتلقاه من عائلتك؟	1	2	3	4	5	6
16. الدعم المعنوي الذي تتلقاه من الآخرين خارج عائلتك؟	1	2	3	4	5	6

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كم هو مهم بالنسبة لك:	غير مهم جدا	غير مهم بشكل متوسط	غير مهم قليلا	مهم قليلا	مهم بشكل متوسط	مهم جدا
17. القيام بالواجبات العائلية؟	1	2	3	4	5	6
18. أن تكون مفيداً للآخرين؟	1	2	3	4	5	6
19. خلو حياتك من الضغوطات النفسية؟	1	2	3	4	5	6
20. جيرانك؟	1	2	3	4	5	6
21. بيتك أو منزلك أو مسكنك؟	1	2	3	4	5	6
22. عملك (إذا كنت تعمل)؟	1	2	3	4	5	6
23. حصولك على عمل (إذا كنت لا تعمل، أو متقاعد، أو غير قادر على العمل)؟	1	2	3	4	5	6
24. تحصيلك العلمي؟	1	2	3	4	5	6
25. القدرة على تدبير أمورك المالية؟	1	2	3	4	5	6
26. القيام بأنشطة ترفيهية؟	1	2	3	4	5	6
27. حصولك على مستقبل سعيد؟	1	2	3	4	5	6
28. راحة بالك أو استقرارك النفسي؟	1	2	3	4	5	6
29. إيمانك بالله عز وجل؟	1	2	3	4	5	6
30. تحقيق أهدافك الشخصية؟	1	2	3	4	5	6
31. سعادتك بشكل عام؟	1	2	3	4	5	6
32. أن تكون راضيا عن حياتك؟	1	2	3	4	5	6
33. مظهرك الشخصي؟	1	2	3	4	5	6
34. نفسك بالنسبة إليك؟	1	2	3	4	5	6

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