IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 8, Issue 3 Ser. IV. (May. - June .2019), PP 01-14
www.iosrjournals.org

A Retrospective Study on Chronic Kidney Disease Among Hemodialysis Patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia

Dr. Bindu Bharathi. Ph.D., MSN.,BSN.,RN., RM.
Assistant Professor, Department of Community Health Nursing, College of Nursing, Northern Border University, Arar, Kingdom of Saudi Arabia
Corresponding Author: Dr. Bindu Bharathi. Ph.D.

Abstract: *Chronic kidney disease (CKD) is a progressive loss in kidney function over a period of months or years. CKD cause 2.4 million deaths per year and that affects 1 in 10 people worldwide. Aim of the study was to identify the retrospective correlation with risk factors and etiological factors of CKD among Hemodialysis(HD)Patients. Quantitative research approach with retrospective correlational research design was the methodology used in this study. This study was done at Artificial Kidney Unit (AKU) of Arar Central Hospital, Arar, Kingdom of Saudi Arabia. Simple Random Sampling Technique was used to collect the data from 100 HD patients. Results of the study shows that, 31 percentage of the subjects were between the age group of 61-70 years and more than half (61 %) of the samples were females. Regarding risk factors, about 17 percentage of the subjects were having the history of nephrotic syndrome and 27 percentage of the samples were have family history of diabetes and hypertension. Majority (83%) of the samples were belongs to End Stage Renal disease and 7 percentage of them were suffered from Polycystic Kidney disease. About 19 percentage of the samples were chain smokers. Regarding etiological factors of CKD, 36 percentage of the subjects were having the problem of both hypertension and diabetes. About 31 percentage of them were suffering from hypothyroidism, and 12 percentage of them were complaints of pregnancy induced hypertension and gestational diabetes. Around 8 percentage have diabetic nephropathy and 45 percentage of the samples were on Hemodialysis for the duration of 2-3 years. There was a significant correlation between risk factors and etiological factors of CKD among hemodialysis patients of AKU,P value is <0.002**. So the research hypothesis (H1) was accepted. There was a significant association between risk factors and etiological factors of CKD among hemodialysis patients of AKU, P value is <0.001**. So the research hypothesis (H2) was accepted. CKD is incurable and causes the patient to need lifelong care. As the incidence of kidney disease escalates, so the researcher strongly recommended for educating the public about early detection and reducing the risk of CKD, prevention and control of diabetes and hypertension.*

Keywords: *Chronic Kidney Diseases (CKD); Hemodialysis Patients; Retrospective Correlational study*

Date of Submission: 09-05-2019 Date of acceptance: 25-05-2019

I. Introduction

Chronic kidney disease (CKD) is a progressive loss in kidney function over a period of months or years. CKD is an emerging worldwide epidemic and it became a major health problem in Saudi Arabia. Kidney diseases often arise from the social conditions in which people are born, grow, live and work. CKD cause 2.4 million deaths per year and that affects 1 in 10 people worldwide. Treatments for kidney disease are often inaccessible due to lack of money, lack of infrastructure and of specialized health care Professional. [(1)]

Chronic kidney disease (CKD) is very common clinical problem in elderly patients and is associated with increased morbidity and mortality. As life expectancy continues to improve worldwide, there is a rising prevalence of comorbidities and risk factors. Common risk factors like hypertension and diabetes predisposing to a high burden of CKD in older population.[(2)]The poorest populations are at the highest risk. CKD is common and mainly associated with ageing. The older you get, the more likely you are to have some degree of kidney disease.[(3)]

Chronic kidney diseases (CKD) is also known as chronic renal disease or chronic renal failure which refers to any alteration in the kidneys which persists for three months or more resulting in any degree of kidney damage and/or decline in kidney function.[(4)] Kidney damage for more than three months, as defined by structural or functional abnormalities of the kidney, with or without decreased Glomerular Filtration Rate(GFR), that can lead to decreased GFR, manifested by either pathologic abnormalities or markers of kidney damage, including abnormalities in the composition of the blood or urine, or abnormalities in imaging test. GFR is less

than 60 ml/min/1.73 m^2 for more than three months, with or without kidney damage. CKD can be detected by using simple laboratory tests, and that treatment can prevent or delay complications of decreased kidney function. [5]

II. Need and Significance of the Study

CKD is an emerging worldwide epidemic. About 850 Million People worldwide are now having kidney diseases. It is the 6thfastest growing cause of death. Kidney disease is currently the 11th leading cause of global mortality. Prevalence of kidney diseases is estimated to be 8 to 16 percentage in the worldwide. About 85 percentage of CKD cases are found in low and middle-income countries. Acute kidney injury (AKI), an important cause of CKD, affects over 13 million people worldwide. Around 1.7 million people are estimated to die annually because of AKI. [1]

The prevalence of CKD in the young Saudi Population is around 5.7 percentage. CKD is significantly higher in the older age groups. Annual increase in dialysis patients has been around 8 percentage. Incidence of dialysis in Saudi Arabia was 136 new cases Per Million Population. Majority of the countries have no strategy for improving the care of people with CKD.[6]The US National Health and Nutrition Examination Survey (NHANES) reported that prevalence of CKD is 18.3 percentage. Kidney Early Evaluation Program (KEEP) conducted health camp-based screening program for individuals at increased risk of developing kidney disease and reported that higher prevalence of (26.2%)of CKD. Because the majority of the population in Saudi Arabia lives in urban areas and large cities, we believe that our numbers are likely to be representative of the urban Saudi population. [7]

ESRD continuous to be one of the major health problem, that needs a lot of attention. There is enough evidence that the prevalence and the incidence of ESRD in Saudi Arabia is increasing and showed rapid rise over the last three decade. Changes in the life style, high population growth, and fast increase in life expectancy have contributed to the changes in the CKD pattern. It is important for the health care providers and financial planners to understand the magnitude of such problem in order to have clear strategies to deal with such devastating disease. The main way to reduce the chances of CKD by to ensure the existing conditions, and through the proper management of diabetes and hypertension. Incidence of ESRD in Madinah region is about 137.5 Per Million Population (Al-Homrany: SJKD). The estimated prevalence of treated ESRD was 460 per million populations (PMP)[8].

CKD is a major health problem in Saudi Arabia. The number of people requiring kidney replacement therapy in Saudi Arabia is growing, which poses challenges for health professionals and increases the burden on the health care system. Improving Nurse's knowledge and awareness about CKD and the risk factors in Saudi Arabia will help them to determine high risk groups and provide early management to delay progression of the disease [9].

Very few studies were reported on Chronic Kidney Disease, in Saudi Arabia. The researcher identified that CKD is a very severe problem affecting to the Saudi young and older population. So the researcher decided to identify what are the risk factors and etiological factors which may cause CKD and would like to find is there any relation between risk factors and etiological factors of CKD among the Saudi population belongs to Northern part of Saudi Arabia.

III. Statement of the Problem

A Retrospective Study on Chronic Kidney Disease among Hemodialysis Patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia

IV. Aim of the Study

This study was to identify the retrospective correlation with risk factors and etiological factors of Chronic Kidney Disease among hemodialysis patients.

V. Objectives of the Study

1. Assess the socio- personal variables of Hemodialysis patients of Artificial Kidney Unit (AKU).
2. Assess the risk factors of Chronic Kidney Diseases (CKD) among Hemodialysis patients of Artificial Kidney Unit.
3. Identify the etiological factors of CKD among Hemodialysis patients of AKU.
4. Find out the correlation between the risk factors and etiological factors of CKD among Hemodialysis patients of AKU.
5. Find out the association between risk factors and etiological factors of CKD among Hemodialysis patients of AKU.

VI. Hypothesis

H1: There will be a significant correlation between risk factors and etiological factors of Chronic Kidney Diseases among Hemodialysis patients of Artificial Kidney Unit.
H2: There will be a significant association between risk factors and etiological factors of Chronic Kidney Diseases among Hemodialysis patients of Artificial Kidney Unit.

VII. Research Methodology

Research Approach: Quantitative Research Approach
Research Design: Retrospective Correlational Research Design

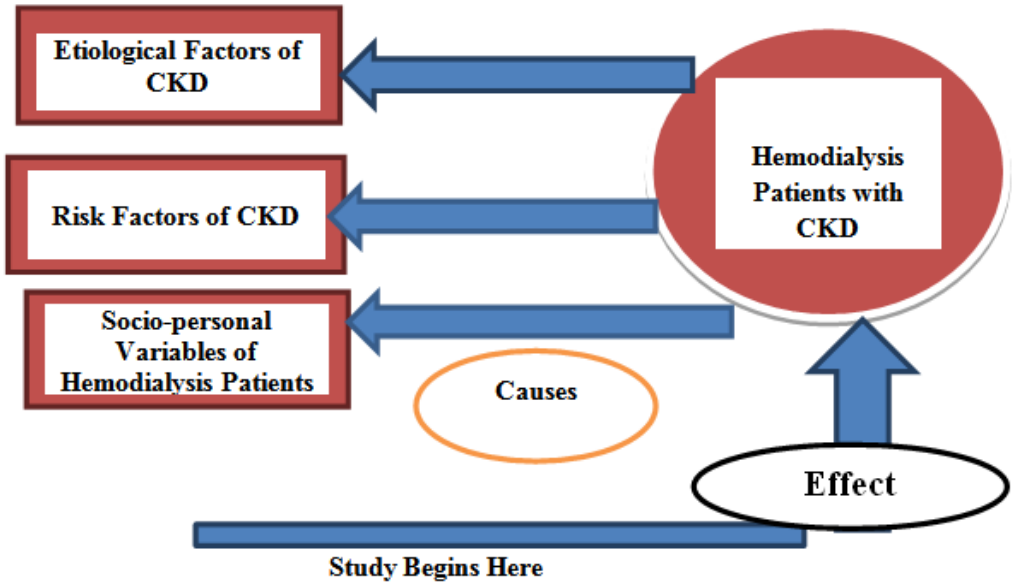

Figure 1: Retrospective Correlational Research Design

This research design was used to identify the socio- personal variables, etiological factors, and risk factors of Chronic Kidney Disease. The researcher examined that there was any correlation between risk factors and etiological factors of CKD among Hemodialysis Patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia
Setting: Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia
Population: Hemodialysis Patients
Sample: Hemodialysis Patients of Artificial Kidney Unit, Arar Central Hospital, Saudi Arabia
Sample Size: 100
Inclusion Criteria

- All study subjects were belongs to Islamic religion
- Those who are willing to participate in the study
- Available at the time of data collection

Exclusion Criteria

- Samples below 10 years of age were excluded from the study
- Mentally challenged patients
- Renal cancer patients

Sampling Technique: Simple Random Sampling Technique
Variables of the Study

- Dependent Variable: Effect (Chronic kidney Disease)
- Independent Variables: Cause of Chronic kidney Disease. It includes socio-personal variables, etiological factors, and risk factors of Chronic Kidney Diseases

Research Tool: Interview Schedule

- Section I: Socio-personal Variables of Hemodialysis patients
- Section II: Risk Factors of Chronic Kidney Diseases
- Section III: Etiological factors of Chronic Kidney Diseases
- Section IV: Bio-physiological measures (Pulse, Respiration, Temperature, Blood Pressure, Weight, and Height& Body Mass Index)

❖ Section V: Laboratory Investigations

Techniques: Self reports, observation, lab investigations (Random Blood Sugar, Urea, Uric acid, Creatinine, Electrolytes, and Thyroid Function Test).

Ethical Consideration: Researcher obtained written permission from Arar Central Hospital. After explaining the purpose and objectives of the study, informed written consent was obtained from all subjects. Throughout the study the researcher maintained confidentiality and anonymity of the participants. There was no conflict of interest.

Data collection: Through the structured interview schedule the researcher collected the data from the subjects regarding socio-personal variables of hemodialysis patients, risk factors, and etiological factors of CKD. The data were obtained from the sample through observation and interview.

VIII. Analysis and Interpretation of the Results

Descriptive and inferential statistical techniques were used to analyze the data. Descriptive statistics which includes frequency and percentage of socio- personal variables, risk factors and etiological factors of Chronic Kidney Diseases among Hemodialysis patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia.

Inferential Statistical test, Pearson Correlational Coefficient (r) test was used to identify the correlation between risk factors and etiological factors of Chronic Kidney Diseases among Hemodialysis patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia. Chi-square (χ^2) test was used to identify the association between the risk factors and etiological factors of Chronic Kidney Diseases among Hemodialysis patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia.

Section 1: Socio- personal Variables of the Sample

Table 1 : Distribution of Samples Based on Age
N=100

Socio-personal Variables Age	Frequency	Percentage (%)
10 - 20 Years	05	05.0
21-30 Years	07	07.0
31-40 Years	14	14.0
41-50 Years	13	13.0
51-60 Years	16	16.0
61-70 Years	31	31.0
Above 71 Years	14	14.0

This table depicts that 31 percentage of the samples were between the age group of 61-70 years and 5 percentage of the samples were between the age group of 10 to 20 years.

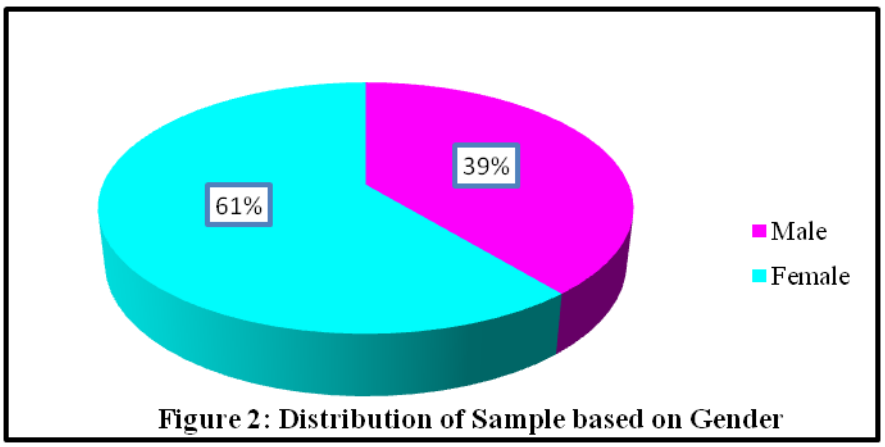

Figure 2: Distribution of Sample based on Gender

This figure depicts that 61 percentage of the samples were females and 39 percentage of the subjects were males.

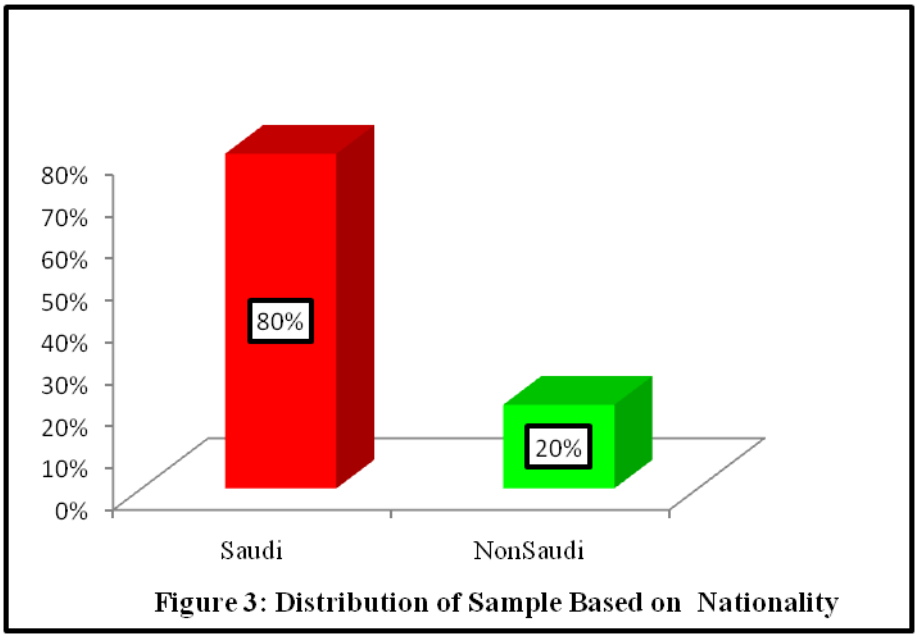

Figure 3: Distribution of Sample Based on Nationality

Majority (80 percentage) of the samples were natives of Saudi and few (20 percentage) of them were Non Saudi.

Table 2: Distribution of Samples Based on Marital status, Occupation and Income

N=100

Socio-personal Variables Marital Status	**Frequency**	**Percentage (%)**
Married	47	47.0
Unmarried	08	08.0
Separated	11	11.0
Widower	05	05.0
Widow	29	29.0
Occupation	**Frequency**	**Percentage**
Housewife	05	05.0
Government	13	13.0
Private Job	14	14.0
Business	10	10.0
Others	14	14.0
No	44	44.0
Income	**Frequency**	**Percentage**
Average	65	65.0
Below Average	19	19.0
Above Average	9	9.0
No	7	7.0

This table shows that 47 percentage of the subjects were married, and 29 percentage of them were widows. About 44 percentage of the subjects have no job and 19 percentage of the samples were belongs to below average income family.

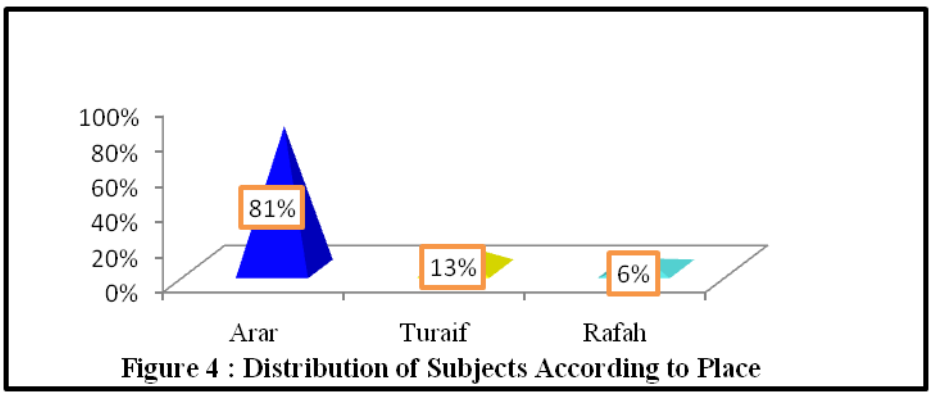

Figure 4 : Distribution of Subjects According to Place

This figure depicts that majority (81 percentage) of the samples were from Arar (Northern) Province, 6 percentage and 13 percentage of the subjects were respectively from Rafah and Turaif region of Saudi Arabia.

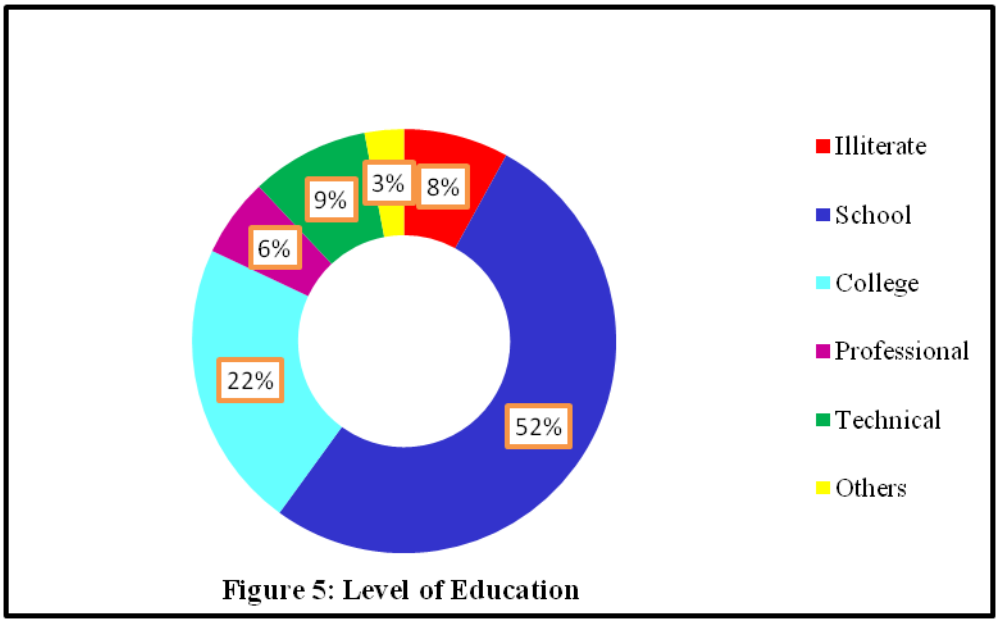

Figure 5: Level of Education

This figure shows that more than fifty (52%) percentage of the subjects were having school education, where as 8 percentage of the samples were illiterates.

Section 2:Risk Factors of Chronic Kidney Diseases

Table 3: Distribution of Samples Based on Childhood Disease

N=100

Childhood Disease	Frequency	Percentage (%)
Streptococcal Throat Infection	02	02.0
Skin Infection	05	05.0
Nephrotic Syndrome	17	17.0
Juvenile Diabetes	5	5.0
No	71	71.0

This table shows that 17 percentage of the subjects were having the history of Nephrotic syndrome and 5 percentage of them were Juvenile Diabetic. About 2 percentage and 5 percentage of the samples were having streptococcal and skin infection respectively during their childhood.

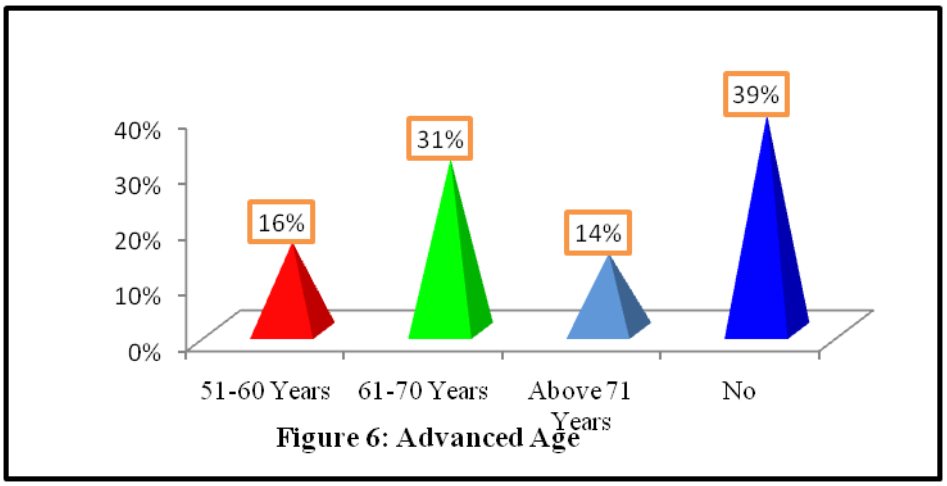

Figure 6: Advanced Age

This figure depicts that 31 percentage of the samples were between the age group of 61-70 years and 14 percentage of them were above 71 years. More than 60 percentage of them were in above 50 years.

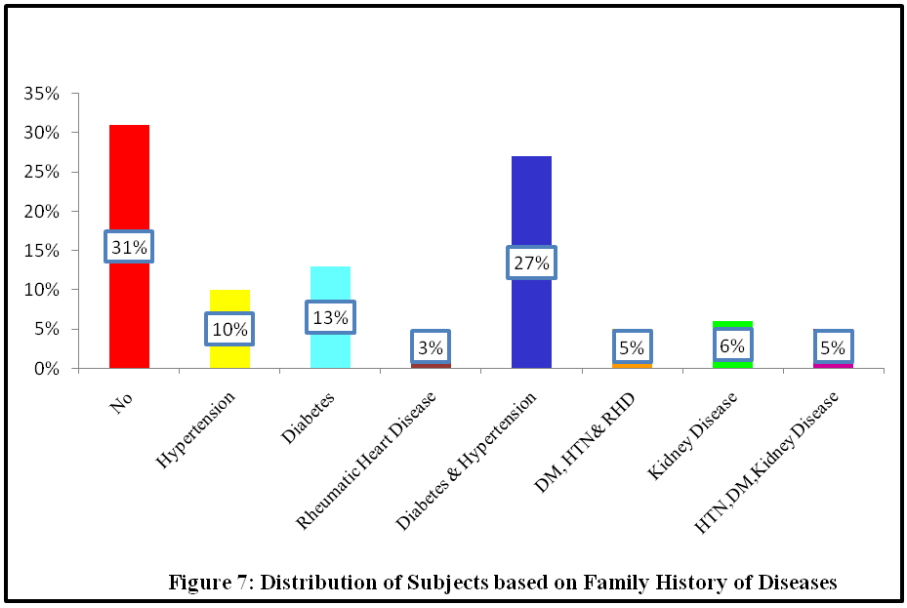

Figure 7: Distribution of Subjects based on Family History of Diseases

This figure depicts that 27 percentage of the samples were have family history of Diabetes and Hypertension, and 6 percentage have the family history of kidney diseases.

Table 4: Distribution of Samples Based on Renal / Urological Disorders, Duration of Kidney Diseases

N=100

Renal / Urological Disorders	**Frequency**	**Percentage (%)**
Kidney Stone	14	14.0
Incontinence of Urine	12	12.0
Urinary Tract Infection	17	17.0
Incomplete Emptying of Bladder	2	2.0
No	55	55.0
Duration of Kidney Disease	**Frequency**	**Percentage**
Below 1 Year	13	13.0
2-3 Years	48	48.0
4-5Years	18	18.0
More than 6 Years	21	21.0

This table shows that 17 percentage of the subjects were having frequent urinary tract infection and 14 percentage of them were have the complaints of kidney stone. Regarding duration of kidney disease, nearly fifty percentage (48 %) of the subjects were suffering from kidney disease for the duration of 2-3 years, whereas 21 percentage of the subjects were complaints of kidney disease more than 6 years.

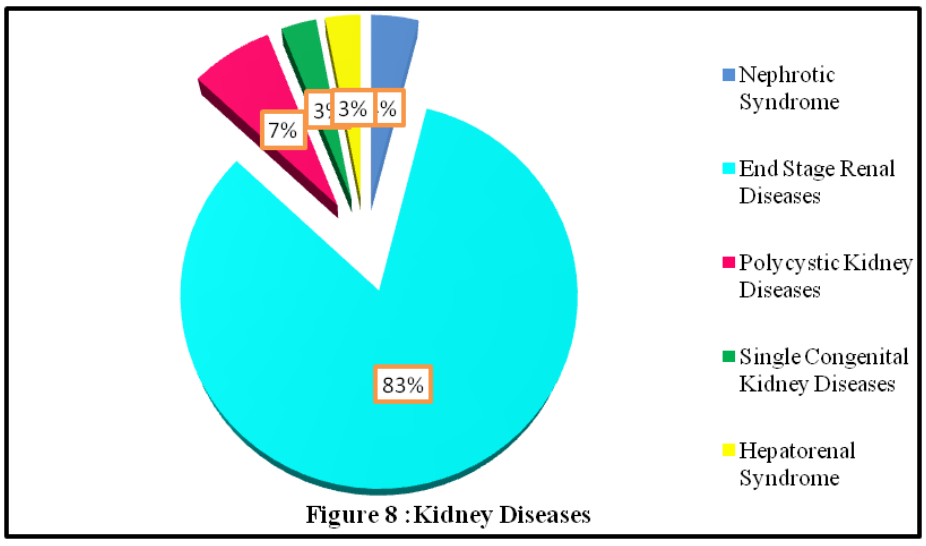

Figure 8 :Kidney Diseases

This figure depicts that majority (83%) of the samples were belongs to End Stage Renal disease, whereas 7 percentage of them were suffered from Polycystic Kidney disease.

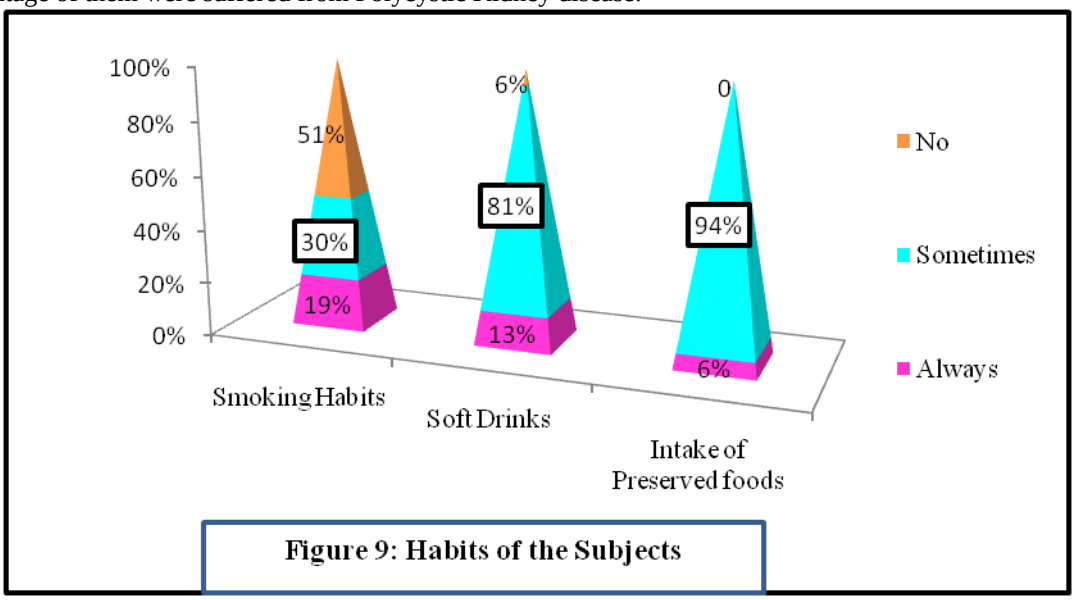

Figure 9: Habits of the Subjects

This figure depicts that 19 percentage of the samples were chain smokers and 13 percentage of the subjects were always taking soft drinks. Majority (94 percentage) of the subjects were sometimes taking preserved foods.

Table 5: Distribution of Samples Based on Food and Drinking Habits

N=100

Food Habits	**Frequency**	**Percentage (%)**
Vegetarian	2	2.0
Non-vegetarian	98	98.0
Habits of Taking Drinks		
Coffee	9	9.0
Tea	8	8.0
Gava (Traditional Saudi drink)	14	14.0
Tea & Coffee	44	44.0
Tea, Coffee &Gava(Traditional drink)	25	25.0

This table shows that, nearly hundred (98) percentage of the subjects were Non- vegetarian and 14 percentage were taking Gava (Traditional drink of Saudi) and 44 percentage of them were having the habit of taking coffee and tea.

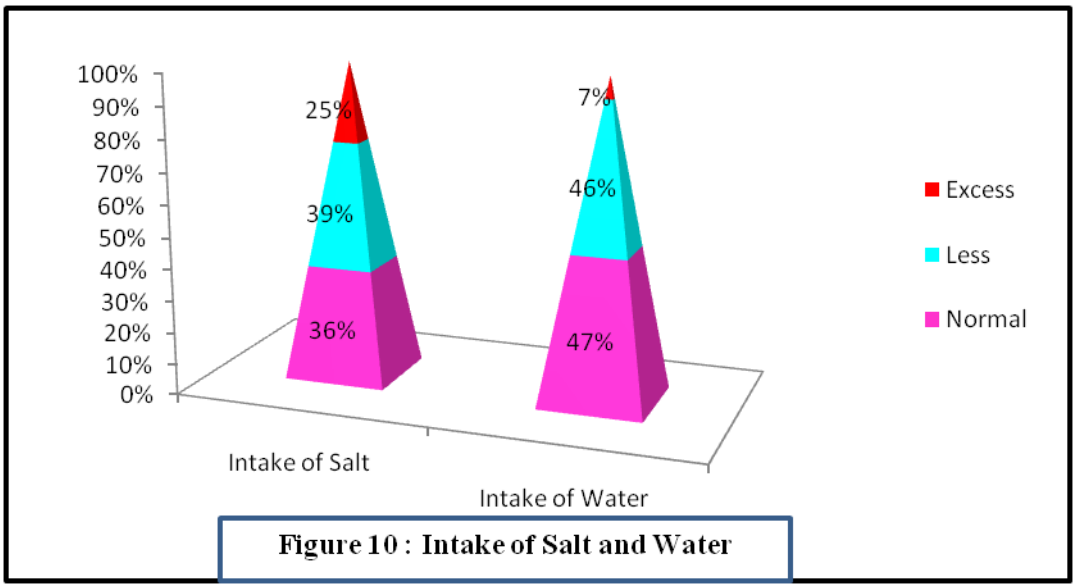

Figure 10 : Intake of Salt and Water

This figure depicts that one fourth (25 percentage) of the samples were taking excess salt, whereas nearly half (46 percentage) of the subjects were drinking less water.

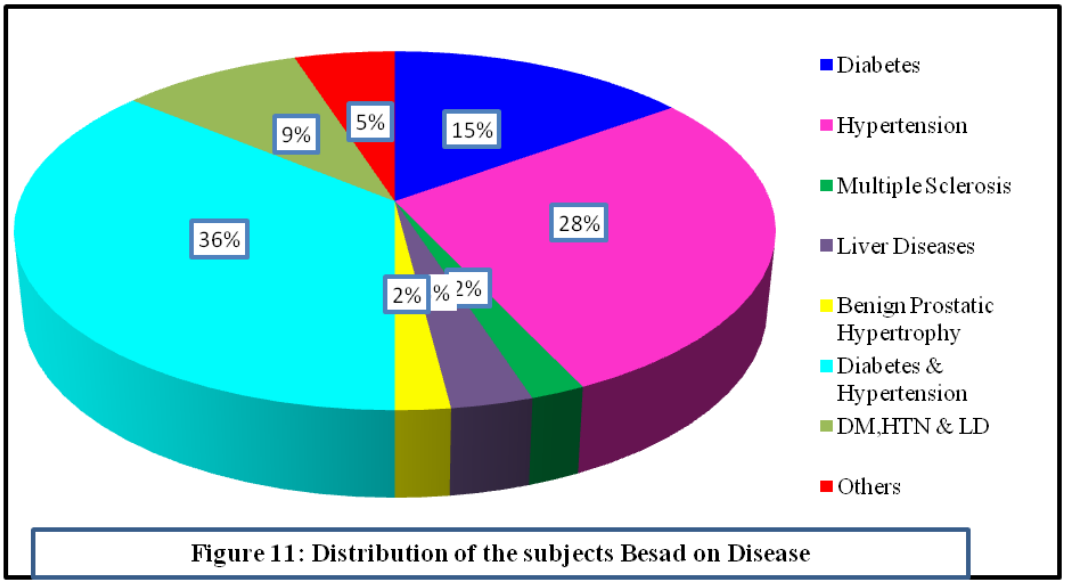

Figure 11: Distribution of the subjects Besad on Disease

This figure depicts that 36 percentage of the subjects were having the problem of both hypertension and diabetes. About 9 percentage of them were suffered from multiple sclerosis, where as 28 percentage of the samples were only having the problem of hypertension.

Table 6. Distribution of Samples Based on Auto immune Diseases, Thyroid Problems, Problems during Pregnancy and Hepatitis

N=100

Variables	Frequency	Percentage (%)
Auto immune Diseases		
Systemic Lupus Erythematosus (SLE)	6	6.0
Gout	1	1.0
Crohn's disease.	3	3.0
No	90	90.0
Thyroid Problems		
Hypothyroidism	31	31.0
Hyperthyroidism	4	4.0
Hyperparathyroidism	13	13.0
No	41	41.0
Hypothyroidism & Hyperparathyroidism	6	6.0
Hyperthyroidism & Hyperparathyroidism	5	5.0
Problems During Pregnancy		
Pregnancy Induced Hypertension	12	12.0
Eclampsia	4	4.0
Gestational Diabetes	12	12.0
No	72	72.0
Hepatitis		
No	94	94
Hepatitis B (HBs Ag)	3	3
Hepatitis C (HCV)	3	3

This table shows that 31 percentage of them were having the problem of Hypothyroidism, where as 13 percentage were suffered from Hyperparathyroidism. About 12 percentage of them were complaints of Pregnancy Induced Hypertension and Gestational Diabetes. Only few (6 percentage) of them were suffered from Systemic Lupus Erythematosus (SLE). About 3 percentage of the subjects were Hepatitis C (HCV) and Hepatitis B (HBs Ag) positive.

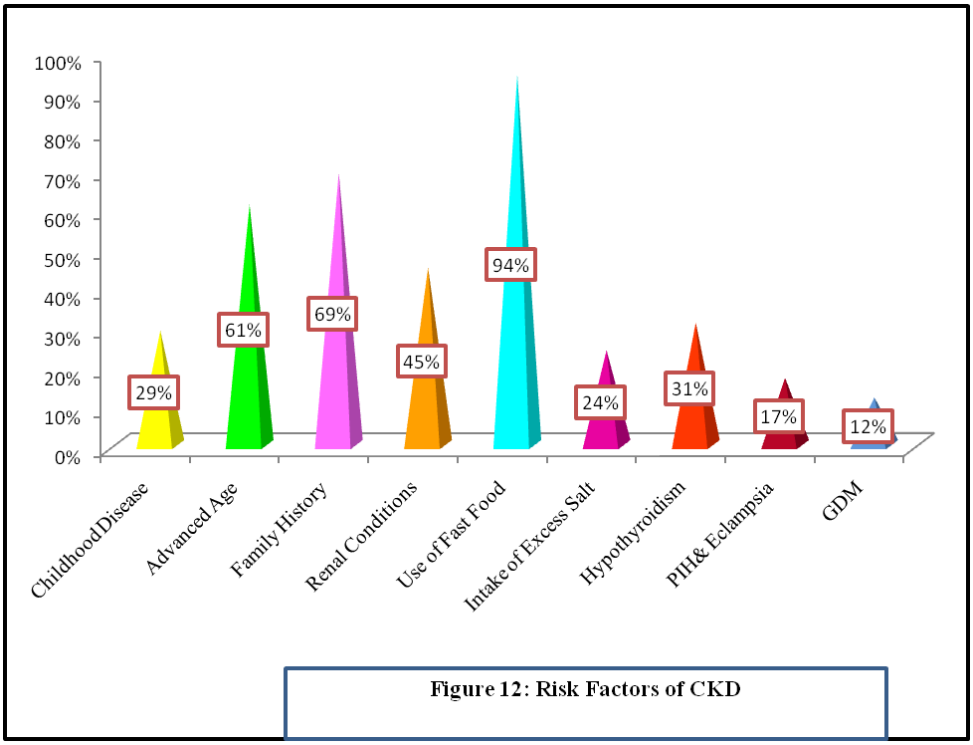

Figure 12: Risk Factors of CKD

About 69 Percentage of the subjects were have the family history of Diabetes, Hypertension and Kidney Diseases. Around 29 percentage of the subjects have childhood diseases and 94 percentage of the subjects were have the use of fast food and 31 percentage of the samples were have the problem of hypothyroidism. About 45 percentage have renal problems. Around 17 percentage of them were have the problem of PIH & Eclampsia. 12 percentage of the samples were have Gestational Diabetes.

Section 3:Etiological Factors of Chronic Kidney Diseases

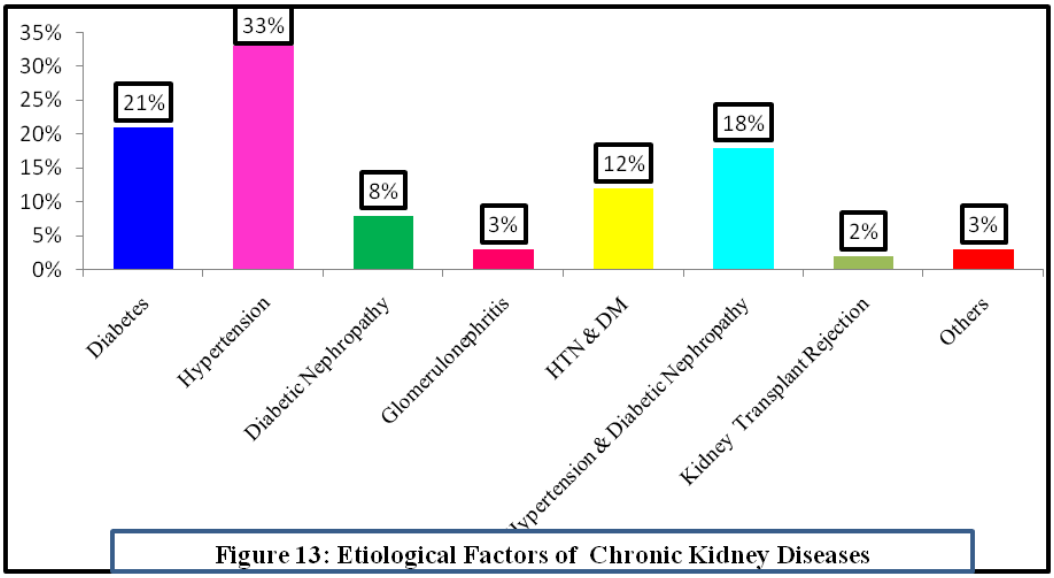

Figure 13: Etiological Factors of Chronic Kidney Diseases

This figure depicts that 33 percentage of the subjects were having the problem of hypertension and 21 percentage have diabetics. About 18 percentage have the complaints of hypertension and diabetic nephropathy.Few of them were suffered from glomerulonephritis (3%) and Kidney Transplant Rejections (2%).

Table 7: Distribution of Samples Based on Type of Treatment, Duration of Treatment and Complications of Chronic Kidney Diseases

N=100

Variables	Frequency	Percentage (%)
Type of Treatment for Renal Diseases		
Hemodialysis	11	11.0
Others	5	5.0
Medication & Hemodialysis	80	80.0
Renal Transplantation	4	4.0
Duration of Treatment		
1 Year	20	20.0
2-3 Years	45	45.0
4-5 Years	21	21.0
6-10 years	13	13.0
More than 11 years	1	1.0
Complications of Chronic Kidney Diseases		
Hyperkalemia	7	7.0
Pericarditis	12	12.0
Pericardial effusion	12	12.0
Cardiac tamponade	5	5.0
Hypertension	16	16.0
Anemia	20	20.0
Liver Diseases	10	10.0
Others	7	7.0
No	11	11.0

This table shows that majority (80 %) of the subjects were on combination of treatments i.e. hemodialysis and medications. About 45 percentage of the samples were on hemodialysis for 2-3 years, but about 13 percentage of the subjects were on hemodialysis for the duration of 6-10 years. Regarding complications of kidney diseases, 24 percentage of the subjects were having cardiac problems and 20 percentage of them have anemia.

Section 4: Correlation between Risk Factors and Etiological Factors of Chronic Kidney Disease

Table 8: Correlation Between Risk Factors and Etiological Factors of Chronic Kidney Diseases

Sl.No.	Variables	Pearson Correlation (r)	P Value
1.	Childhood Diseases	-.058	.567
2.	Advance Disease	-.082	.415
3.	Renal / Urological	.205	.040*
4.	Kidney Disease	-.065	.522
5.	Duration of Kidney Diseases	.205	.041*
6.	Smoking	-.049	.631
7.	Intake of water	.298	.003**
8.	Diseases	.270	.007**
9.	Autoimmune diseases	.041	.684
10.	Thyroid Problems	-.188	.061
11.	Problems during pregnancy	-.011	.915
12.	Hepatitis	.027	.788
13.	Disease Condition	.106	.296
14.	Type of Treatment	-.110	.274
15.	Duration of Treatment	.173	.086

This table depicts that there was a positive correlation between risk factors and etiological factors of chronic kidney diseases. P value is <.002**. Correlation is significant at the 0.01 level. So the research hypothesis (H1) was accepted.

Section 5: Association between Risk Factors and Etiological Factors of Chronic Kidney Diseases

Table 9: Association Between Risk Factors and Etiological Factors of Chronic Kidney Diseases

Sl.No	Variables	Chi-square (χ^2)	Degree of Freedom (df)	P Value
1.	Family History	92.320	7	.000***
2.	Childhood Diseases	169.200	4	.000***
3.	Advance Disease	9.360	3	.025
4.	Cholesterol	166.160	5	.000***
5.	Renal / Urological	82.900	4	.000***
6.	Kidney Disease	318.080	5	.000***

7.	Duration of Kidney Diseases	29.520	3	.000***
8.	Smoking	15.860	2	.000***
9.	Food Habits	67.240	1	.000***
10.	Habits of taking Drinks	45.100	4	.000***
11.	Soft Drinks	102.980	2	.000***
12.	Preserved foods	77.440	1	.000***
13.	Intake of Salt	3.260	2	.196
14.	Intake of water	31.220	2	.000***
15.	Diseases	91.680	7	.000***
16.	Autoimmune diseases	225.840	3	.000***
17.	Thyroid Problems	73.280	5	.000***
18.	Problems during pregnancy	119.520	3	.000***
19.	Hepatitis	165.620	2	.000***
20.	Disease Condition	71.840	7	.000***
21.	Type of Treatment	162.480	3	.000***
22.	Duration of Treatment	51.800	4	.000***
23.	Complication of CKD	26.800	9	.002**

There was a significant association between risk factors and etiological factors of CKD among hemodialysis patients of AKU, P value is <0.001**. So the research hypothesis (H2) was accepted.

IX. Discussion

In the present study 31 percentage of the subjects were between the age group of 61-70 years and 61 percentage of the samples were females. Majority (80 percentage) of the samples were natives of Saudi and 83 percentage of the samples were belongs to End Stage Renal Disease (ESRD). This findings was supported by the study of Abdul Kareem et.al, shows that the incidence rate of ESRD among the age group of 45–64 years is 577.7 Per Million Population(PMP), and >65 years is 716 PMP. The proportion of males was slightly higher than females. In Saudi Arabia, incidence and prevalence of ESRD are linked directly to increasing age. In Saudi Arabia, the mean annual growth rate was reported to be 7.44 percentage during the period of 1987 to 2000.CKD is common and mainly associated with ageing.[10]It is estimated that about one in five men and one in four women between the age groups of 65 to 74 has some degree of CKD. Prevalence of CKD is 18.3 percentage (NHANES 2017). [11] The poorest populations are at the highest risk. The older you get, the more likely you are to have some degree of kidney disease (Levey A.S et.al).[12]

In the current study 33 percentage of the subjects were having the problem of hypertension and 21 percentage have diabetics. About 18 percentage have the complaints of hypertension and diabetic nephropathy. Around 36 percentage of the subjects were having the problem of both hypertension and diabetes. About 24 percentage of the subjects were having cardiac problems and 20 percentage of them are anemic. Few of them were suffered from glomerulonephritis (3%) and Kidney Transplant Rejections (2%).Majorities (94 %) of the subjects were sometimes taking preserved foods and 13 percentage of the subjects were always taking soft drinks. This finding was supported by the study of Mohammad Salman et.al, in their study they emphasized that, causes of CKD were dominated by hypertension (30%) and diabetes (25%). At admission, 83.3 percentage of the patients were hypertensive, 75percentage were anemic and 13 percentage were presented with the complaints of proteinuria. The main co-morbidities associated with CKD were neoplasms (17% of cases), chronic heart disease (15% of cases) and pneumonia (15% of cases). [13]Diabetes mellitus (DM) is the leading cause of CKD; particularly type two DM. Type two DM cause damage to the glomerulus by affecting the microscopic blood vessels in the glomeruli (Kidney Health Australia, 2012).[14] DM has become a major cause of CKD in Saudi Arabia. In the 1990s, the incidence of DM in Saudi Arabia as the primary cause of ESKD ranged from 12 to 26percentage.Recent figures now indicate that DM is responsible for more than 37percentageof all cases of ESKD. This increase in new ESKD cases is due to the increased prevalence of DM in Saudi Arabia. Recent dramatic changes in lifestyles and social patterns in Saudi Arabia have contributed to the increasing prevalence of DM and obesity; for example, changed eating behaviors towards a Western diet (high in fat and sugar, and the consumption of sugar-laden soft drinks); reduced activity levels; embracing Western work practices; development of a youth culture (e.g. smoking habit) and changes in modern labour-saving technology and transport systems (Al-Nozha et al., 2007; World Health Organization [WHO], 2006).[15]

In this study, 19 percentage of the samples were chain smokers. This findings was consistent with the study findings of Maryland et.al, cigarette smoking was also significantly associated with risk of CKD in both men and women. A large proportion of the attributable risk of CKD in this population was associated with stage 1 hypertension (23%) and cigarette smoking (31%). Diabetes, and current cigarette smoking that are at least as strong in women as in men.[16]

Present study findings shows that, 8 percentage of the participants were have the complaints of diabetic nephropathy.Diabetic nephropathy (DN) is rapidly becoming a main cause of ESRD requiring dialysis. This finding was consistent with study reports of Khalid Al-Rubeaan et.al, the foremost attributable causes of CKD were Diabetic Nephropathy (44.9%), hypertension (24.2%) and obstructive uropathy (9.2%). The most common traditional causes of CKD are diabetes, high blood pressure and obesity. Research study reported in the KSA, it was concluded that the prevalence of diabetic nephropathy had increased from 2 to 6 percentage in 1983 to 16 to 25 percentage in 1999 (4 to 8-fold rise). Similarly the incidence of diabetic nephropathy increased from 2 to 44 percentage over the same period of time. DN and Hypertension are the major attributable causes of CKD among patients at a Malaysian tertiary-care hospital. Furthermore, the results draw attention to the possibility that greater emphasis on primary prevention of diabetes and hypertension will have a great impact on reduction of hospital admissions due to CKD in Malaysia. [(17)]Meta-analysis showed that the leading cause of ESRD in the GCC was diabetic nephropathy 17% followed by glomerulonephritis (GN) (13%) and hypertensive nephropathy (8%), while the prevalence of diabetic nephropathy had been increasing significantly over time.

In the present study, majorities (80 %) of the subjects were on hemodialysis, but 13 percentage of the subjects were on hemodialysis for the duration of 6-10 years. This finding was supported by the study of Couser et.al., over two million people worldwide currently receive treatment with dialysis or a kidney transplant to stay alive, yet this number may only represent 10 percentage of people who actually need treatment to live. Out of 2 million people who receive treatment for kidney failure, the majority are treated in only five countries – the United States, Japan, Germany, Brazil, and Italy. These five countries represent only 12 percentage of the world population. Only 20 percentage of them were treated in about 100 developing countries that make up over 50 percentage of the world population. [(18)]

X. Limitations and Delimitations of the Study

This study was help to identify the socio- personal factors, etiological and risk factors of Chronic Kidney diseases among Hemodialysis patients of Artificial Kidney Unit. The researcher selected appropriate research methodology for the study. Simple Random sampling techniques with structured interview schedule was used to collect the data from the subjects. SPSS was used for analysis of the study. Findings of the study can be generalized. Recommendations of the study will be focusing on screening programs for high risk groups, early detection of CKD, control of Diabetes and Hypertension. These are the delimitations of the study.

This study was conducted in only one setting, i.e. at Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia. This was the limitation of the study.

XI. Recommendations of the Study

CKD is incurable and causes the patient to need lifelong care. As the incidence of kidney disease escalates, so the researcher strongly recommended for educating the public, and the medical community in encouraging prevention and early detection of kidney disease. Chronic kidney disease is an increasing public health issue. Screening and intervention can prevent chronic kidney diseases and it help to reduce the incidence of end-stage kidney diseases. Awareness of the disorder, however, remains low in many communities. Strategies to reduce burden and costs related to chronic kidney diseases need to be included in national programs for non-communicable diseases. CKD can be detected by using simple laboratory tests, and that treatment can prevent or delay complications of decreased kidney function. Main recommendations are, Early Detection of Obesity among School Children, Educate all medical professionals about detection and reducing the risk of CKD, Prevention, and Control of Diabetes and Hypertension, Lifestyle Modification (Exercise, Diet), Awareness of the Public regarding Diabetes & Hypertension . Screening for high risk individuals and early diagnosis and treatment for ESRD. "Kidney Health for Everyone"

XII. Conclusion

Given the alarming increase of kidney disease globally, a drastic change and improvement in kidney disease prevention and treatment is needed. In turn, screening for high risk individuals and early diagnosis and treatment are cost effective to prevent or delay end-stage kidney diseases. Educate all medical professionals about their key role in detecting and reducing the risk of CKD, particularly in high risk populations. Everyone will take the responsibility to advocate for concrete measures in every country to improve kidney care. Finally make awareness to all about our "**Amazing Kidneys**". "MOVE 4 AMAZING KIDNEYS"I Love My Kidneys, I Get My Body Moving, Proper Nutrition and Exercise are the most important Key to Prevent Kidney Disease. Keeping fit helps reduce your blood pressure and therefore reduces the risk of CKD. I Take Care of My Health, Move/Run/Skate/Ski/Cycle/Swim for My Kidneys Whenever I Can, Wherever I Am, I Get Moving

Acknowledgements

I would like express my sincere gratitude to Hemodialysis Patients and staffs of AKU, Arar Central Hospital, Arar, Kingdom of Saudi Arabia.

I would like to share my appreciation to Dean, Vice-Dean, Head of the Departments and all faculty members of College of Nursing, Northern Border University.

References

[1]. International Society of Nephrology , Advancing Kidney Health Worldwide Report of World Kidney Day, 2019,
[2]. http://www.researchgate.net/publication/270908706_Chronic_kidney_disease_in_the_elderly_ evaluation_and_management [accessed Apr 29, 2015].
[3]. WHO Report on Kidney Diseases: 2017.
[4]. http://www.researchgate.net/publication/237003355_Chronic_kidney_disease_global_dimension_and _perspectives [accessed Apr 29, 2015].
[5]. http://www.researchgate.net/publication/272516603_Prevalence_of_chronic_kidney_disease_and_associated_factors_in_senegalese _populations_a_community-based_study_in_saint-louis [accessed Apr 29, 2015].
[6]. The annual report of the of the Saudi Centre for Organ Transplantation (SCOT)-2017www.scot.org.sa http://www.scot.org.sa /annual-report.html
[7]. http://www.nlm.nih.gov/medlineplus/kidneyfailure.html
[8]. http://www.medicinenet.com/health_and_living/focus.htm
[9]. http://www.drugs.com/cg/renal-failure-diet.html
[10]. Abdulkareem O Alsuwaida, Youssef M.K Farag, Abdulla A Al Sayyari, DujanahMousa, Fayez Alhejaili, Ali Al-Harbi, AbdulrahmanHousawi, Bharati V Mittal, Ajay K SinghEpidemiology of Chronic Kidney Disease in the Kingdom of Saudi Arabia (SEEK – Saudi Investigators) 2010, Volume:21, Issue :6, Page 1066-1072
[11]. NHANES - National Health and Nutrition Examination Survey - CDCnhanes 2017-2018 – CDC
[12]. Levey AS, Atkins R, Coresh J, et al. Chronic kidney disease as a global public health problem: approaches and initiatives - a position statement from Kidney Disease Improving Global Outcomes. *Kidney Int. Aug 2007;72(3):247-259.*
[13]. Muhammad Salman.,AmerHayat Khan.,AzreenSyazril Adnan., SyedAzhar Syed Sulaiman., Khalid Hussain., Naureen Shehzadi Fauziah Jummaat (2015)Saudi Journal of Kidney disease and transplant.
[14]. Kidney Health Australia, 2012.
[15]. Al-Nozha et al., 2007; World Health Organization [WHO], 2006).
[16]. Melanie K. Haroun., Bernard G. Jaar,., Sandra C..Hoffman,George W. Comstock, Michael J. Klag, and Josef Cresh(2003). Risk Factors for Chronic Kidney Disease: A Prospective Study of 23,534 Men and Women in Washington County, Maryland
[17]. Khalid Al-Rubeaan, Khalid Siddiqui, Mohammed A. Al-Ghonaim, Amira M. Youssef, DhekraAlNaqeb(2018)
[18]. Couser WG, Remuzzi G, Mendis S, Tonelli M. The contribution of chronic kidney disease to the global burden of major noncommunicable diseases. *Kidney Int. Dec 2011;80(12):1258-1270*.
[19]. AmalAbdulazizHassaniem (2013), Renal Care in Saudi Arabia: A Review of the Quality of Healthcare Management Submitted for the Degree of Doctor of Philosophy
[20]. Youssef M.K. Farag a Jameela A. Kari b Ajay K. Singh (2012), Chronic Kidney Disease in the Arab World: A Call for Action, Minireview, Nephron ClinPract 2012;121:c120–c123 DOI: 10.1159/000345149
[21]. Ibrahim Abdelmajeed Ginawi1, HussainGadelkarim Ahmed, Awdah M. Al-Hazimi Assessment of Risk Factors for Chronic Kidney Disease in Saudi Arabia
[22]. William F. Keane, Bbarry M. Brenner, Dick De Zeeuw, Jean-Pierre Grunfeld, Janet McGill, William E. Mitch, Artur B. Ribeiro, ShahnazShahinfar,Roger . Simpson, Steven M. Snapinn, and Robert Toto, Definition and classification of chronic kidney disease: Aposition statement from Kidney Disease: Improving Global Outcomes (KDIGO) for the Renal Study Investigators; K*idney International, Vol. 63 (2003), pp. 1499–150*

Dr. Bindu Bharathi. " A Retrospective Study on Chronic Kidney Disease Among Haemodialysis Patients of Artificial Kidney Unit, Arar Central Hospital, Arar, Kingdom of Saudi Arabia" .IOSR Journal of Nursing and Health Science (IOSR-JNHS), vol. 8, no.03 , 2019, pp. 01-14.