Knowledge and Risk Factors of Chronic Kidney Disease Among Ebira Community in Irasa, Ado-Ekiti

Author(s), ISIJOLA, Bukola Ibiso (RN, RM, RPHN, BNSc, M.Sc.)

AND

OLUBIYI, Simeon Kayode (Ph.D, RN, RPHN, FWACN, FCP)

Abstract:

Chronic kidney disease (CKD) is a worldwide health problem. The burden and the very high cost of care is a big challenge, especially in developing countries. The study examined knowledge and risk factors of CKD among Ebira community at Irasa area of Ado-Ekiti. The study specifically investigated the knowledge level of chronic kidney disease among Ebira community; the risk factors of chronic kidney disease among the Ebira community; the relationship between knowledge level and development of CKD among Ebira Community; and the relationship between risk factors and development of CKD among Ebira Community, Irasa Ado Ekiti. The study adopted cross- sectional descriptive design. The study was focused on both men and women in the Ebira community having an estimated population of over 396 while purposive and convenient sampling method was used to select 220 respondents for the study. The instrument for this study was questionnaire comprising of 3 sections which was administered on 220 participants. The data collected was analyzed using descriptive and inferential statistics. Findings on knowledge level of chronic kidney

disease among the respondents revealed that more than half of the respondents, 127 (59.1%) had very poor knowledge, 77 (35.8%) respondents has fair knowledge and 11(5.1%) had good knowledge. it is therefore concluded that majority of the respondents had poor knowledge of chronic kidney disease while Ebira at Irasa community are at high risk of developing CKD. It was recommended among others that Government and health care providers should increase awareness and campaign on the common causes and prevention of risk factors of CKD in the rural areas.

Keywords: Knowledge, Risk Factors, Chronic Kidney Disease,

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About Author

Author(s):
ISIJOLA, Bukola Ibiso (RN, RM, RPHN, BNSc, M.Sc.)
Nephrology Department,
Ekiti State University Teaching Hospital, Ado – Ekiti, Nigeria.

And

OLUBIYI, Simeon Kayode (Ph.D, RN, RPHN, FWACN, FCP)
Department of Nursing Science,
College of Health Sciences,
University of Ilorin, Kwara State, Nigeria.

Introduction

Kidney disease is a non-communicable disease (NCD) and currently affects around 850 million people worldwide. One in ten adults has chronic kidney disease, which is invariably irreversible and mostly progressive (WKD, 2020). The global burden of CKD is increasing, and is projected to become the 5th most common cause of loss of life globally by 2040 (Li Kam-Tao et al., 2020). Oluyombo et al. (2017) defined Chronic kidney disease (CKD) as abnormalities of kidney structure, function or glomerular filtration rate (GFR) <60 mL/min/1.73 m2 for ≥3 months. He further stated that CKD is a global public health problem, with adverse outcomes of kidney failure, cardiovascular disease, and premature death. Presently, there is an increase in the occurrence of CKD. It moved from 29th in the list of causes of total number of global deaths in 1990; however, to 18th position in 2019. This degree of movement up the list was alarming with the poorer populations being at the higher risk.

CKD has numerous complex causes. The disease has an indirect impact on global morbidity and mortality by increasing the risks associated with at least five other major killers: cardiovascular diseases, diabetes, hypertension, infection with human immunodeficiency virus (HIV) and malaria. Global Burden of Disease (GBD) (2016), study estimated that 1.2 million deaths, 19 million disability-adjusted life-years (DALYs) and 18 million years of life lost from cardiovascular diseases were directly attributable to reduced glomerular filtration rates (Kassebaum, 2016)

CKD is usually asymptomatic but it is detectable. The tests for detecting CKD are both simple and freely available. There is evidence that treatment can prevent or delay the progression of CKD, reduce or prevent the development of complications as well as reduce the risk of cardiovascular disease. However, because of a lack of specific symptoms, CKD frequently remains undetected and unrecognized. As a consequence, people with CKD are often not diagnosed, or diagnosed late when CKD has reached an advanced stage. Late diagnosis is associated with increased morbidity, mortality and healthcare associated costs. Other complications include acute kidney injury, increased risk of infection, cognitive decline, anemia, mineral and bone disorders and fractures (Jha et al., 2018).

The asymptomatic nature of CKD makes its early detection more difficult, which could be important as the treatment in early stages may prevent or delay its progression. Therefore, identification and knowledge of factors predisposing an individual to CKD is essential in terms of personal and community health, as some risk factors can be modified and prevent or slow down progression to end stage renal disease (ESRD). Early screening, detection with good management (mainly focusing on blood pressure (BP), lipid and glycemic control, together with smoking cessation, and avoiding nephrotoxic drugs) can delay or even retard progression. In resource-poor countries like ours, where the cost of renal replacement therapies is beyond the reach of most citizens, this remains the most viable option of management of CKD (American Kidney Foundation, 2020).

However, the shortage of information on risk factors for CKD is a major obstacle in pushing communities and populations towards early detection of the disease. It is necessary to conduct studies, especially on communities, to identify risk factors of CKD within

communities. Hence, this study is aimed at investigating knowledge and risk factors of CKD among Ebira community, at Irasa area of Ado-Ekiti. The study specifically investigated:

i.   the knowledge level of chronic kidney disease among Ebira community in Irasa, Ado-Ekiti;
ii.   the risk factors of chronic kidney disease among the Ebira community in Irasa Ado-Ekiti;
iii. the relationship between knowledge level and development of CKD among Ebira Community Irasa Ado Ekiti; and
iv.   the relationship between risk factors and development of CKD among Ebira Community Irasa Ado Ekiti.

Research Questions

The following research questions were raised in this study

1.   What is the knowledge level of chronic kidney disease among Ebira community in Irasa, Ado-Ekiti?
2.   What are the risk factors of chronic kidney disease among the Ebira community in Irasa Ado-Ekiti?

Research Hypotheses

The following research hypotheses were formulated for this study

1.   There is no significant relationship between knowledge level and development of CKD among Ebira Community Irasa Ado Ekiti.
2.   There is no significant relationship between risk factors and development of CKD among Ebira Community Irasa Ado Ekiti.

Literature Review

Investigating the risk factors and indices of chronic kidney disease is very pertinent owing to the overwhelming burden of the disease. Chronic kidney disease (CKD) is global condition, an alarming issue that is increasing in most part of the world. It is a disorder whereby the kidneys have been impaired structurally, functionally for more than or equal to three months (Amoako et al., 2018). The kidneys performs the duty of filtration of extra fluid and waste out of the blood, forms urine, production of hormones (calcitriol, Erythropoietin) to help the body stay healthy, regulation of blood force (RAAS), then keep the right levels of electrolytes (Haroun, et al., 2016).

According to the Global Kidney Health Atlas, (2017), presented at the week's world congress of Nephrology in Mexico City and compiled by the international society of Nephrology, one in 10 individuals globally have chronic kidney disease. One in three people in the general populace worldwide is at bigger risk of CKD, and the report projected that 9 in 10 of those with CKD are unacquainted of their condition. Globally, estimated CKD prevalence worldwide differs from 7% in South Asia and 8% in Africa to as high as 11% in North America and 12% in Europe. Globally, it is projected that about one million people die yearly from untreated kidney failure. But those with CKD are up to 20 times more possible to die of other causes, largely cardiovascular illnesses before they reach end-stage renal disease.

Chronic kidney disease (CKD) or chronic kidney failure (CKF), is a term that comprises all grades of decreased renal function, from damaged, through mild, moderate, and severe chronic kidney failure. The Kidney Disease Outcomes Quality Initiative (KDOQI) of the

National Kidney Foundation (NKF) established a definition and classification of CKD in 2002. The KDOQI and the international guideline group Kidney Disease Improving Global Outcomes (KDIGO) later updated these guidelines. These guidelines have permitted improved communication among physicians and had expedited intervention at the different stages of the disease. The recommendations define chronic kidney disease as either kidney damage or a decreased glomerular filtration rate (GFR) of less than 60 ml/min/1.73 m² for at least 3 months. Schnaper et al, (2016), whatever the underlying cause, once the loss of nephrons and reduction of functional renal mass reaches a certain point, the residual nephrons begin a process of irreversible sclerosis that leads to advanced deterioration in the GFR.

Kokila et al. (2018) stated that heritable component is present with individuals that have CKD. Conducted genome-wide association studies identified susceptibility loci for glomerular filtration rate (GFR), estimated by serum creatinine (eGFRcreatine), cystatin C (eGFRcys), and CKD (eGFRcrea <60 ml/min per 1.73 m²) in a cohorts study on European ancestry participated by four population (2388 CKD cases). Uromodulin (which encodes Tamm–Horsfall protein in the urine) mutations were associated with differences in renal function. Also APOL1 was identified with mutation. It is an autosomal recessive arrangement of inheritance, established and related with a significantly higher risk of end stage renal disease (ESRD) (multipled-fold higher risk of CKD due to focal glomerulosclerosis and 7-fold higher risk of CKD due to hypertension). Individuals of African descent, APOL1 mutations are found exclusively among them and make them more prone to CKD (Polak et al, 2015).

Risk factors of CKD are high among family members of CKD patients. Song et al, (2017), screened incident dialysis patients in the United States. Voluntary participation was ensured and participants were asked to fill questionnaire on family history of CKD. After the exclusion of patients with CKD due to hereditary disorders and urologic causes, it was discovered that nearly 23% of incident dialysis patients had relatives close to them who also had CKD. Hence, it became very imperative to screen the high-risk family members of those with CKD, in an effort to avoid any kidney disease.

Advanced age decreases renal function in both men and women. In the mist of elderly population, more than one-half of the subjects screened had CKD stages 3–5 (GFR<60 ml/min per 1.73 m²) according to the National Kidney Foundation Kidney Disease Outcomes Quality Initiative (K/DOQI) guidelines. Hence, the elderly population is more predisposed to developing CKD after various renal insults. Suleymanlar et al, (2017), in a study stated that, the odds ratios of CKD ranged from 1.45 to 2.18 for every 10-year increase in age among subjects older than 30 years of age in Turkey.

One of the strongest yet modifiable risk factors for CKD in the 21st century is obesity. Glomerular hypertrophy and hyperfiltration may accelerate kidney injury by increasing capillary wall tension of the glomeruli and decreasing podocyte density. Obesity may contribute to the pathogenesis of kidney damage through inflammation, oxidative stress, endothelial dysfunction, prothrombotic state, hypervolemia, and adipokine derangements (Shulman, et al, 2018). Lea et al, (2017), in a large-scale epidemiologic study from Sweden demonstrated the role of obesity in CKD. In this study, native Swedes between the ages of 18 and 74 with CKD whose serum creatinine exceeded 3.4 mg/dl (men) or 2.8 mg/dl (women) during the study period were analyzed. Overweight (body mass index (BMI) ≥25 kg/m²) at

age 20 was associated with a significant threefold excess risk for CKD, in comparison with BMI<25 kg/m². Obesity (BMI⩾30 kg/m²) among men and morbid obesity (BMI⩾35 kg/m²) among women anytime during lifetime was linked to three- to fourfold increases in CKD risk. Besides high BMI, carrying excess weight around the abdomen is linked to an increased risk of CKD.

Smoking can increase the CKD risk through proinflammatory state, oxidative stress, prothrombotic shift, endothelial dysfunction, glomerulosclerosis and tubular atrophy (Mirrakhimov et al, 2018). In a study by Bleyer et al, (2016), where 7,476 non-diabetic participants were enrolled, smoking >20 cigarettes per day increased the risk of CKD. In another study, each additional five smoked cigarettes per day was associated with an increase in serum creatinine >0.3 mg/dl by 31% (Orth et al, 2017). Alcohol and recreational drugs have been linked to CKD progression as well as excessive use of analgesic drugs and exposure to heavy metals. When persons who had taken fewer than 1000 pills containing acetaminophen in their lifetime were used for reference, the odds ratio for CKD was found to be 2.0 for those who had taken 1000–4999 pills and 2.4 for those who had taken 5000 or more pills (Perneger et al, 2018). In a study by Megan et al, (2020) NSAID use has been associated with acute kidney injury, progressive loss of glomerular filtration rate in CKD, electrolyte derangement, and hypovolemia with worsening of heart failure and hypertension. In a further study, participants were followed up from 2001, 2005, 2009 till 2013. Adults older than 18years were recruited, of which (50.8% men and 49.2% women) new onset of chronic kidney disease was identified in 1535 (5.5%), 292 (2.7%) and 317 (4.9%) for non-drinkers, social-drinkers, and regular- drinkers (Yun-Ju et al, 2019). Social and regular drinkers had decreased risk of CKD when compared with non-drinkers.

CKD is mostly found among men in their productive age, who were either diabetic or hypertensive with history of ingestion of herbal concoction and chronic use of analgesic. A retrospective cohort study of 150 cases and 300 controls was done, review of records of in-patients from 2010-2013 in a state Teaching Hospital was under taken, result revealed, subjects between ages 20-29 years, that is mean age cases was 40.6 (14.4) and controls was 38.6 (15.8). Almost 87% of the cases and 42% of the controls ingest herbal concoction (Temitope, et al, 2017).

Hypertension has long been a defined risk factor for CKD and accounts for 27% of all patients with CKD and 28% of haemodialysis patients (Lea & Nicholas, 2017).Systemic hypertension is transmitted to intraglomerular capillary pressure leading to glomerulosclerosis and loss of kidney function; thus variable risk of impaired renal function has been reported among hypertensive subjects. Klag et al, (2016) at study entry, 5.9% of the Hypertension detection and Follow-up Program trial participants had a serum creatinine of 1.5 mg/dl or greater. Among the 8683 participants, 2.3% of those with serial serum creatinine measurements above 1.5 mg/dl experienced clinically significant loss of renal function over 5 years.

According to Lea & Nicholas (2017), essential hypertension is generally diagnosed between 25 and 45 years of age and overt kidney dysfunction develop if the patient sustains at least 10 years of uncontrolled hypertension. Valerie et al (2017), conducted a study in which increasing evidence indicates that CKD burden may be even greater in developing

countries. Diabetes, hypertension, and obesity are major contributors to the global burden of disease and are important traditional CKD risk factors.

Ala'a et al (2017) conducted a cross-sectional survey of 23,869 participants to measure the risk factors for chronic kidney disease in a rural population. The overall prevalence of CKD was 16.4% (15.9–16.8%) and factors independently associated with kidney damage were found to be age, gender, education, personal income, alcohol consumption, overweight, obesity, diabetes, hypertension and dyslipidemia. Stanifer et al (2016) conducted a study by administering a structured survey to a random sample of 606 participants from 431 urban and rural households on assessing their knowledge level, symptoms and treatment of kidney disease. A mean score 3.28 out of 10; 95% cl 2.94, 3.63 were identified. In a study conducted by Dada et al. (2018), on knowledge of CKD, majority (78.4%) of the respondents have no idea about common symptoms associated with CKD. Overall only 14.5% of the respondents had good knowledge about CKD.

Muhammad et al (2017) investigated the prevalence of risk factors for CKD among the civil servants. Weight, height, Body Mass Index (BMI), and blood pressure were measured. Spot urine samples were collected and tested for protein, sugar, and other parameters using a dipstick. Random blood sugar was measured with a glucometer. And the most frequent risk factors for CKD among the subjects were the use of traditional medication, cigarette smoking, obesity, hypertension, and proteinuria. In another study, risk factors for kidney damage were old age, hypertension, diabetes and human immunodeficiency virus. Risk factors for kidney damage were older age, hypertension, diabetes and human immunodeficiency virus in a study conducted by Jaya et al (2019) in sub-Sahara Africa.

Methodology

The study adopted cross- sectional descriptive design. This research was conducted at the Irasa community in Ado- Ekiti. The community can be accessed through the road leading to Iworoko from Ado Ekiti. This community is bound in the north by Ekiti State University and in the South by NNPC, located 200 meters from it, and Ado- Iworoko road by the East. The community has an estimated population of over 396. The community is an agrarian society. This study was focused on both men and women in the Ebira community having an estimated population of over 396, ranging from 18-70years both literate and non-literate. Purposive and convenient sampling method was used to select 220 respondents for the study.

The instrument for this study was questionnaire comprising of 3 sections which was administered on 220 participants, section A was used to elicit information of the respondents' socio demographic data, section B contains items to determine the knowledge level of the respondents while section C items was used to determine the risk factors of chronic kidney disease. The instrument was validated by experts in Nursing Science who ensured the face and content validity. Data collected was analyzed using SPSS version 26. The data collected was analyzed using descriptive and inferential statistics. Inferential techniques involving chi-square was employed to determine the relationship between the variables. The data collected from respondents were presented and analyzed in tabular form. All hypotheses were tested at 0.05 level of significance.

Results

Research Question 1: What is the knowledge level of chronic kidney disease among Ebira community in Irasa, Ado-Ekiti?

Table 1: Level of knowledge of Respondent's on CKD

Score	Frequency	Percent	Knowledge level	Range	Mean	Std. deviation
0.00	84	38.2	Poor knowledge 59.1%			
1.00	4	1.8				
2.00	39	17.7				
3.00	33	15.0	Fair knowledge 35.8%			
4.00	32	14.5				
5.00	12	5.5		8.00	2.0465	1.97358
6.00	8	3.6	Good knowledge 5.1%			
7.00	1	.5				
8.00	2	.9				
Total	**215**	**97.7**				
Missing System	**5**	**2.3**				
Total	**220**	**100.0**				

Table 1 shows respondent's knowledge level of chronic kidney disease. Knowledge level was rated 1-8, and grouped from 0-2, 3-5 and 6-8. Anyone that scores 6-8 was considered as having good knowledge, 3-5 as fair knowledge, and 0-2 as poor knowledge. It was observed that majority of the respondents (59.1%) had poor knowledge while 35.8% of the respondents had fair knowledge and 5.1% of the respondents had good knowledge. Figure 1 further shows respondent's knowledge level of chronic kidney disease at a glance.
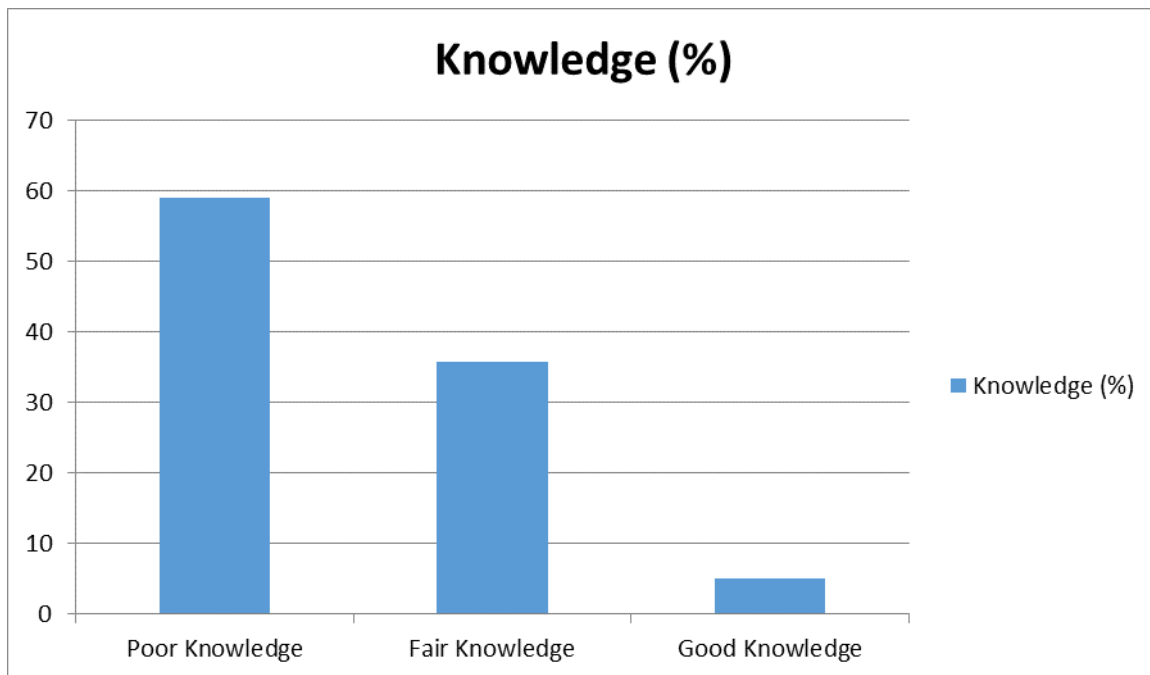
Figure i: Bar chart showing the respondent's knowledge level of chronic kidney disease

Research Question 2: What are the risk factors of chronic kidney disease among the Ebira community in Irasa Ado-Ekiti?

Table 2: Risk factors of CKD among the Ebira community in Ado-Ekiti

Variables		GFR			
		Normal		Abnormal	Total
Age	18-32	77	(88.5%)	10 **(11.5%)**	87
	33-47	63	(88.7%)	8 **(11.3%)**	71
	48-62	32	(88.9%)	4 (11.1%)	36
	62 and above	21	(80.8%)	5 **(19.2%)**	26
NSAID	Yes	144	(86.7%)	22 **(13.3%)**	166
	No	47	(90.4%)	5 (9.6%)	52
Do you take herbal concoction (H/C	Yes	182	(87.1%)	27 **(12.9%)**	209
	No	11	(100.0%)	0 (0.0%)	11
Alcohol	Yes	2	(100.0%)	0 **(0.0%)**	2
	No	191	(87.6%)	27 (12.4%)	218
Diabetes (D/M)	Yes	10	(66.7%)	5 **(33.3%)**	15
	No	183	(89.3%)	22 (10.7%)	205
Hypertension	< 130/80	128	(90.1%)	14 (9.9%)	142
	>130/80	65	(83.3%)	13 **(16.7%)**	78

Table 2 revealed that the risk factors of chronic kidney disease among Ebira residing in Irasa Ado-Ekiti were old age (62 years and above) with 19.2% as against 11.5%, 11.3% and 11.1% for ages between 18-32, 33-47 and 48-62 respectively. The use of NSAID accounted for

13.3% as against 9.6% for those that do not use NSAID. The risk of herbal concoction user was 12.9% as against 0.0% for non-users of herbal concoction. Also, no one recorded the use of alcohol but 12.4% still came down with CKD, indicating that alcohol consumption is not a risk factor of CKD in the studied population. Diabetes risk was 33.3% against 10.7% of respondents without diabetes. Lastly, hypertension as a risk was 16.7% as against 9.9% of those without hypertension. Therefore, the risk factors for CKD among Ebira in Irasa community were old age, use of NSAID, herbal concoction, diabetes and hypertension.

Hypotheses Testing

Hypothesis 1: There is no significant relationship between knowledge level and development of CKD among Ebira Community Irasa Ado Ekiti

Table 3: Chi-Square analysis showing relationship between Knowledge level and CKD development

Variable		GFR			χ^2	df	p-value
		Normal	Abnormal	Total			
Knowledge	Poor	111	16	127			
	Fair	69	8	77	2.499	2	0.287
	Good	8	3	11			
Total		**188**	**27**	**215**			

Table 3 indicated that the relationship between development of chronic kidney disease among Ebira in Irasa community in Ado-Ekiti and their knowledge level was not significant (χ^2 = 2.499, p=0.287). The null hypothesis stated that there is no significant relationship between knowledge level and development of CKD among residents of Ebira community Irasa Ado-Ekiti was therefore not rejected. It implies that the knowledge level of Ebira in Irasa community Ado-Ekiti is not a function of CKD development.

Hypothesis 2: There is no significant relationship between risk factors and development of CKD among Ebira Community Irasa Ado Ekiti.

Table 4: Chi-Square analysis showing relationship between risk factors and CKD development

Risk factors		GFR		Total	χ^2	df	P value
		Normal	Abnormal				
Do you take Akape daily?	Yes	144	22	166			
	No	47	5	52	0.483	1	0.487
Total		191	27	218			
Do you smoke?	Yes	1	0	1			
	No	192	27	192	0.141	1	0.708
Total		193	27	220			
Take herbal concoction?	Yes	182	27	209			
	No	11	0	11	6.632	1	0.010**
Total		193	27	220			

Hypertension	< 130/80	128	14	142			
	>130/80	65	13	78	2.167	1	0.141
Total		193	27	220			
Diabetes	Positive	10	5	15			
	Negative	183	22	205	6.632	1	0.010**
Total		193	27	220			
Do you take alcohol regularly?	Yes	2	0	2			
	No	191	27	218	0.282	1	0.595
Total		193	27	220			

Table 4 shows the relationship between development of chronic kidney disease among Ebira in Irasa community in Ado-Ekiti and their use of NSAID was not significant (χ^2 = 0.483, p=0.487). The null hypothesis stated that there is no significant relationship between the use of NSAID and development of CKD among residents of Ebira community in Irasa, Ado-Ekiti was therefore not rejected. It implies that the use of NSAID among Ebira in Irasa community Ado-Ekiti is not a function of CKD development. Also, smoking was reported to have chi-square value of 0.708 which was more than the alpha value of 0.05, where the χ^2_{cal} was 0.141 (χ^2 = 0.141, p=0.708). The null hypothesis stated that there is no significant relationship between smoking and development of CKD among residents of Ebira community in Irasa, Ado-Ekiti was therefore not rejected. This implies that smoking is not a function of CKD development.

Herbal concoction was also investigated upon, same revealed that relationship development of chronic kidney disease among Ebira in Irasa community in Ado-Ekiti and their use of herbal concoction was significant with value of 0.010 which was less than the alpha value of 0.05, where the χ^2_{cal} was 6.632 (χ^2 = 6.632, p=0.010). The null hypothesis which stated that there is no significant relationship between the use of herbal concoction among Ebira in Irasa community Ado-Ekiti and development of chronic kidney disease was therefore rejected. This means that use of herbal concoction is a function of CKD development.

The table shows the relationship between development of chronic kidney disease among Ebira in Irasa community in Ado-Ekiti and hypertension which was not significant with value of 0.141 which was more than the alpha value of 0.05, where the χ^2_{cal} was 2.167 (χ^2 = 2.167, p=0.141). The null hypothesis stated that there is no significant relationship between hypertension and development of CKD among residents of Ebira community in Irasa, Ado-Ekiti was therefore not rejected. It implies that hypertension is not a function of CKD development. Also, diabetes was reported to have chi-square value of 0.010 which was less than the alpha value of 0.05, (χ^2 = 6.632, p=0.010). The null hypothesis stated that there is no significant relationship between diabetes and development of CKD among residents of Ebira community in Irasa, Ado-Ekiti was therefore rejected. This implies that diabetes is a function of CKD development.

Alcohol consumption was also investigated upon, same revealed that, relationship development of chronic kidney disease among Ebira in Irasa community in Ado-Ekiti and alcohol consumption was not significant with value of 0.595 which was more than the alpha value of 0.05, where the χ^2_{cal} was 0.282 χ^2= 0.282, p=0.595). The null hypothesis which stated that there is no significant relationship between alcohol consumption among Ebira in Irasa community Ado-Ekiti and development of chronic kidney disease was therefore not rejected. This means that alcohol consumption is not a function of CKD development.

Discussion

Findings on knowledge level of chronic kidney disease among the respondents revealed that more than half of the respondents, 127 (59.1%) had very poor knowledge, 77 (35.8%) respondents has fair knowledge and 11(5.1%) had good knowledge. This findings were in line with the previously conducted study by Oluyombo et al. (2017) who observed that 25.5% participants had good knowledge while 42.2% and 32.3% respectively had and fair and poor knowledge. The study was also corroborated by Stanifer et al. (2016) who observed that respondents had poor knowledge with a mean score of 3.28 out of 10. Good knowledge of CKD was similar to the study of Dada et al. (2015) with 14.5 but negates poor knowledge of 19.8% in the same study. In contrast, the study of Akpan and Ekrikpo (2017) reported a good knowledge of 68.7% as against 5.1% recorded in this study.

It was also revealed from the findings that the identified risk factors are age, use of NSAID, use of herbal concoction, smoking, hypertension, diabetes. With regards to risk factors of chronic kidney disease, age of respondents were considered along with their GFR thus revealing 10 (11.5%) for 18-32 years, 8 (11.3%) 33-47, 4 (11.1%) 48-62 and finally 5 (19.2%) for 62 years and above. These findings indicated that older people are more prone to the development of CKD than the younger ones. It harmonized with previously conducted study by Adaobi et al (2018) where CKD increased significantly with age; about two fold among subjects aged 50-69 years. A similar study carried out by Andong et al. (2016) also associated age from 60 years or older, which is closely similar to the findings in the study. The use of NSAID accounted for (13.3%) for 22 respondents as against (9.6%) that did not use NSAID this findings showed indiscriminate use of NSAID is a risk factor to CKD development and it contrast a previously researched study by Dada et al, (2020) where use of NSAID is not a risk factor in the population studied. It corroborates with the study conducted by Temitope et al. (2017) where use of herbal concoction was a risk factor with 14.4 as against 40.6. Also, no one recorded the use of alcohol but 12.4% still came down with CKD, indicating that alcohol consumption was not a risk factor of CKD in the studied population. This was contrasted with previously conducted study by Yun-Ju, Lai et al. (2019) where alcohol consumption was a risk factor for CKD.

Diabetes risk was 33.3% against 10.7% of respondents without diabetes. A previously conducted study by McClellan et al. (2017) indicated diabetes as a risk factor where 37.3% of participants in the studied population were diabetic. In a study conducted by Dada et al, (2020) on diabetes as a risk factor of CKD, it was revealed that out of 122 participants, (15.6%) were detected. Both studies correlated with the findings of this study as diabetes as a risk factor to CKD development. Lastly, hypertension as a risk was 16.7% as against 9.9% of

those without hypertension in this study. In a similar study conducted by Temitope et al. (2017) 10.7% out of the studied population were identified as having hypertension.

The study further revealed that there was no significant relationship between the knowledge level and CKD with p value of 0.287 which is greater than the significant value of 0.05. This was in line with the studies of Adaobi et al. (2018) and Amoako et al (2016).

The study however revealed that there was significant relationship between herbal concoction and CKD with p value of 0.010 which is less than the significant value of 0.05. This was in harmony with the studies of McClellan and Flanders (2017) and Dada et al. (2020). There was significant relationship between diabetes mellitus and CKD with p value of 0.010 which is less than the significant value of 0.05. This was in line with the study of Oluyombo et al. (2016).

Conclusion

Based on the findings of this study, it is therefore concluded that majority of the respondents had poor knowledge of chronic kidney disease while Ebira at Irasa community are at high risk of developing CKD. The study showed that the use of NSAID, hypertension, smoking, and alcohol intake were not statistically significant to CKD development, while gender, regular intake of herbal concoction, and diabetes were statistically significant to CKD development in this study.

Recommendations

Based on the findings of this study, the following are recommended:

1. Individual should engage in regular medical checkup for early detection and modify their life style.
2. Government and health care providers should increase awareness and campaign on the common causes and prevention of risk factors of CKD in the rural areas.
3. Community Health workers sent to the rural areas should be adequately trained in the field of nephrology to enhance their cognitive power in identifying risks factors of kidney disease.

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