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Risky behaviours and attitudes of healthy Nigerians towards kidney failure: a case study of Ede north local government workers.

***Tijani KIA., Famuyiwa SA.**

Abstract

Objective: This research work is aimed at determining the kidney failure risk behaviours and attitudes of healthy populace of workers of Ede North Local Government Area of Osun State, Nigeria.

Methods: We adopted a descriptive survey research method. The study population consisted of both male and female local government workers in Ede North Local Government Area of Osun State. A self developed questionnaire, Kidney Failure Risk Behaviours (KFRB) research instrument, with nine items and two point response scale of 'Yes' and 'No' was administered and completed questionnaire was collated, coded and analysed using descriptive statistic of frequent count and percentages to describe the demographic characteristics of the respondents. Bar and pie charts were used to analyze the data relating to risk behaviours and attitude of the respondents to kidney failure.

Results: The study showed that the common kidney failure risk behaviors exhibited by workers in Ede North Local Government Area of Osun State are the use of herbal remedies 284 (85.8%), use of alcohol 239 (72.2%) and cigarette smoking 134 (40.1%). The study also showed that 183 (55.3%) were indifferent, 44 (13.3%) had positive attitude while 104 (31.4%) had negative attitude towards kidney failure. Thus majority of the respondents were indifferent towards kidney failure.

Conclusion: The reflections of their attitude about their knowledge of kidney failure in their exhibitions of risk behaviours for kidney failure are strong indications of the need for health advocacy on kidney failure of these groups of workers and the healthy populace.

Keywords: Kidney failure, risk behaviours, attitude, healthy populace

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Les comportements à risque et les attitudes des Nigériens saines envers insuffisance rénale: une étude des travailleurs du nord Ede gouvernement local de cas.

* Tijani KIA, Famuyiwa SA

Résumé

Objectif: Ce travail de recherche vise à déterminer les comportements et les attitudes de population saine des travailleurs de Ede Nord zone de gouvernement local de l'Etat d'Osun, Nigeria risque d'insuffisance rénale.

Méthodes: Nous avons adopté une méthode de recherche d'enquête descriptive. La population étudiée était composée de deux travailleurs de l'administration locale masculins et féminins à Ede Nord zone de gouvernement local de l'Etat d'Osun. Une auto développé questionnaire, l'insuffisance rénale comportements à risque (KFRB) instrument de recherche, avec neuf points et deux échelle de réponse de point de «Oui» et «Non» a été administré et questionnaire complété ont été colligés, codé et analysé à l'aide statistique descriptive du compte fréquentes et pourcentages pour décrire les caractéristiques démographiques des répondants. Bar et camemberts ont été utilisés pour analyser les données relatives aux comportements à risque et de l'attitude des répondants à l'insuffisance rénale.

Résultats: L'étude a montré que l'échec des comportements à risque rénaux commune exposées par les travailleurs à Ede Nord zone de gouvernement local de l'Etat d'Osun sont l'utilisation de remèdes à base de plantes 284 (85,8%), la consommation d'alcool 239 (72,2%) et le tabagisme 134 (40.1 %). L'étude a également showed that 183 (55,3%) étaient indifférents, 44 (13,3%) ont eu une attitude positive tout en 104 (31,4%) avaient une attitude négative envers l'insuffisance rénale. Ainsi la majorité des répondants étaient indifférents à l'insuffisance rénale.

Conclusion: Les réflexions de leur attitude au sujet de leur connaissance de l'insuffisance rénale dans leurs expositions des comportements à risque pour l'insuffisance rénale sont de fortes indications de la nécessité de promotion de la santé en cas d'échec du rein de ces groupes de travailleurs et la population en bonne santé.

Mots-clés: Insuffisance rénale, les comportements à risque, l'attitude, population saine

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INTRODUCTION

The kidneys are vital excretory organs predominantly regulating the composition and volume of extracellular fluid (ECF) in the body through the maintenance of a stable internal environment by the excretion of appropriate amount of many substances in the urine. According to the Center for Disease Control and Prevention, "kidney failure occurs when the kidneys stop working and waste can no longer be removed from the blood" (1). Kidney diseases cause damages to the kidneys such that they cannot perform their statutory excretory functions, leading to waste and water retention in the body. The common causes of kidney failure, as stated by Alagappan, are diabetes mellitus, hypertension, glomerulopathies, interstitial nephritis, cystic disease/ hereditary disorders amongst others (2). Chronic Kidney Disease is defined by estimated GFR $<60\text{ml}/\text{min}/1.73\text{m}^2$ and/or presence of dipstick proteinuria for greater than 3 months. (3).

Afolabi et al also viewed kidney failure as resulting from irreversible damage to the kidneys to sustain functions and normal growth of the body (4) while Kivi and Solan refers to the condition as loss of ability to adequately filter wastes from the blood due to numerous factors (5). World Health Organization (WHO) showed the death rates from intrinsic kidney and urinary tract disease to be one million in the year 2002; ranking twelfth on the list of major causes of death (6). The prevalence of impaired kidney function, estimated to range between 10% and 20% of the adult population in most countries worldwide (6) has however been reported to be increasing globally. Johnson et al. in 2004 reported the National Kidney Foundation estimate of 20 million Americans having chronic kidney disease and at least a further 20 million people have an increased risk (7). The prevalence of preventable renal diseases is not known in developing countries like Nigeria (4). Akinsola et al in 1989 observed that renal failure constituted 8% of hospital admissions (8), and Abioye-Kuteyi et al in 1999 documented a prevalence of 19.9% of undetected renal diseases in a rural populace in Nigeria. (4). Nwankwo et al reported an incidence of 45.5% of impaired kidney

function among hospitalized hypertensive patients in Maiduguri (8).

Assessing the knowledge of prevalence and age group affected by kidney failure, Alebiosu reported that 21.9% of the respondents do not have an idea of what is meant by kidney failure while 37.8% believed it is rare and 30.4% believed it is a very common medical condition in Sagamu, Ogun State, Nigeria. He also reported that 50.6%, 16.1%, 10.6%, 1.9% and 30.4% of the respondents respectively believed that the adult, the elderly, the adolescent, the children and the babies were affected by kidney failure, while only 19% of the respondents could attribute kidney failure to any age group (9). A lot of other researchers from Nigeria have reported diverse findings on the incidence and prevalence of causes, signs and symptoms of kidney failure.

Looking at the demographic characteristics of kidney failure, there was a preponderance of males affected by kidney failure in Spain (10), United States of America (11), Ghana (12) and Nigeria (13). The male predominance might be a reflection of the fact that kidney failure and its risk factors such as hypertension and smoking are commoner in males than females, and might be a reflection of the differences in the health seeking behaviours of males and females. Yaw et al reported the mean age of patients with kidney failure to be 43.9 ± 17.8 years, with a peak age between 40 - 49 years (14). This is similar to the findings from Nigeria (13) and other developing countries (12, 15) but is in contrast to what was seen in developed countries (14).

The low socio-economic status and poverty in most developing countries and the resultant limited access to health care have been adduced by researchers to be strong risk factors for kidney failure (14, 15, 16). In Nigeria, the situation is such that kidney failure represents about 8–10% of hospital admission (16). Although studies have revealed that early detection of kidney related disease and prompt referral for consultation play an important role in curtailing its progression to End Stage Renal Disease, many patients in developing countries are referred for medical treatment late (17).

Kidney failure has a very devastating

effect on health, morbidity and mortality of the populace. Kidney damage is a major determinant for the development of progression of accelerated atherosclerosis, ischaemic vascular disease, and cardiovascular death (13). Centre for Disease Control in 2014 reported that the kidney failure can lead to other health problems (18). The National Institute of Diabetes and Kidney Diseases reported that the total number of ESRD deaths has continued to rise since 2001 (19). Lazano et al reported that ESRD globally resulted in 735,000 deaths in 2010 from 400,000 deaths in 1990 (20). Unpublished data from the hospital records related to the cause of kidney failure reported at the State Hospital, Ede in Nigeria revealed that over 13700 cases of hypertension, diabetes and some infections were reported between 2007 and 2014. Availability of data locally and internationally, showing enormous burden of kidney failure prompted the authors to determine the kidney failure risk behaviours and attitude of the healthy populace, taking the workers of Ede North Local Government Area of Osun State as a case study.

MATERIALS AND METHODS

This study adopted descriptive survey research design. The population for the study consisted of staff of Ede North Local Government Area of Osun State. The sample size was three hundred and thirty one (331) workers from all the eight sections in the local government secretariat. Multi stage sampling technique was used to select seventy percent (70%) of the local government workers from each of the sections (Table 1).

A questionnaire, Kidney Failure Risk Behaviours (KFRB) instrument, with nine items and two point response scale of *Yes* and *No* was developed by the authors and used. Nine items were developed to assess the risk behaviours of the workers towards kidney failure, four of these items were regarded as positive items (which shall enhance the risk of developing kidney failure by individuals) while the remaining five items are negative items (which if exhibited regularly, shall reduce the risk of developing kidney failure). Positive responses (*Yes*) to the positive risk behaviours implies that such

individuals giving positive responses are at higher risk of developing kidney failure through habitual exhibition of the behaviour while negative responses (*No*) put such individuals at lower risk of developing kidney failure. The case is reverse for negative risk behaviours where positive responses put the individuals at lower risk and negative responses at higher risk of developing kidney failure.

We ensured validity of the instrument by subjecting it to review by a nephrologist. The corrected version of the questionnaire was self-administered to forty (40) workers in Ede South Local Government Area of Osun state who were not part of the research sample. The Cronbach's alpha was used to test the internal consistency of the instrument which yielded a coefficient of 0.81 to estimate the reliability of the instrument.

The authors obtained an informed verbal consent from the respondents by duly informing them of the concepts and objectives of the research and soliciting for their consent to participate, cooperate and be sincere in their contributions. Questionnaire and guidelines concerning its completion were administered together to the respondents to ensure accurate responses. The research was conducted following the Declarations of Helsinki (21).

Data analysis

Questionnaires were collated, coded and analysed using descriptive statistic of frequency and percentages to describe the demographic characteristics of the respondent. Bar and pie charts were used to present the data relating to risk behaviours and attitude of the respondents to kidney failure.

RESULTS

Table 2 shows the distribution of respondents by age. The majority of the respondents were between the ages of 31 and 40 years. Out of the 331 respondents, 200 (60.4%) were males while 131 (39.6%) were females.

Figure 1 showed that the common kidney failure risk behaviors of the workers in Ede North Local Government Area of Osun State is the use of herbal remedies 284 (85.8%), lack of regular exercise 247 (74.6%), use of alcohol 239 (72.2%) and smoking cigarettes 134 (40.1%). Figure 2

shows that 183 (55.3%) were indifferent, 44 (13.3%) had positive attitude while 104 (31.4%) had negative attitude towards kidney failure. This shows that majority of the respondent were indifferent towards kidney failure.

DISCUSSION

This study showed that significant percentage of the respondents habitually exhibited risky behaviours that can lead to the development of obesity, use of herbal remedies, alcohol and cigarette smoking. Alcohol consumption and cigarette smoking have been documented as risky behaviours towards developing cardiovascular risk profile including worsening the conditions of hypertension, heart diseases and diabetes mellitus. Chronic effects of alcohol and cigarettes increase the risks of development of kidney failure.

As reported earlier, 74.6% of the respondents do not engage in regular exercise while 69.5% of them use drugs without prescription or indiscriminately. Engaging in regular exercise will reduce the incidence of obesity and its comorbidities. The indiscriminate use of drugs without prescriptions by most of the respondents also increases the risk of organ damage. Poor hygiene methods by the respondents puts the workers at high risk of developing chronic kidney diseases. Glomerulonephritis is one of the common risk factors for developing kidney failure. It can result from infection of any part of the body especially the throat, skin and urinary tract infection.

The outcome of the study showed that the population needs to imbibe attitudinal change towards healthy living that will prevent the development of chronic kidney diseases. There is a need to embark on continuous health education to improve knowledge, attitude and behavior of the population as appropriate.

The reflection of their attitude about their knowledge of kidney failure in their exhibitions of risk behaviours for kidney failure is a strong indication of the need for health advocacy on kidney failure to these groups of workers.

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Table 1: selection of seventy percent (70%) of local government workers for the research

S/N	Sections in Ede North Local Government (Department)	Number of workers	Number of workers selected (70%)
1.	Administrative and General Service	100	70
2.	Finance and Supply	97	68
3.	Social and Community Development	53	37
4.	Primary Health Care (PHC)	105	74
5.	Works and Transport	45	32
6.	Water and Environmental Sanitation	38	27
7.	Budget, Research, Planning and Statistic	10	7
8.	Town Planning and Land Services	23	16
	Total	471	331

Source: Administrative department, Ede north local government, Ede Osun state (October 2014).

Table 2: Socio-demographic characteristics of the respondents

	Frequency	Percent
Age		
Below 21years	10	3.0
21-25years	20	6.0
26-30years	31	9.4
31-35years	109	32.9
36-40years	91	27.5
41-45years	23	6.9
46-50years	27	8.2
51years and above	20	6.0
Total	331	100.0
Religion		
Islam	192	58.0
Christianity	130	39.3
Others	9	2.7
Total	331	100.0
Marital status		
Single	60	18.1
Married	192	58.0
Widow	44	13.3
Divorced	10	3.0
Separated	25	7.6
Total	331	100.0
Ethnicity		
Yoruba	317	95.8
Hausa	3	.9
Igbo	11	3.3
Total	331	100.0
Educational status		
Primary School Leaving Certificate	12	3.6
Junior Secondary School Certificate	23	6.9
Senior Secondary School Certificate	27	8.2
Ordinary National Diploma	46	13.9
Higher National Diploma	61	18.4
Bachelor Degree Certificate	118	35.6
Additional Professional Certificate	20	6.0
Master Degree Certificate	24	7.3

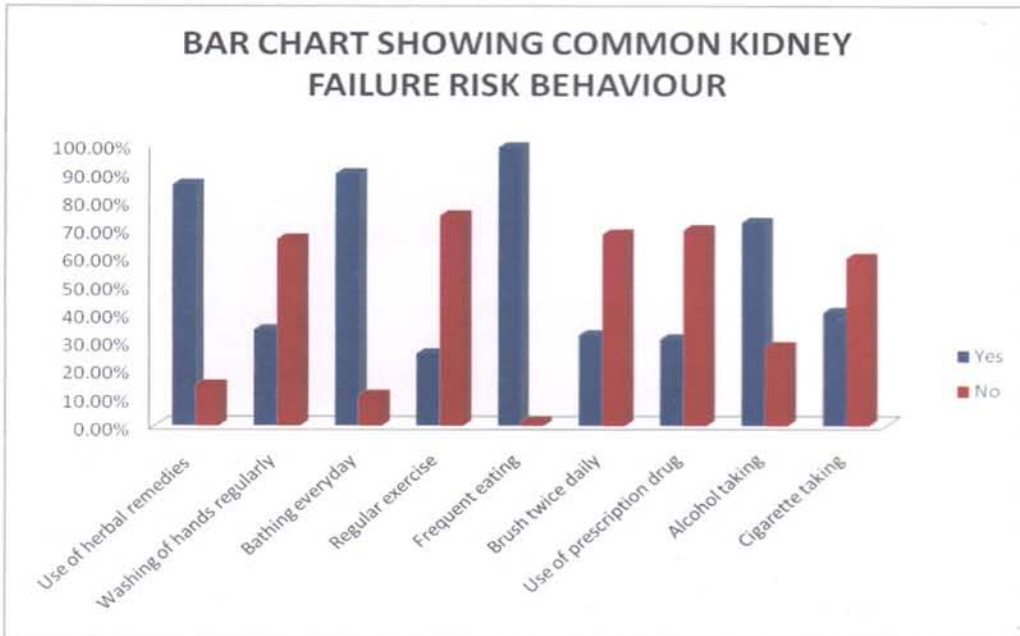


Fig 1: Bar chart of the common kidney failure risk behaviours exhibited by workers in Ede North Local Government area of Osun State

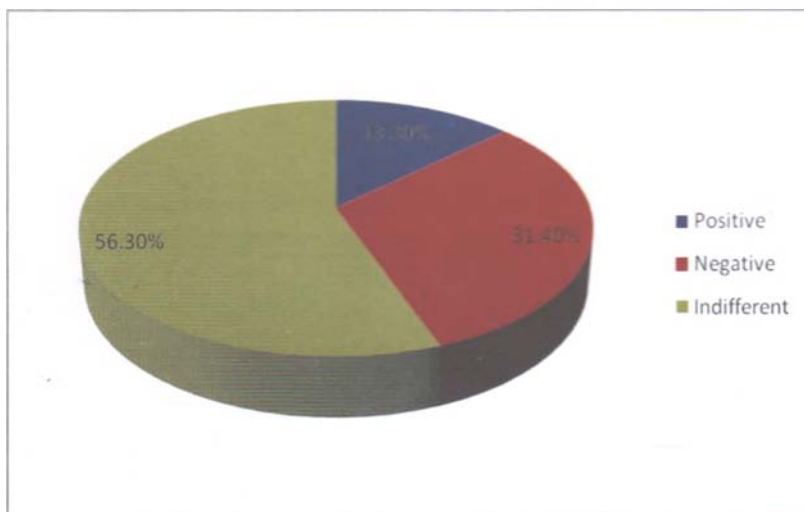


Fig. 2: Pie chart showing the attitude of workers in Ede North Local Government Area of Osun State towards kidney failure