

# Awareness of Kidney Disorders in Nigeria.

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## SUMMARY

This paper assesses the level of awareness of the generality of the populace towards kidney disease, in the Ogun State University Teaching Hospital and its environment. Questionnaires were administered to the administrative staff (excluding medical/nursing workers) of the Ogun State University teaching hospitals, bank workers, market women and artisans in its environment. Responses were analyzed by standard statistical methods. Out of 455 questionnaires administered, there were 415(91.2%) respondents. Eighty-eight (21.2%) were non-academic staff of the hospital, 123(29.6%) were market women, 106(25.5%) were artisans and 98(23.6%) were bank workers. Their ages ranged from 15 years to 54 years (mean 34.2±9.7years), with a sex ratio, (M/F) of 1:1 (192 males and 223 females). Majority of the interviewees, 273(65.8%) do not know the function of the kidneys. The use of local herbs, indiscriminate use of drug, skin lightening cream, jaundice and scarifications are also believed to be associated with kidney diseases in 300(72.3%), 270(65.1%), 140(33.7%) 263(63.4%) and 98(23.6%) of respondents respectively. Sixty-eight respondents (16.4%) do not know the common complaints associated with kidney diseases. One hundred and eighty-seven (45.1%) believed that kidney diseases are associated with urinary complaints while 99(23.9%), 56(13.5%) and 3(0.7%) believed that the common complaints associated with kidney diseases are swelling of the body, body weakness and swelling of the face respectively. This study demonstrated that there is a low awareness of the populace regarding the prevalence, causes and prevention of kidney diseases in the environment. There is need for introducing measures that will improve the awareness of the populace, aim at preventive measures such as pre-employment urinalysis screening and health education.

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## Introduction

Hundreds of thousands of patients around the world suffer from a kidney disease. Sooner or later, these patients would need a form of renal replacement therapy such as dialysis or renal transplantation. These procedures save lives but not without great costs, which are becoming a major issue of western countries because it accounts for a significant proportion of health expenditure. For the developing countries, it is impracticable to establish programs for regular renal replacement therapy for all chronic renal failure patients because of its prohibitive cost.

Epidemiological studies have shown that the incidence of acute and chronic renal diseases is higher in the developing countries than in the developed world [1]. These countries could not even ensure the basic health needs of their populace. Thus it is clear that for people with renal diseases living in developing countries, some form of prevention of renal failure is the only way to offer some hope for the future.

In the Ogun State University Teaching Hospital, the commonest non-infectious cause of medical admissions are congestive heart failure

178 (9.2%), cerebrovascular disease 169 (8.7%) and chronic renal failure 153 (7.9%), with case fatality rates of 16%, 50% and 55%<sup>2</sup> respectively; [tuberculosis is the commonest cause of medical admissions, accounting for 193 (10%) of medical admissions with a case fatality rate of 33%]. The seemingly high prevalence of chronic renal failure in this study was attributed to the high prevalence of glomerular diseases and poor control of hypertension in the study population [2]. In the study, diabetes mellitus accounted for 148 (7.6%) of the medical admissions.

In Nigeria, the commonest causes of chronic renal disease are glomerulonephritis, hypertension, diabetes mellitus and obstructive uropathy [3].

Prevention implies creating awareness, educating the populace and identifying early enough, those subjects who are at risk of developing a renal disease later in life. This study assesses the level of awareness of the generality of the populace towards kidney disease in the Ogun State University Teaching Hospital and its environment.

## Methodology

A structured questionnaire was administered to the administrative staff (excluding medical/nursing workers) of the Ogun State University Teaching Hospital, bank workers, market women and artisans in its environment. Information was obtained on educational background, age, sex, occupation and religion. Information was also requested for on the function of the kidneys, number of kidneys present in an individual, how common kidney diseases are in the environment and the common complaints associated with kidney diseases

generally. Other questions asked include the age group usually affected, causes of kidney diseases, modality of treatment, frequency of use of local herbs and awareness of dialysis / renal transplantation. Subjects were selected randomly. Data was expressed as mean  $\pm$  SD. Student's t-test was used to assess the difference between the various subject groups. P-values < 0.05 were considered significant.

## Results

A total of 455 questionnaires were administered, out of which there were 415 (91.2%) respondents. Eighty-eight (21.2%) were administrative staff (non academic) of the hospital (excluding the nurses/medical workers); 123 (29.6%) were market women, 106 (25.5%) were artisans and 98 (23.6%) were bank workers. Their ages ranged from 15 years to 54 years (mean  $34.2 \pm 9.7$  years), with a sex ratio, (M/F) of 1:1 (192 males and 223 females). Table 1 shows the distribution of the population according to age.

The highest educational level attained was the primary school in 129 (31.1%) of the respondents, while 286(68.9%) were considered to have attended higher institutions. There is a higher proportion of Christians in both groups – 110 (85.3%) and 167 (58.4%) respectively and a statistically significant higher proportion of Christians among the literate population ( $p < 0.000004$ ). Majority of the interviewees, 273 (65.8%) do not know the function of the kidneys. Forty-one (9.9%) respondents do not have any idea of the number of kidneys in an individual, while 76 (18.3%) and 298 (71.8%) believed that an individual has 'one' and 'two' kidneys respectively.

Table 1. The distribution of the population according to age.

AGE (YEARS)	NUMBER	PERCENTAGE
< 19	12	2.9
20-29	82	19.8
30-39	207	49.8
40-49	67	14.9
50-59	36	8.7
>60	16	3.9
TOTAL	415	100

**Table 2. The beliefs of the population as regards the causes of kidney diseases.**

CAUSATIVE DISEASE	NUMBER	PERCENTAGE
Urinary Infection	128	30.8
Diabetes Mellitus	96	23.1
Hypertension	66	15.9
Malaria	27	6.5
Sickle Cell Disease	16	3.9
Skin/Throat Infections	8	1.9
I do not know	74	17.8

In assessing how common kidney diseases (KD) were, 157 (37.8%) respondents believed that they are rare, while 91(21.9%) do not have any idea. One hundred and twenty-six (30.4%) and 41 (9.9%) believed that KD are 'common', and 'very common' respectively. Seventy-nine (19%) interviewees do not know the common age group(s) that KD affect, while 210 (50.6%), 67 (16.1%), 44 (10.6%), 8 (1.9%) and 7 (1.7%) believed that the adults, the elderly, the adolescent, children and babies are affected in this proportion respectively. Table 2 shows the responses of the interviewees as regards the causes of KD.

The use of local herbs, indiscriminate use of drug, skin lightening cream, jaundice and scarifications are also believed to be associated with KD in 300 (72.3%), 270 (65.1%), 140 (33.7%) 263 (63.4%) and 98(23.6%) of respondents respectively. In the study population, 130 (31.3%) can not remember ever using local herbs, while the proportion that use herbs only 'when sick', 'rarely use', 'regularly use' and 'routinely use' herbs are 100 (24.1%), 100 (24.1%), 42 (10.1%) and 29 (6.9%) respectively. Fourteen (3.4%) use herbs for other reasons.

Sixty-eight respondents (16.4%) do not know the common complaints associated with KD. One hundred and eighty-seven (45.1%) believed that kidney diseases are associated with urinary complaints while 99 (23.9%), 56 (13.5%) and 3 (0.7%) believed that the common complaints associated with KD are swelling of

the body, body weakness and swelling of the face respectively. One hundred and fifty-one (46.5%) out of 325 salary earners in the study population attributed urinary complaints to kidney diseases as against 26 (28.9%) of 90 self-employed respondents ( $p < 0.000005$ ).

One hundred and seventy-one (41.2%) interviewees responded that kidney diseases are difficult to treat although 118 (28.4%) and 73 (17.6%) assume that KD are 'curable' and 'incurable' respectively. However, fifty-three (12.8%) believes that KD are easy to treat. It was the view of 273 (65.8%) respondents that KD are best treated in teaching hospitals while 49(11.8%) do not know who best handles the treatment. Thirty-four (8.2%), 24 (5.8%), 10 (2.4%) and 25 (6%) opine that private hospitals, state hospitals, traditional healer and spiritual leaders best treat KD respectively.

Out of the 415 respondents, 295 (71.1%), 215 (51.8%), 136 (32.8%) and 271 (65.3%) have heard about dialysis, hemodialysis, peritoneal dialysis and renal transplantation at one time or another and the awareness is more among the literate group.

Only 8 (2.5%) out of the 324 Christians attributed KD to God compared to 6 (6.6%) Moslems out of 91, 29 (8.9%) and 4 (4.4%) Christians and Moslems respectively attributed KD to the devil. Neither religion nor occupational stratification have any significant influence on the choice of who best treat KD in the study population; ( $X^2=5.77$   $df=5$   $p>0.05$ ) and ( $X^2=10.68$   $df=5$   $p>0.005$ ) respectively.

There is a greater tendency for Moslems to use herbs than Christians ( $X^2=39.4$   $df=5$ ,  $p<0.0000002$ ). The salary earners are more informed of dialysis and renal transportation than the self-employed ( $X^2=28$ ,  $p<0.0000001$ ).

## Discussion

A majority of the study population is in their fourth decade of life, the productive sector of the society. Most 273 (65.8%) do not know the function of the kidneys and still believe that kidney diseases are rare in the environment. Significantly, 74(17.8%) of respondents do not know the likely causes of kidney diseases. Extremely few respondents, 3(0.7%) could associate a swollen face to kidney diseases.

With chronic renal failure being the third most prevalent cause of medical admissions in the environment (and a high case fatality rate of 55%) [2] there is need for increased awareness of the populace, aim at preventive measures. Societal practices that seem harmless on the surface such as scarifications, tattooing, skin bleaching, use of local herbs and indiscriminate drug use should be discouraged. Pre-employment urinalysis screening and health education will go a long way in educating, increasing awareness and preventing the deleterious complications of uncontrolled hypertension, diabetes mellitus and glomerulonephritis.

It has been observed that chronic renal failure patients are referred late to nephrologists in Nigeria [4]. It is recommended that chronic renal failure patients should be referred early to teaching hospitals when the serum creatinine is 1.5mg% (132.6Umol/L) in women and 2.0mg% (176.8Umol/L) in men [5] or generally 3mg% [6].

This study has demonstrated that there is a low awareness of the populace regarding the prevalence, causes and prevention of kidney diseases in the environment. In 1992, a project

for screening for kidney diseases and sensitization of the populace was initiated in Bolivia, a developing country under the auspices of the Renal Sister Center Programme of the International Society of Nephrology [1]. Urinary abnormalities were detected in 4261 out of 14,082(30.3%) subjects at the first screening. This highlights the need for educational and preventional programs for renal diseases in developing countries.

There is a need to embark on a massive health education campaign and screening of the study populace for early detection of kidney diseases.

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