

# HEALTH STATUS OF UNIVERSITY OF CALABAR WORKERS

ETETE J. PETERS, ROWLAND A. ESIN and KOBINA K. IMANANAGHA

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## ABSTRACT

A cross sectional survey was carried out among University of Calabar workers to ascertain their health status. One thousand, five hundred workers representing about 50% of the entire staff population were randomly selected for the survey. The workers were interviewed individually using a prepared questionnaire and this was followed by a comprehensive physical examination conducted by the investigators. Information on each worker was confidentially recorded in a protocol sheet prepared for each worker.

The study revealed a high prevalence of both communicable and non-communicable diseases among the workers. Fifty (3.3%) persons were found to be hypertensive. Of these, 34 were diagnosed for the first time and were not receiving any antihypertensive medication. Similarly, 18.3% of the workers surveyed had infectious diseases, 3% has various eye diseases, 2% were asthmatic while 1.3% were diabetic. These findings emphasize the need for more studies among workers in urban areas and the call for improved screening facilities for the early detection and treatment of diseases.

**Key Words:** HEALTH, UNIVERSITY, WORKERS

## INTRODUCTION

The health status of urban workers has come under focus of recent (Bunker, et al, 1992; Lisk, 1994, Astagneasu et. al, 1992). In Sub-Saharan Africa, the assessment of the health status of urban workers has become quite imperative as a result of the high prevalence of chronic conditions such as hypertension. (Cooper et al 1998) The economic depression in Nigeria has forced many workers, particularly those in government establishments to pay less attention to their state of health. In the absence of affordable medical services for workers, regular medical examination is regarded as an extra burden on the meager income. Thus, apart from the mandatory pre-employment medical examination, many workers may not avail themselves of regular medical examination. In Nigeria, as elsewhere, hypertension, obesity and other non-communicable diseases constitute both relative risk and absolute risk of a cardiovascular event or death. (Akinkugbe 1997). Some of these tragedies could have been prevented if people are exposed to regular medical examination or screening.

The aim of this study was therefore to ascertain the health status of university of Calabar workers with a view to identifying potential treatable disease conditions and also enlighten the university community on the need to have regular medical examination.

## SUBJECT AND METHODS

This study was conducted in 1998 at the University of Calabar, Nigeria. The survey involved one thousand, five hundred staff representing about 50% of the entire staff population at the University and includes both senior (academic and non-academic) and junior staff. The senior staff were 645 (43%) made up of 443 males and 202 females while the junior staff were 855 (57%), consisting 502 males and 353 females.

The study received approval of the University of Calabar Authority, and those who took part in the study did so voluntarily, after assuring strict confidentiality of the exercise.

## PROCEDURE

Each subject was taken through a prepared questionnaire by the investigators. The questionnaire included questions on age, sex, occupation, duration of employment at the University, past medical history, present medical history and family/social history. The subjects were comfortably seated during the interview and after allowing for sufficient period of relaxation, physical examination was carried out on each subject. The blood pressure was first measured in a sitting position

using a mercury sphygmomanometer. Korotkoff phase 1 and phase 5 were used to determine systolic blood pressure (SBP) and diastolic blood pressure (DBP) respectively, accordingly to WHO specification to the nearest 2mmHg. (WHO 1989). This was followed by a comprehensive physical examination of the various systems, after ensuring adequate privacy. The height in metres and weight in Kilogram were measured using a height scale and bathroom weighing scale respectively. Body mass index (BMI) was calculated using quetelets index i. e. weight (Kg)/ height (Meters)<sup>2</sup>.

Information on each staff was carefully documented on a protocol sheet prepared for each staff. The data obtained was checked for consistency and accuracy before analysis using EPI infor version 5 computer software.

## RESULTS

Of the 1500 subjects surveyed, 945 (63%) were male while 555 (37%) were female. The general characteristic of the study group is as shown in table 1. The mean age of the male subjects was  $35.56 \pm 2.46$  years while that of the females was  $31.64 \pm 2.46$  years. Majority of the subjects were aged between 31 – 40 years. The mean BMI for men was  $20.74 \pm 3.2$  Kg/m<sup>2</sup> while females had a slight higher BMI of  $21.08 \pm 3.6$  Kg/M<sup>2</sup>. This difference was however not statistically significant.

Although 115 (7%) subjects smoked cigarettes, they were generally light smokers taking an average of 1 – 2 sticks of cigarettes daily. Similarly, alcohol and coffee consumption was found in 33% and 42% of the subjects respectively.

Table 11 shows the past medical and family history of the study group. Eye disorders such as refractive errors, conjunctivitis and minor surgical operations such as heriorrathy, appendicectomy topped the list of past health problems of the workers.

Communicable diseases such as sexually transmitted diseases and typhoid fever accounted for 4.7% of the past health problems respectively while non-communicable diseases such as diabetes mellitus and hypertension made up only 1.3% and 3.3% of the past health conditions respectively. The past medical history of subjects referred to above were medically confirmed cases who had received treatments in the past.

The age and sex distribution of the disease conditions of the study group are illustrated in Table 11. In both males and females, the BMI was highest in the age group of 51 – 60 years. Using a BMI of 27Kg/m<sup>2</sup> and above as obesity (Astagneau et al 1992), only 29 (2%) subjects were obese. The mean systolic blood pressure of  $153.24 \pm 12.4$  mmHg was recorded for male workers. The highest blood pressure recording was in the age range of 60 years and above. Similarly, mean systolic blood pressure of  $135.14 \pm 28.14$  mmHg was recorded in female

workers and the highest recording was in the age range of 51 – 60 years. In the entire study, using WHO criteria of a blood pressure of 160/95mmHg and above as hypertension, only (3.3%) subjects; 32 males and 18 females were found to be hypertensive. In both sexes blood pressure levels increased with age and similar observations were found in other diseases such as diabetes mellitus and eye disorders. A higher number (175) of the subjects had a family history of hypertension while only 16 (32%) of those hypertensive were aware of their condition and were receiving antihypertensive treatment.

Infectious diseases remained the commonest health problems among the workers accounting for 18.3% of cases in both males and females. Menstrual disorders

TABLE 1  
AGE AND SEX DISTRIBUTION OF DISEASES OF  
THE STUDY GROUP

PARAMETERS	MALE n/%	FEMALE n/%
Sex	945 (63)	555 (37)
Mean Height	1.57 ± 0.35	1.59 ± 0.42
Mean Weight	45.8 ± 3.20	51.2 ± 3.82
Mean Age	35.56 ± 2.50	31.64 ± 2.46
Mean BMI	20.74 ± 3.2	1.08 ± 3.6
Age Range		
20 – 30	305 (20.3)	185 (12.3)
31 – 40	460 (30.7)	275 (18.3)
41 – 50	130 (8.6)	80 (4.3)
51 – 60	40 (2.7)	15 (1)
60	10 (0.6)	-
Official Status		
(A) Senior Staff		
(i) Academic	443 (29.5)	202 (13.4)
(ii) non-Academic	90 (6)	25 (1.6)
(B) Junior Staff	353 (23.5)	177 (11.8)
Marital Status		
Married	540 (36)	280 (18.7)
Single	358 (23.9)	182 (12.1)
Separated	47 (3.1)	93 (6.3)
Social Habits		
Cigarette Smoking	105	10 (0.6)
Alcohol Consumption	420 (28)	80 (5.3)
Coffee Consumption	425 (28.3)	200 (13.3)

such as dysmenorrhoea were frequently seen in women aged between 20 – 30 years, 673 (44.8) male and 291 (19.4) females had no detectable health problems during the survey.

## DISCUSSION

This study has demonstrated that University of Calabar workers are also prone to various health problems of urban workers as documented in other studies. (Cooper et al 1997). Although enormous challenges persists in the control of infectious diseases in Nigeria in particular, and Africa in general, non-communicable diseases are also important threats to the health of adults (Feachem et al 1991)

This is corroborated by studies in other countries which have shown a higher prevalence of non-communicable diseases among urban than rural dwellers or urban poor (Cooper et al 1997, Seedat & Hackland 1992).

It is a known fact that urbanized people in Africa are still vulnerable to not only diseases of poverty and infection but are also subject to social and chronic diseases (Watts & Siziya, 1998). It is noteworthy that economic and social factors faced by these workers may predispose them to some of the disease conditions.

3.3% of the workers surveyed had hypertension. This figure is rather low when compared with results from surveys of urban workers at Ibadan and Harare which showed a prevalence rate of 17% and 26 respectively (Cooper et al 1998).

Similarly, a higher prevalence rate of 22.4% was obtained in a survey in Sierra Leone. (Williams & Lisk 1998). The lowest rate in this study may be due to the small sample of subjects surveyed and their younger age. However, there was an increase in the mean blood pressure of workers with advancing age. This is similar to results obtained from other studies in South Western Nigeria, Sierra Leone and South Africa. (Seed at Hackland 1992, Williams & Lisk 1998, Kaufman et al 1996).

The mean body mass index (BMI) for both females and male workers were normal. The relative leanness of these workers means that the contribution of obesity to high blood pressure is quite minimal as documented in other studies in Africa. (M'buyamba – Kabangu et al 1986). A number of studies have shown hypertension and its complications to be an important cause of hospital admissions, morbidity and mortality especially as the epidemics of infectious disease are increasingly being brought under control. (M'buyamba – Kabangu et al 1987). It is therefore prudent to prevent the development of these complications by early and proper management of hypertension. This survey showed that only 16(32%) of the hypertensive subjects were receiving antihypertensive medication.

Furthermore, there was an increase prevalence of other non-communicable diseases such as asthma, diabetes mellitus and eye disorders among the workers surveyed. This is in agreement with results of other studies on urban workers (Williams & Lisk 1998, M'buyamba – Kabangu et al 1987). These studies highlight the need for regular health screening exercise to be conducted for various workers in other establishments.

Communicable diseases were also documented among 19.3% of the workers surveyed. This may be due to the fact that most people in Africa are still

TABLE II  
PAST MEDICAL AND FAMILY HISTORY OF THE GROUP

S/NO.	DISEASE CONDITION	PAST MEDICAL HISTORY n/%	FAMILY HISTORY n/%
1	Sexually transmitted diseases (excluding HIV/AIDS)	70 (4.7)	-
2.	Eye disorders	160 (10.7)	150 (10)
3.	Diabetes	20 (1.3)	75 (75)
4.	bronchial Asthma	40 (2.7)	50 (3.7)
5.	Hypertension	50 (3.3)	175 (11.7)
6.	Minor Surgical Operations	120	-
7.	Typhoid Fever	40 (2.7)	-
8.	Hemorrhoids	50 (3)	-
9.	Allergic Reaction	60 (4)	-
10.	Stroke	-	10 (0.6)
11.	Rheumatic Diseases	45 (3)	10 (6.7)
12.	Others	75 (5)	-

vulnerable to diseases of poverty and infection. (Watts & Siziya 1998).

The social habits of the workers were also similar to results obtained in previous studies about urban workers ( M'buyamba – Kabangu et al 1986, Kaufman et al 1996). A few of the subjects surveyed, 7% smoked cigarettes. However, they are light smokers consuming 1-5 cigarettes daily. On the other hand, there was a high consumption of coffee and alcohol among other workers, and this also corroborates with results of other studies (Bunker et al 1992, WHO 1989).

## CONCLUSION

In conclusion, this study has demonstrated various problems among University of Calabar workers, and is similar to findings in other urban workers. Further studies among other urban workers are needed to obtain a true picture of the various problems associated with this group of people.

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TABLE III  
AGE AND SEX DISTRIBUTION OF DISEASES OF THE STUDY GROUP

AGE RANGE (YRS) MALE	NOS.	BMI	MEAN SBP	MEAN DBD	HYPERT %	D/m n/%	ASTHMA	EYE Dis.	INFECT DISEASE	MENSTRUAL DISORDER	STD%	OTHERS	NAD
20-30	305	20.38±62.52	121.±2±19.25	74.18±13.40	0	-	3	1	38	-	7	12	244
31-40	470	20.76±3.60	125.76±18.42	77.64±14.90	12	2	6	1	67	-	-	20	362
41-50	135	21.14±3.60	136.±18.40	88.74±14.90	14	2	5	8	33	-	-	9	64
51-60	25	20.94±2.92	142.46±11.20	90.30±12.14	2	5	1	11	2	-	-	4	-
60	10	20.45±2.84	153.24±12.4	94.12±14.60	4	-	-	2	-	-	-	3	3
TOTAL	945				32	9	14	23	140	-	7	46	673
<b>FEMALE</b>													
20-30	185	20.86±2.74	115.12±15.02	72.34±10.43	-	1	5	-	55	11	3	17	93
31-40	275	21.24±3.42	118.38±16.20	74.12±11.34	3	1	4	1	59	4	-	22	181
41-50	80	21.60±3.88	123.42±21.4	81.43±13.74	9	7	4	14	21	5	-	3	17
51-60	15	21.42±3.52	135.14±28.14	91.35±14.62	6	2	3	2	-	-	-	2	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	655				18	11	16	27	135	20	3	44	291

D/M = DIABETES MELLITUS  
 STD = SEXUALLY TRANSMITTED DISEASE  
 NAD = NO ABNORMALITY DETECTED

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