ASSESSMENT OF THE LEVEL OF HEALTH CHECK AWARENESS AMONG STAFF OF DELTA STATE UNIVERSITY, ABRAKA, NIGERIA

David U. Adje*[1] John E. Arute[1], Felicia O. Williams[2], Ejiro E. Akpovwovwo[3], and Chukwuemeka E. Kaine[1]

[1]Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, Delta State University Abraka, Nigeria.
[2]Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmaceutical Sciences University of Ilorin, Ilorin. Kwara State. Nigeria.
[3]Drug Information and Pharmacovigilance center, Department of Pharmacy, Delta State University Teaching Hospital, Oghara, Delta State, Nigeria.

*Corresponding Author: David U. Adje

Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, Delta State University Abraka, Nigeria.

ABSTRACT

Background: Early detection of diseases through health checks could help reduce complications and mortality from chronic diseases. Adopting preventive health behavior is essential for maintaining a productive workforce. **Objective:** To access the level of awareness and health check habit among staff of Delta State University and to explore socio-demographic variables affecting health checks. **Method:** Pretested questionnaires were administered to selected staff from various faculties of the university. Responses were expressed as frequency and percentage. Chi Square test was used to explore association between health check behavior and independent variables. A P value of 0.05 was considered significant. **Result:** The level of awareness about health checks was high. Health care professionals were the principal source of information about health checks. Blood pressure check was the most predominant health check irrespective of gender. Only 11% of males and 15% of females had ever done a PSA test or a Pap smear test respectively. More than one third of females claim to do regular breast self – examination. More than 90% of females had never done mammogram and only 15% of females had ever had HPV vaccination. Age, gender, educational level, discipline and cadre were found not to be significantly associated with level of health checks awareness. **Conclusion:** Although there was a high level of awareness of health check among the staff of Delta State University, the actual level of practice was very low.

KEYWORDS: Health checks, Annual medical checkup, Delta State University, Nigeria.

INTRODUCTION

Health check can be defined as an examination of current state of health, often carried out by health care providers with the aim of identifying signs, symptoms, or risk factors for disease that were previously unrecognized.[1] The main goals of a periodic medical examination are to detect treatable asymptomatic diseases or risk factors and to provide reassurance when there are no abnormalities.[2] General health checks have the potential to reduce morbidity and mortality and save health care cost.[3-4] Preventive health check is a highly cost effective measure that offers benefits to individuals, employers and the government. The range of preventable diseases that could be addressed by timely health checks include breast, cervical and prostate cancers, osteoporosis, hypertension, cardiovascular diseases and diabetes.[5] A study assessing prevalence of undiagnosed diabetes among senior staff of the university found a prevalence rate of 10% indicating that university staff could benefit from periodic health checks.[6] It is important to assess the extent of preventive health checks among members of the university community so as to increase the level of awareness and ensure a healthier work force. The objectives of this study were to determine the knowledge of health check among staff of Delta State University, to access the level of health check awareness among staff of the University, to explore the socio-demographic factors affecting the level of health check awareness, and to identify attitude of various cadre of staff of Delta State University towards health checks.

Study Setting

This study was conducted in Delta State University Abraka Campus. Abraka Campus has three sites. Site I consists of the departments of works and Projects; Site II consist of annexes of the faculties of Science and Arts. Site III consist of Faculties of Pharmacy, Basic Medical Science, Education, Arts, Social Sciences and Science,

including the administrative departments. Delta State University is located in Delta Central Senatorial District and is occupied predominantly by the Urhobo, the Enuani-Igbos (Aniocha/Oshimili), Ukwuani/Ndokwa and Ika ethnic nationalities which are collectively referred to as Anioma people, Isoko, Itsekiri and Ezon ethnic nations. The staff of the university are mostly civil servants.

Study Design
The study was cross-sectional survey design. Questionnaires were administered to staff of faculty of Pharmacy, Basic medical sciences, Education, Arts, Social Sciences and Sciences including the departments of works, projects and administration of Delta State University.

Study Population
The study population consisted of academic, senior non-academic and junior non-academic staff of the university and involved faculties of Social-Sciences, Basic Medical Sciences, Pharmacy and Education including the departments of works, projects and administration in a randomized manner.

Sample Size
The total estimated staff strength of the university was 2214, this consisted of about 683 academic staff, 610 senior non-academic and 921 junior non-academic staff, and desired population sample size was obtained using Taro Yemen's formula.[7-8]

$$n = \frac{N}{(1+Ne^2)}$$

Where n = desired sample size,
N = population size,
e = maximum acceptable margin of error (0.05)
1 = Theoretical constant
$$n = \frac{2214}{1 + 2214\,(0.05)^2}$$

$$= \frac{2214}{1 + 6.535}$$

$$= \frac{2214}{7.535}$$
= 293.83
n = Approx. 300

Study Tool
The study tool was a self-administered questionnaire adapted from Akubue (2005)[9] Section 1 contains demographic information of the participants. Section 2 contains age and gender specific questions about the knowledge of health checks, frequency of screening and attitude to health checks. Responses were on a dichotomous scale.

Data Collection
Pre tested questionnaires were distributed to a convenient sample of staff in the faculties of Pharmacy, Social-Sciences, Education, Arts, Basic Medical sciences as well as the departments of works and projects and administration. The questionnaires were handed over to the individuals after they had signed a written informed consent form. The questionnaire were read and interpreted to individuals who were not literate or had difficulties understanding any of the questions in the questionnaire. The anonymously filled questionnaires were collected on the same day.

Data Analysis
The data were entered into Microsoft excel spread sheet and crosschecked for accuracy. All sorted questionnaires were coded and fed into SPSS version 20[10] for descriptive and inferential statistics. Responses were expressed as frequency and percentage. Chi Square test was used to explore association between health check behavior and independent variables. A P value of 0.05 was considered significant.

RESULT
Demographic Characteristics of Staff
A total of 300 questionnaires were distributed but 208 retrieved given a response rate of 69%. There were 113 (54.3%) males and 95(45.7%) females. The predominant age group was 40-49 years for both male and female respondents. Almost ½ (41.8%) became aware of health check through medical professionals. Details of the socio-demographics characteristics are shown in table 1.

Table 1: Socio-demographic characteristics of respondents.

Characteristics	No (%) N=208
Place of domicile	
Abraka	170(81.7)
Benin	2(1.0)
Warri	14(6.7)
Obiaruku	21(10.1)
Sapele	1(0.50)
Gender	
Male	113(54.3)
Female	95(45.7)
Ethnicity	
Urhobo	109(52.4)
Isoko	15(7.2)
Ijaw	26(12.5)
Ukwuani	23(11.1)
Others	35(16.8)
Cadre of staff	
Academic staff	65(31.3)
Senior non-Academic staff	76(36.5)
Junior non-Academic staff	67(32.2)
Disciplines	
Medicine, Pharmacy, Nursing, Health science.	21(10.1)
Social science	56(26.9)
Physical science	54(26.0)
Law and Art.	17(8.2)
Engineering and Mathematics	11(5.3)
Others	42(20.2)
Educational Level	
Ph.D	29(13.9)
Masters Degree	46(22.1)
Bachelor's Degree	75(36.1)
PGD	11(5.3)
Diploma	3(1.4)
WAEC	28(13.5)
Primary school certificate	16(7.7)
Source of information about health checks	
Family members	39(18.8)
Friends	17 (8.2)
Colleagues.	25 (12.0)
Medical professionals.	87(41.8)
Mass media.	33(15.9)
Self.	7(3.4)

Proportion of males that do health check

More than half of the male 64(56.6%) check blood pressure regularly. Most 85 (75.2%) knew their genotype. About half 58 (51.3%) claimed to exercise regularly. Only 13 (11.5%) had ever done a PSA check, (Table 2).

Table 2: Proportion of males that do regular health checks.

Item	Frequency (%)*N=113
Annual medical check up	45 (39.8)
B. P. check at least once every six months	64 (56.6)
Liver function test	25 (22.1)
Kidney function test	26 (23.0)
Blood cholesterol	35 (31.0)
Cataract test	15 (13.3)
Eye pressure test	27 (23.9)
Know Genotype?	85 (75.2)
Exercise 30 minutes 3 times a week?	58(51.3)
Prostate antigen test	13(11.5)
Hemorrhoids	10 (8.8)
Chest x-ray recently?	78(69.0)
Testes check recently	22 (19.5)

*Proportion with positive response to questions about regular health checks.

Proportion of females that do regular checks

About one third, 31 (32.6%) of the female respondents claimed to do regularly annual medical check. More than half 52 (54.7%) check BP regularly, nearly half 40(42.1%) do breast self-examination but only 37(38.9%) do so regularly. The proportion that do mammogram and pap smear test is very low 3(3.2%) and 10(10.5%) respectively, Table 3.

Table 4: Proportion of females that do regular health checks.

Item	Frequency (%)* N=95
B.P check at least once every six months	52 (54.7)
Liver Function Test	7 (7.4)
Kidney Function Test	5 (5.3)
Blood Cholesterol Test	17(23.8)
Occult Blood Test In Stool	9(9.5)
Test For Glaucoma	11(11.6)
Test For Cataract	9 (9.5)
Eye Pressure Test	19 (20.0)
Do You Know Your Blood Genotype	56(58.9)
Do you exercise 30 min at least 3 times a week	41 (43.2)
Do you check your breast regularly?	37 (38.9)
Do you check your breast for lumps?	40 (42.1)
Did you check your breast for lumps last month?	30 (13.7)
Have You Ever Done A Breast Mammogram	5 (5.3)
Did You Do A Breast Mammogram Last Year?	3 (3.2)
Have you ever checked your Fasting Blood Sugar level?	53 (55.8)
Have You Ever Done Pap Smear	15 (15.8)

Test?	
Did You Do Pap Smear Test Last Year?	10 (10.5)
Do you know you blood group?	36 (37.9)
Have You Had 3 Shot Of HPV Vaccine To Help Protect Against Cervical Cancer?	15 (15.8)
Do you check your BMI (weight / height)?	34 (35.8)

*Proportion with positive response to questions about regular health checks

Practice of annual medical checkup

Even though more males 45(59.2%) than females 31(40.8%) do regular annual medical checkups, only age and educational level were significantly associated with the practice of annual medical checkup.

Table 5: Practice of annual medical checkup.

Item	Frequency* (%)	X^2	P value
Age Below 40 years 40 – 49 years Above 50 years	26(34.2) 20(26.3) 30(39.5)	5.655	0.059
Gender Male Female	45(59.2) 31(40.8)	1.151	0.283
Education level WAEC PGD Bachelor's Degree Master's Degree Ph.D. Primary school certificate Diploma	7(9.2) 8(10.5) 28(36.8) 19(25.0) 7(9.2) 7(9.2) 0(0)	12.301	0.056
Cadre Of Staff Academic Staff Senior administrative staff Junior administrative staff	22(28.9) 31(40.8) 23(30.3)	0.937	0.626
Discipline Medicine, Pharmacy, Nursing, Health Science. Social Science Education Physical Science Law And Art Engineering And Mathematics Others	11(14.5) 19(25.0) 25(32.9) 4(5.3) 2(2.6) 1(1.3) 14(18.4)	9.175	0.164

*Proportion of respondents that do regular annual medical checkup

DISCUSSION

The level of awareness of health checks was quite high among the population surveyed. This may be attributed to the fact that respondents were university staff and had access to information through the mass media, print media and internet. Similar level of awareness was observed in studies conducted in Benin City and Ibadan, Nigeria which showed a 65% and 71% cervical cancer screening awareness level respectively.[11-12]

For most of the respondents, medical professionals were the most prominent source of information about health checks. Health professionals were also the principal source of information about health checks in similar studies carried out in Nigeria, Kenya and other countries.[13-14] This is understandable as many persons in developing countries undergoe health check only when they are sick or when they visit the hospital.

The most predominant check up by both males and females was blood pressure measurement, followed by fasting blood sugar test. This is similar to findings from work done in Japan.[15] Respondents health check habit was poor for eye checkup and for liver and Kidney function tests There is a need to increase level of awareness about these tests among staff of the university irrespective of gender.

Age group prevalence of regular health checks was highest in the above 50 years age group followed by below 40 years group. As persons age they become more susceptible to multiple chronic disease conditions. It is therefore not surprising that awareness and involvement in health checks is more in the older age brackets.

CONCLUSION

This study showed a high level of awareness of health check among the staff of Delta State University. However, the actual practice of health check is very low among staff of the university. Also, the knowledge of various types of health check is low among the respondents. Age, Gender, Educational status, Discipline and Cadre were not found to significantly affect the level of health check awareness.

RECOMMENDATION

This study was stimulated by the increased incidence of deaths among apparently healthy staff of the university. Therefore, efforts should be made by the university administration to initiate preventive health programs , medical symposia and regular health checks among members of the university community in order to increase productivity of the university workforce.

REFERENCES

1. Krogsboll, Q T, Jorgensen K J, Larsen C G, Gotzsche P C General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis _BMJ,_ 2012; 345: e7191.

2. Nakanishi, N., Tatan, K., Fujiwara, H. Do Preventive health services reduce eventual demand for medical care? _Soc. Sci. Med_, 1996; 43(6): 999-1005.

3. Shinsho, F. Analysis on the relationship between use of health check-ups and medical care by elderly patients. A study on urban cities with high health check-up rates. Nippon Koshu Eisei Zasshi, 2001; 48(4): 314-323.

4. Duzan K (2010). The Benefits of Health Screening. Available at http://www.ettow/livingstrong.com. Accessed 25 June 2015.

5. Halpin H A , Morales-Suárez-Varela M M , Martin-Moreno J M Chronic disease prevention and the new public health. Public Health Reviews, 2010; 32(1): 120-154.

6. Adje U D, Arute J. Aghoja C O , James M Screening for Diabetes Mellitus and Its risk factors among senior staff of Delta State University, Abraka. Afri. J. Trop.Med. and Biomed. Res., 2013; 2(1): 13-21.

7. Taro Y. Statistics: An Introductory Analysis. 2nd Ed. New York, Harper and Row, 1967.

8. Kasinlevicius V, Sapoka V, Filipaviciute R Sample size calculation in epidemiological studies. Gerontologija, 2006; 7: 225-231.

9. Akubue P. I. Health check and health promotion-_Your Personal Guide to Long Life_ – Snap Ltd Enugu, 2005.

10. IBM SPSS Statistical package for social sciences version 20. IBM SPSS INC, Chicago, Illinois, USA.

11. Gharoro, E. P., Ikeanyi, E. N. An appraisal of the level of awareness and utilization of the Pap smear as a cervical cancer screening test among female health workers in a tertiary health institution. Int. J. Gynecol. Cancer, 2006; 16(3): 1063-68.

12. Ayinde OA, Omigbodun AO, Ilesanmi A O Awareness of cervical cancer, Papanicolaou's smear and it's utilisation among female undergraduates in Ibadan. _Afr. J. Repro. Health,_ 2004; 8: 68-80.

13. Ezem, B. U. Awareness and uptake of cervical cancer screening in Owerri, South-Eastern Nigeria. Ann. Afr. Med, 2007; 6: 94-98.

14. Ahluwalia JS, Gibson CA, Kenney RE, Wallace DD, Resnicow K. Smoking as a vital sign. _J. Gen. Intern. Med,_ 1999; 14(7): 402-408.

15. Nakagawa, Y., Takabayashi H, Takahasi S, Tatara K, The relationship between stress and health indicators in an urban population from a study of subjects selected by sex and age groups who underwent health check-ups in S city in Osaka prefecture. _Nihon Eiseigaku Zasshi,_ 1998; 53(2): 407-419.