

# Assessment Of Socio-Demographic And Lifestyle Factors Associated With Uptake Of Periodic Medical Examination Among Health Care Workers In A Tertiary Hospital In North-Central Nigeria.

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## Abstract:

**Background:** Periodic Medical Examination (PME) is essential as it helps detect medical conditions early even before the symptoms appear. The significance of this is that such diseases are tackled early reducing morbidity and mortality. The factors associated with uptake of PME has been poorly studied among groups in the society.

**Objectives:** The aim of this study was to assess the sociodemographic and lifestyle factors that determine the uptake of PME among healthcare workers.

**Materials and Methods:** A cross-sectional study involving two hundred and twenty (220) healthcare workers in Federal Medical Centre, Makurdi Nigeria was carried out. A pretested self-administered questionnaire was used to collect information on socio-demographic characteristics, uptake of PME and lifestyle factors of the respondents. The data was analyzed using SPSS version 20. The level of significance was set at  $p < 0.05$ .

**Results:** Most of the respondents (44.1%) were aged between 40 – 49 years; males made up 53.6% and 91.4% had tertiary education. The senior staff made up 86.8% and most (56.4%) had been working for 10 – 19 years. Majority of respondents were support staff 30.8% and the least was laboratory scientist 2.4%. More than half of the respondents 56.4% were employed between 10-19 years. Only 2.7% of the participants smoked cigarette. About 83(37.7) drank alcohol. Slightly above half of the respondents 118(53.6%) exercised regularly. Only 79(35.9%) of the respondents had a diet plan. About three-quarters of the respondents 169(76.8%) had one form of periodic medical examination or the other.

**Conclusion:** The study found a significant association between ethnicity, level of education, regular exercise and uptake of Periodic Medical Examination ( $p$ -value  $< 0.05$ ).

**Key words:** Periodic Medical Examination; Assessment; Hospital workers; Federal Medical Centre.

Date of Submission: 04-02-2024

Date of Acceptance: 14-02-2024

## I. Introduction

The average life expectancy at birth in Nigeria increased from 41.39years in 1971 to 55.02 years in 2020 growing at an average annual rate of 0.58%.<sup>1</sup> One of the reasons for this is the paradigm shift from curative to preventive medical practice.<sup>2</sup> Periodic Medical Examination also known as Routine Medical Check-up, is a form of preventive medical care.<sup>3</sup> This entails history, physical examination and screening of persons who do not have symptoms by health-care workers on regular basis.<sup>3</sup> Most people especially in Africa, do not attach much significance to medical checkups.<sup>4</sup> Hence most medical examination are carried out during ill-health and pre-employment period.<sup>4</sup>

Routine Medical Check-ups are important for early identification of risk factors for many non-communicable diseases such as heart disease, diabetes and stroke, and some communicable diseases such as Hepatitis B and C as shown in a study on routine check-ups among adult Croatians.<sup>5</sup> It is essential to have periodic medical examination since these chronic diseases have heavy socio-economic burden on individuals, and account for more than 60% of the overall global burden of diseases.<sup>6,7</sup>

The World Health Organization (WHO) estimates that globally infectious and parasitic diseases caused 5.1 million deaths in 2019, of which nearly 52% (2.64 million deaths) were due to eight major diseases (Tuberculosis, HIV/AIDS, Measles, Hepatitis, Malaria, Dengue, Yellow Fever, Rabies).<sup>8</sup> Low- and middle-income countries notably represent 98.3% (2.59 million deaths) of these eight major infectious diseases. Infectious diseases (e.g., tuberculosis, HIV, measles, etc.) tend to occur earlier in life compared to non-communicable diseases (e.g., cancer, diabetes, Alzheimer's, etc.) and affect prime-age workers leading to losses of both labor supply and household income. This, in addition to the financial burden of diseases, has a cascading effect on economic growth.<sup>8</sup>

In 2016, an estimated 40.5 million (71%) of the 56.9 million worldwide deaths were from NCDs. Of these, an estimated 1.7 million (4% of NCD deaths) occurred in people younger than 30 years of age, 15.2 million (38%) in people aged between 30 years and 70 years, and 23.6 million (58%) in people aged 70 years and older. An estimated 32.2 million NCD deaths (80%) were due to cancers, cardiovascular diseases, chronic respiratory diseases, and diabetes.<sup>9</sup> Women in 164 (88%) and men in 165 (89%) of 186 countries and territories had a higher probability of dying before 70 years of age from an NCD than from communicable, maternal, perinatal, and nutritional conditions combined.<sup>9</sup>

In some western countries such as Germany, the statutory health insurance, which covers about 90% of the German population states that, regular medical examination be carried out in all primary health care facilities. German population above the age of 35 years and under the statutory health insurance, have the right to a medical examination once every two years, for the early detection of risk factors for diabetes, cardiovascular and renal conditions.<sup>10</sup> Ironically, the practice of PME is poor in developing countries, despite increasing prevalence of chronic diseases.<sup>11</sup>

Globally, some factors, which determine the practice of PME, include advance age, economic status of the individual, marital status, educational level, gender, nature of one's job and the health state of the individual<sup>12</sup>. People around the globe give varying levels of attention to health issues and pay differing levels of priority regarding medical check-up. It is essential to have periodic medical examination as various chronic diseases have devastating socio-economic burden on individual affected.<sup>13</sup> Detailed medical examination is necessary and its frequency increases if there is a health problem that requires continuing care. Factors that are non-modifiable like age and family history of certain diseases determine the frequency and type of check-up or screening that one requires. Similarly, the presence of modifiable risk factors like smoking, consumption of alcohol, unhealthy lifestyle including sedentary lifestyle and diet, are all-important in determining the frequency of check-up.<sup>13</sup>

Generally, in developing countries like Nigeria where the uptake of Periodic Medical Examination is poor, few studies have been conducted on uptake of PME.<sup>13</sup> Most of the studies conducted were on knowledge and level of practice of Periodic Medical Examination.<sup>6,13,14</sup> A few of these studies were on factors associated with uptake of Periodic Medical Examination.<sup>15</sup>

This study aimed at assessing the socio-demographic and lifestyle factors associated with periodic medical examination among hospital workers in Federal Medical Centre, Makurdi, North-Central Nigeria. The result of this research would be necessary in formulating policies, which will enhance the uptake of periodic medical examination among health care workers in Nigeria.

## **II. Material and Methods:**

**Study Design:** Descriptive cross-sectional study

**Study Area:** The descriptive cross-sectional study was conducted among hospital workers in Federal Medical Centre, Makurdi, North-central Nigeria from August to November 2021. Federal Medical Centre, Makurdi is a tertiary health facility catering for the healthcare needs of the people of Benue state and the neighboring states of Nasarawa, Taraba, Kogi and Enugu respectively. It is a 400 bedded hospital that runs multi-specialist services in the departments of Internal Medicine, Pediatrics, Psychiatry, Surgery, Obstetrics/ Gynecology and Family Medicine. The hospital has over two thousand staff spread across the various departments including administration, Medical, nursing, pharmacy, medical social work, clinical psychology, laboratory and medical records.

**Study Duration:** August to November 2021

**Sample size:** 250

**Calculation of sample size:** The minimum sample size required was calculated using the Leslie and Kish formula for descriptive studies.<sup>16</sup>

$$n = \frac{Z^2pq}{d^2}$$

Where

n = Minimum sample size

Z = A constant at 95% confidence level = 1.96

P = Proportion in the target population estimated to have a particular characteristic of interest (which is practice of periodic medical examination) in another study from Ilorin, Nigeria 20.6%.<sup>17</sup>

Q = 1 - p (i.e., 1 - 0.21) = 0.79

d = Desired precision of 5% = 0.05

N =  $\frac{(1.96)^2 \times 0.21 \times 0.79}{(0.05)^2} = \frac{3.8416 \times 0.1659}{0.0025} = 255$

Since the total number of patients is < 10000, the sample size will be corrected using the formula,<sup>16</sup>

$$nf = \frac{n}{1 + (n) / N}$$

Where

nf is desired sample size for a population < 10000.

n is the desired sample size for a population > 10000 which is 255.

N is total number of staff in Federal Medical Centre, Makurdi, 2000.

nf =  $\frac{255}{1 + 255/2000} = 226$  workers

1 + 255/2000

The actual sample size was 226. When 10% of the minimum sample size (226) for anticipated attrition, non-response, incompletely filled data and missing questionnaires was added (22.6), the sample size became 250 workers.

**Subjects and selection method:** After calculation of the sample size, Stratified Sampling technique was used to select health workers in the health facility. Each of the eight categories of health care workers was a stratum. The formula  $n_i = (n/N) \times S$ , was used to determine the number of individuals from each stratum to be included in the study<sup>18</sup>.

n is number of individuals in each stratum from the population.

N is number of individuals in the population estimated to be 2000.

S is sample size calculated above, thereafter the size of the stratum ( $n_i$ ) was calculated<sup>18</sup>

The sample size was stratified as follow: Medical doctors 45, Nurses 70, medical record officers 20, clinical psychologists 15, pharmacists 10, Lab scientists 10, medical social workers 10, and support staff 70. From each stratum, a proportionate number of participants were selected using simple random sampling technique by ballot method.

#### **Inclusion criteria:**

1. Being a staff of Federal Medical Centre, Makurdi, Benue state, Nigeria
2. Aged 18 years and above
3. Non casual staff
4. Non contract staff

#### **Exclusion criteria:**

1. Not a staff of Federal Medical Centre, Makurdi, Benue state, Nigeria
2. Less than 18 years
3. Being a casual staff
4. Being a contract staff

#### **Data collection:**

Participation was voluntary and informed consent obtained by participants signing the consent form attached to the questionnaire after discussing the study with them and providing room for questioning. The structured questionnaire was self-administered, except for those staff that were not very literate and in such cases, research assistants administered the questionnaires.

The structured questionnaire contained sections including section A on socio-demographic characteristics such as age, gender, ethnicity, marital status, religion, level of education, job cadre and income. Section B on information about lifestyle such as alcohol consumption, cigarette smoking, exercising regularly and having a diet plan. Section C on uptake of periodic medical examination such as have you ever had a periodic medical examination?, how often do you have PME?, when was the last time you had a PME?, and when are you having the next PME?. Those who ever had a Periodic Medical Examination done were presumed to have good uptake and those who never did had poor uptake. Data was collected on each day of the week from

the staff that met the inclusion criteria in the designated departments, using simple random sampling technique of balloting, until the required number is met

**Statistical analysis:**

Data generated through the structured self-administered pre-tested questionnaire were analyzed using statistical package for social sciences version 20. Statistical variables were summarized using frequency distribution and cross tabulation. Chi-square test was used to explore association between categorical variables.

The level of statistical significance was set at 5% ( $p < 0.05$ ). Logistic regression analysis was used to identify independent factors predicting Uptake of PME

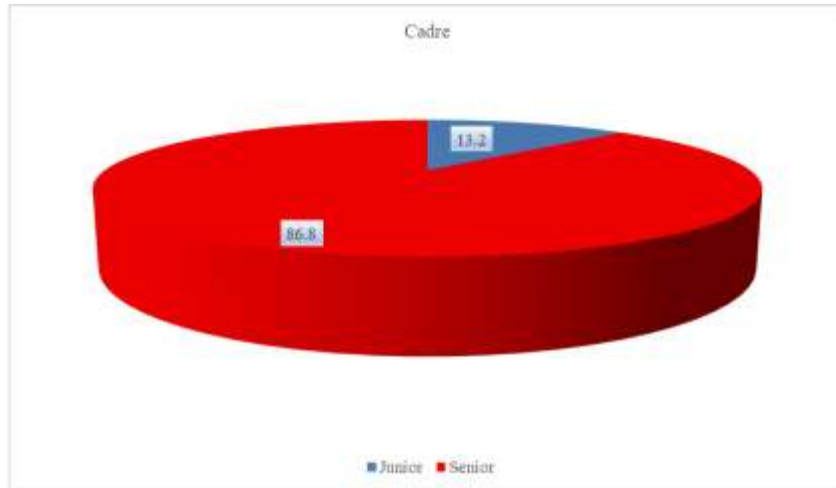
**III. Results**

*1 Socio-demographic Characteristics of the respondents.*

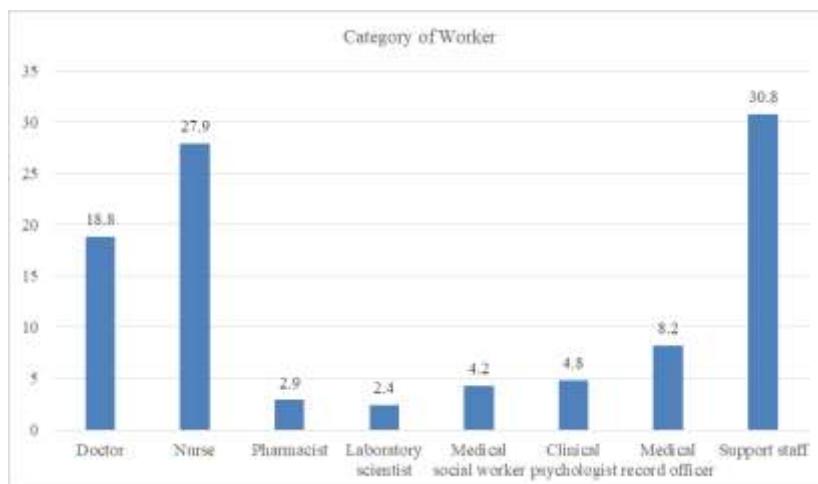
**Table 1:** Socio-demographic characteristics of the respondents.

| Variable                               | Frequency | Percentage |
|--|-----------|------------|
| <b>Age category (n=220)</b>            |           |            |
| 20-29                                  | 17        | 7.7        |
| 30-39                                  | 67        | 30.5       |
| 40-49                                  | 97        | 44.1       |
| 50-59                                  | 37        | 16.8       |
| 60 and above                           | 2         | 0.9        |
| <b>Gender (n=220)</b>                  |           |            |
| Male                                   | 118       | 53.6       |
| Female                                 | 102       | 46.4       |
| <b>Marital status</b>                  |           |            |
| Single                                 | 31        | 14.1       |
| Married                                | 177       | 80.5       |
| Divorced                               | 4         | 1.8        |
| Widowed                                | 8         | 3.6        |
| <b>Religion</b>                        |           |            |
| Christianity                           | 205       | 93.2       |
| Islam                                  | 10        | 4.5        |
| Traditional                            | 2         | 0.9        |
| Others                                 | 3         | 1.4        |
| <b>Ethnicity</b>                       |           |            |
| Tiv                                    | 117       | 53.2       |
| Idoma                                  | 51        | 23.2       |
| Igede                                  | 8         | 3.5        |
| Hausa                                  | 7         | 3.2        |
| Ibo                                    | 12        | 5.5        |
| Yoruba                                 | 7         | 3.2        |
| Others                                 | 18        | 8.2        |
| <b>Level of education</b>              |           |            |
| Informal                               | 1         | 0.5        |
| Primary                                | 1         | 0.5        |
| Secondary                              | 17        | 7.7        |
| Tertiary                               | 201       | 91.3       |
| <b>Average monthly income in Naira</b> |           |            |
| <50,000                                | 17        | 7.7        |
| 50,000-99,000                          | 55        | 25.0       |
| 100,000-149,000                        | 46        | 20.9       |
| 150,000-199,000                        | 24        | 10.9       |
| 200,000-249,000                        | 22        | 10.0       |
| 250,000 and above                      | 56        | 25.5       |

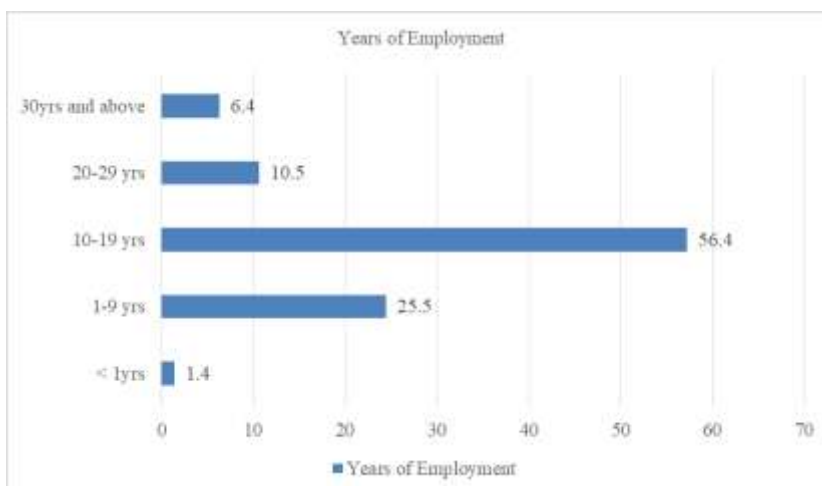
Of the 250 questionnaires distributed, only 220 participants responded. Majority of the respondents 97(44.1%) were aged 40-49 and only 2(0.9%) were 60 years and above. Most of the respondents 118(53.6%) were males, more than three quarters 177(80.5%) of respondents were married and 31(14.1%) were single. A large proportion of the respondents were Christians 205(93.2%) and a little above half were of Tiv ethnicity. Overwhelming number 201(91.4%) of the respondents had tertiary education, while 17(7.7%) had secondary education. Most of the respondents earned above N 250,000 monthly 56(25.5%) while the least earners, 17(7.7%) earned less than N 50,000. (Table 1)



**Fig 1:** Job Cadre above showed that majority 191 (86.8%) of the participants were senior staff, while 29(13.2%) were junior staff.



**Fig 2:** Category of Worker showed that majority were support staff (30.8%) followed by Nurses (27.9%) and the least was laboratory scientists (2.4%).



**Fig 3:** Showed years of employment. The study found that majority of the participants 124(56.4%) have been employed between 10-19 years. 56(25.5%) between 1-9 years, 23(10.5%) between 20 to 29 years, 14(6.4%) have been employed for a period more than 30 years while just about 3(1.4%) were newly employed.

**Lifestyle factors of the respondents**

**Table 2:** Showing Lifestyle factors.

| Variables (n=220)                 | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| <b>Do you smoke cigarette?</b>    |           |            |
| Yes                               | 6         | 2.7        |
| No                                | 214       | 97.3       |
| <b>Do you take alcohol?</b>       |           |            |
| Yes                               | 83        | 37.7       |
| No                                | 137       | 62.3       |
| <b>Do you exercise regularly?</b> |           |            |
| Yes                               | 118       | 53.6       |
| No                                | 102       | 46.4       |
| <b>Do you have a diet plan ?</b>  |           |            |
| Yes                               | 79        | 35.9       |
| No                                | 141       | 64.1       |

Only 2.7% of the participants smoked cigarette. About 83(37.7) drank alcohol. Slightly above half of the respondents 118(53.6%) exercised regularly. Only 79(35.9%) of the respondents had a diet plan.

**3 Uptake of Periodic Medical Examination**

**Table 3:** Uptake of Periodic Medical Examination

| Variables   | Frequency | Percentage |
|---|-----------|------------|
| <b>Have you ever had periodic Medical Examination (n=220)</b>                 |           |            |
| Yes   | 169       | 76.8       |
| No  | 51        | 23.2       |
| <b>If yes, how often have you had Periodic Medical Examination (n=169)</b>    |           |            |
| Twice in a year   | 91        | 53.8       |
| Once in year  | 58        | 34.3       |
| Once in 2 years   | 6         | 3.6        |
| Once in > 2 years   | 14        | 8.3        |
| <b>When was the last time you had a Periodic Medical Examination? (n=169)</b> |           |            |
| < 1 year  | 121       | 71.6       |
| 1-2 years   | 24        | 14.2       |
| > 2 years   | 12        | 7.1        |
| Not sure  | 12        | 7.1        |
| <b>When are you having the next Periodic Medical Examination? (n=169)</b>     |           |            |
| < 1 year  | 90        | 53.3       |
| 1-2 years   | 31        | 18.3       |
| > 2 years   | 9         | 5.3        |
| Not sure  | 39        | 23.1       |

About three-quarters of the respondents 169(76.8%) had one form of periodic checkup or the other. Majority of those who have ever done it 91(53.8%), had their medical examination done twice in a year and 58 (34.3%) had theirs done once in a year. Close to three-quarters of the respondents 121(72.5%) who have ever had periodic medical examination claimed they had theirs less than 1 year prior to the study while 12(7.2%) had theirs done more than 2 years prior to the study. 10(6.0%) were not sure of when they had done it. On when next they will do their PME, 90(55.2%) indicated less than a year while about one quarter of them 39(23.9%) were not sure when next to have theirs.

**4 Association between Socio-demographic factors and Uptake of Periodic Medical Examination**

**Table 4:** Showing association between socio-demographic characteristics and Uptake of Periodic Medical Examination (PME)

| Variables           | Uptake of PME |           | $\chi^2$ | df | p-value |
|---------------------|---------------|-----------|----------|----|---------|
|                     | Good n(%)     | Poor n(%) |          |    |         |
| <b>Age category</b> |               |           | 5.715    | 4  | 0.22    |
| 20-29               | 11(64.7)      | 6(35.3)   |          |    |         |
| 30-39               | 50(74.6)      | 17(25.4)  |          |    |         |
| 40-49               | 81(83.5)      | 16(16.5)  |          |    |         |
| 50-59               | 26(70.3)      | 11(29.7)  |          |    |         |
| 60 and above        | 1(50.0)       | 1(50.0)   |          |    |         |

|  |           |          |        |   |      |
|--|-----------|----------|--------|---|------|
| <b>Gender</b>                          |           |          | 0.013  | 1 | 0.91 |
| Male                                   | 91(77.1)  | 27(22.9) |        |   |      |
| Female                                 | 78(76.5)  | 24(23.5) |        |   |      |
| <b>Marital status</b>                  |           |          | 5.187  | 3 | 0.16 |
| Single                                 | 20(64.5)  | 11(35.5) |        |   |      |
| Married                                | 138(78.0) | 39(22.0) |        |   |      |
| Divorced                               | 3(75.0)   | 1(25.0)  |        |   |      |
| Widowed                                | 8(100.0)  | 0(0.0)   |        |   |      |
| <b>Religion</b>                        |           |          | 7.182  | 3 | 0.07 |
| Christianity                           | 159(77.9) | 45(22.1) |        |   |      |
| Islam                                  | 7(70.0)   | 3(30.0)  |        |   |      |
| Traditional                            | 0(0.0)    | 2(100)   |        |   |      |
| Others                                 | 2(66.7)   | 1(33.3)  |        |   |      |
| <b>Ethnicity</b>                       |           |          | 18.162 | 6 | 0.01 |
| Tiv                                    | 94(80.3)  | 23(19.7) |        |   |      |
| Idoma                                  | 37(72.5)  | 14(27.5) |        |   |      |
| Igede                                  | 7(87.5)   | 1(12.5)  |        |   |      |
| Hausa                                  | 3(42.9)   | 4(57.1)  |        |   |      |
| Ibo                                    | 5(41.7)   | 7(58.3)  |        |   |      |
| Yoruba                                 | 6(85.7)   | 1(14.3)  |        |   |      |
| Others                                 | 17(94.4)  | 1(5.6)   |        |   |      |
| <b>Level of education</b>              |           |          | 10.309 | 3 | 0.02 |
| Informal                               | 0(0.0)    | 1(100.0) |        |   |      |
| Primary                                | 0(0.0)    | 1(100.0) |        |   |      |
| Secondary                              | 10(58.8)  | 7(41.2)  |        |   |      |
| Tertiary                               | 159(79.1) | 42(20.9) |        |   |      |
| <b>Cadre</b>                           |           |          | 0.364  | 1 | 0.55 |
| Junior staff                           | 21(72.4)  | 8(27.6)  |        |   |      |
| Senior staff                           | 148(77.5) | 43(22.5) |        |   |      |
| <b>Category of worker</b>              |           |          | 6.802  | 7 | 0.45 |
| Doctor                                 | 28(65.1)  | 15(34.9) |        |   |      |
| Nurse                                  | 49(80.3)  | 12(19.7) |        |   |      |
| Pharmacist                             | 4(66.7)   | 2(33.3)  |        |   |      |
| Laboratory Scientist                   | 6(100.0)  | 0(0.0)   |        |   |      |
| Medical Social Worker                  | 8(88.9)   | 1(11.1)  |        |   |      |
| Clinical Psychologist                  | 9(81.8)   | 2(18.2)  |        |   |      |
| Medical Record Officer                 | 13(76.5)  | 4(23.5)  |        |   |      |
| Support Staff                          | 52(77.6)  | 15(22.4) |        |   |      |
| <b>Years on employment</b>             |           |          | 5.495  | 4 | 0.24 |
| <1                                     | 2(66.7)   | 1(33.3)  |        |   |      |
| 1-9                                    | 38(67.9)  | 18(32.1) |        |   |      |
| 10-19                                  | 101(81.5) | 23(18.5) |        |   |      |
| 20-29                                  | 16(69.6)  | 7(30.4)  |        |   |      |
| 30 and above                           | 12(85.7)  | 2(14.3)  |        |   |      |
| <b>Average monthly income in Naira</b> |           |          | 8.252  | 5 | 0.14 |
| <50,000                                |           |          |        |   |      |
| 50,000-99,000                          | 11(64.7)  | 6(35.3)  |        |   |      |
| 100,000-149,000                        | 43(78.2)  | 12(21.8) |        |   |      |
| 150,000-199,000                        | 41(89.1)  | 5(10.9)  |        |   |      |
| 200,000-249,000                        | 18(75.0)  | 6(25.0)  |        |   |      |
| 250,000 and above                      | 18(81.8)  | 4(18.2)  |        |   |      |
|  | 38(67.8)  | 18(32.1) |        |   |      |

The study found a significant association between ethnicity ( $\chi^2=18.162$ ,  $df=6$ ,  $p=0.01$ ), level of education ( $\chi^2=10.309$ ,  $df=3$ ,  $p=0.02$ ) and Uptake of PME among the respondents.

### 5 Association between Lifestyle and Uptake of Periodic Medical Examination

**Table 5:** Bivariate analysis of lifestyle factors and uptake of Periodic Medical Examination.

| Variables                 | Uptake of PME |           | $\chi^2$ | df | p-value |
|---------------------------|---------------|-----------|----------|----|---------|
|                           | Good n(%)     | Poor n(%) |          |    |         |
| <b>Smoking cigarette</b>  |               |           | 0.348    | 1  | 0.56    |
| Yes                       | 4(66.7)       | 2(33.3)   |          |    |         |
| No                        | 164(77.0)     | 49(23.0)  |          |    |         |
| <b>Drinking alcohol</b>   |               |           | 1.025    | 1  | 0.31    |
| Yes                       | 61(73.5)      | 22(26.5)  |          |    |         |
| No                        | 108(79.4)     | 28(20.6)  |          |    |         |
| <b>Regular exercise</b>   |               |           | 5.552    | 1  | 0.02    |
| Yes                       | 98(83.1)      | 20(16.9)  |          |    |         |
| No                        | 71(69.6)      | 31(30.4)  |          |    |         |
| <b>Having a diet plan</b> |               |           | 1.218    | 1  | 0.27    |
| Yes                       | 64(81.0)      | 15(19.0)  |          |    |         |
| No                        | 105(74.5)     | 36(25.5)  |          |    |         |

The study showed a statistically significant association between regular exercise ( $\chi^2 = 5.552$ ,  $df = 1$ ,  $p = 0.02$ ) and Periodic Medical Checkup.

**6 Multivariate analysis of the factors that determine the Uptake of Periodic Medical Examination in Federal Medical Centre, Makurdi**

**Table 6:** Multivariate logistic regression of independent variables predicting Periodic Medical Examination uptake among respondents

| Variables                         | Adjusted odds ratio | 95% confidential interval (CI) |         | p-value |
|-----------------------------------|---------------------|--------------------------------|---------|---------|
|                                   |                     | Lower                          | Upper   |         |
| <b>Ethnicity</b>                  |                     |                                |         |         |
| Tiv                               | Reference           |                                |         |         |
| Idoma                             | 3.371               | 0.390                          | 29.158  | 0.27    |
| Igede                             | 5.841               | 0.630                          | 54.172  | 0.12    |
| Hausa                             | 1.571               | 0.75                           | 32.726  | 0.77    |
| Ibo                               | 9.967               | 0.479                          | 207.526 | 0.14    |
| Yoruba                            | 14.124              | 1.107                          | 108.192 | 0.52    |
| Others                            | 0.000               | 0.000                          |         | 0.99    |
| <b>Level of education</b>         |                     |                                |         |         |
| Informal                          | Reference           |                                |         |         |
| Primary                           | 3940416760.356      | 0.00                           |         | 1.00    |
| Secondary                         | 47580300316.99      | 0.00                           |         | 0.99    |
| Tertiary                          | 1.547               | 0.40                           | 6.02    | 0.53    |
| <b>Do you exercise regularly?</b> |                     |                                |         |         |
| Yes                               | Reference           |                                |         |         |
| No                                | 0.53                | 0.25                           | 1.11    | 0.09    |

None of the associated factors independently predicted uptake of PME among the study participants ( $p$ -value  $> 0.05$ )

**IV. Discussion:**

Periodic Medical Examination is the thorough checking of an apparently healthy person with the aim of early detection and treatment of diseases. Sometimes no disease is detected and in such cases, prevention is offered to such a person. When diseases are discovered at early stages, management of such diseases become easier with better outcome. Periodic medical examination is considered effective in preventing illness and promoting health and reducing morbidity and mortality.<sup>19</sup>

In this study, majority of the respondents 97(44.1%) were aged 40-49. This is contrary to the finding in a study in Sokoto, North-West Nigeria, among healthcare workers where majority of the respondents were aged 30-39 years.<sup>20</sup> Only 2(0.9%) belonged to age category 60 years and above which is reasonably so because in Nigeria, public workers retire at the age of 60 years.

More than half of the respondents, 118(53.6%) were males, and 102(46.4%) were females. This is in tandem with findings in North-West and South-South of Nigeria.<sup>20,21</sup> This is contrary to findings from studies carried out in a community in South-West Nigeria and Saudi Arabia, where females dominated the respondents.<sup>6,22</sup>

More than three quarters, 177(80.5%) of the study participants were married and majority of the participants were Christians 205(93.2%). This is similar to findings in South-West Nigeria.<sup>6</sup>

Large proportion 201(91.4%) of the study population had tertiary education, while 17(7.7%) had secondary education. This is likely to be because it is a tertiary health facility and most of the staff are professionals.

Majority of the participants 86% were senior staff with only 13.2% been junior cadre. This is because most of the study participants were professionals and as such attained tertiary level of education.

Most of the study population were support staff 30.8%, followed by the nurses 27.9% and the doctors 18.8%. This finding is so because support staff are in every department of the hospital, while the other staff are in their respective departments.

Majority of the participants 56.4% had been employed between 10 and 19 years while only 6.4% had spent 30 years and above in service. This is likely to be due to the fact that few of the study participants 0.9% were aged 60 years and above. Most of the participants might have retired from service before spending up to 35 years constitutionally recommended as year of service before retirement in Nigeria. Very few of the participant 1.4% had spent up to one year in service. The implication of this finding is that new employment were not done on a large scale.

About three-quarters of the respondents 169(76.8%) have ever had one form of periodic examination or the other. This high proportion of respondents up taking Periodic Medical Examination could be because of



the high educational standard of the respondents who were mostly of tertiary educational level. This is contrary to the findings in Ilorin among health care workers, where only a fifth of them ever had a Periodic Medical Examination done since the onset of their employment.<sup>17</sup> Similarly, contrary findings were noted in similar studies among a community in South-West Nigeria, Obafemi Awolowo University Ile-Ife in South-West Nigeria and the kingdom of Saudi Arabia.<sup>6,15,22</sup>

Majority of the respondents (97.3%) did not smoke cigarette. This is expected considering the fact that they were health workers who might know the implications of the hazards of smoking cigarette to their health. Similarly, more than half of the respondents (62.3%) did not drink alcohol. About half of the participants (53.6%) exercised regularly. Only 79 (35.9%) of the respondents had a diet plan.

This study sought to find out the sociodemographic and lifestyle factors associated with uptake of Periodic Medical Examination. The study found a significant association between ethnicity, level of education, regular exercise and uptake of Periodic Medical Examination (p-value <0.05). These findings agree with a study in Uganda.<sup>23</sup> However, none of these association was strong enough to independently predict uptake of Periodic Medical Examination in the study.

## V. Conclusion:

This study found out significant statistical association between level of education, ethnicity, performing regular exercise and uptake of Periodic Medical Examination. It is therefore important for organizations, institutions, and government to implement programs that will raise standard of education and enhance participation in regular exercise. It is also important for the various bodies to note that ethnicity is significantly associated with uptake of PME and thus tailor health educational activities along ethnic lines to increase the uptake of PME.

## VI. Recommendation:

We recommend that Government at all levels, institutions, organizations and all workplaces should embark on health education targeting ethnic groups and increase educational facilities to increase the overall level of education of the citizens. They should also formulate and implement policies that will enhance regular exercise.

**Limitation:** There may have been recall bias by some of the respondents. Since it is a cross-sectional study where exposures and outcomes are measured at the same time, there is inherent weakness or difficulty in ascertaining temporal relationship.

**Ethical approval:** Approval to carry out the study was obtained from the Research Ethical Committee of the hospital.

**Acknowledgment:** We appreciate the management of Federal Medical Centre Makurdi for giving approval for this study to take place

**Competing interest:** The authors have no competing interest.

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