

Level of Awareness and Health Benefits of Regular Medical Checkup by the Elderly in Tombia Community, Bayelsa State.

Tari Amakoromo¹, Dr. Data, Aluye-Benibo¹, Sambo Baralate²

¹Department of Community Health Nursing, Niger Delta University Wilberforce Island, Bayelsa State, Nigeria

²Department of Medical Surgical Nursing, Niger Delta University Wilberforce Island, Bayelsa State, Nigeria

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ABSTRACT

Medical checkup is seen as effective in preventing illness and promoting health as well as reducing morbidity and mortality. The aim of this study was to determine the knowledge, attitude and practice of medical check-up among the elderly in Tombia Community. A descriptive survey design was adopted for the study. Stratified random sampling technique was used to select sample size of 318. Data was collected through a structured interviewer questionnaire with the reliability coefficient of 0.83. Data generated were analyzed using statistical package for social sciences (SPSS v.20). The significance of the hypothesis was tested using Chi – Square statistics at <0.05 level of significance. From the findings, majority of the respondents, 295 (92.8%) had good knowledge of medical checkup. Most respondents, 205 (64.5%) had positive attitude towards medical checkup. And a few respondents, 147 (46%) practiced medical checkup. Hypothesis revealed that the calculated X² value (5.92a) was greater than the critical X² value of 3.84 at <0.05 level of significance showing that there was a significant relationship between the knowledge elderly and practice of medical checkup in Tombia community. In conclusion, the elderly had good knowledge and positive attitude towards medical checkup. Poor practice of medical checkup was also observed. Hence, the researchers recommended that regular seminars and mandatory annual medical examinations should be organized for the elderly in Tombia community to improve their knowledge and practice of medical check-up.

Keywords: knowledge, attitude, practice, elderly, medical checkup.

INTRODUCTION

Background of the Study

Medical checkup is a form of preventive measures involving thorough history, physical examination and screening of asymptomatic persons by physicians on a regular basis as part of a health care process (WHO, 2010). The average life expectancy at birth in Nigeria rose from 46 years in 1990 to 53 years in 2011 with a shift in curative medical to preventive medical practice (United Nations World Population Project 2012). According to the latest World Health Organization, data published in 2018, life expectancy in Nigeria is; male 54.7, female 55.7 and a total life expectancy is 55.2 which gives Nigeria a world life expectancy ranking of 178 (WHO, 2018).

Life expectancy and prosperity have risen in developed and developing countries over the past 50 years and is expected to continue rising by 2020, (Lomborg, 2002). In developing world it is expected to pass age 70 years barrier, hence causing the world's life expectancy to continue to climb. Health was defined by the WHO as the state of physical, mental and social wellbeing, not merely the absence of disease or infirmity (Morby's Medical, Nursing and Allied Health Dictionary, 1990). Medical checkup is seen as effective in preventing illness and promoting health as well as reducing morbidity and mortality (Damiani, Ferdeco and Basso, 2012). A checkup examination is defined as health care motivated by the need to assess general health and prevent

future illness rather than to attend to symptoms (Sox, 2013). Hence, people around the world pay varying levels of attention to health issues and give different levels of priority, regarding medical checkup. During this process of routine checkup some of the non-communicable diseases such as hypertension, cancer; cervical, prostate, breast and diabetes mellitus and so on, can be detected and any declining health condition from normal health is noticed and managed in the form of preventive or curative services thereby reducing the mortality associated with them (Moser, Patrick and Beral, 2009). It is essential to undertake periodic medical examination since these chronic diseases have a heavy socio-economic burden on individuals and accounts for more than 60% of the overall global burden of diseases (Si-qing, 2009). Thorough medical examination is necessary and its frequency increases in the face of a health problem that necessitates continuing care. Factors that are non-modifiable like age and family history of some diseases determine the checkup or screening one requires. Likewise, the modifiable risk factors like alcohol consumption smoking, unhealthy life style like physical inactivity, unhealthy diet and sedentary lifestyle are all keys in determining the frequency of checkup (WHO, 2012).

Some studies have shown that these risk factors are more among those in low socio-economic class and more vulnerable to cardiovascular disease and diabetes (Lampert, 2010). Generally, in developing countries including Nigeria, where the practice of periodic or routine medical checkup is poor, very few studies have been conducted on it. A study on perception and practice of periodic medical checkup by traders in South East Nigeria, reported that 74.9% were aware of periodic medical checkup. 61.2% have their major source of information from friends and 18.2% from mass media. The study concluded that there is a high level of awareness of periodic medical checkup, but low practice level among the group (Eke, Eke, Joe-Ikechebelu, & Okoye 2012). Also another study on periodic medical checkup, knowledge and practice in a community in South West Nigerian showed that 62% have heard of periodic medical checkup 79% of those who heard have done it and 48.2% of those who have done it had frequent medical checkup. 50% had general medical examination, 32.2% blood pressure check, 6.9% visual check, 6.2% dental check and 4.6% blood sugar check. 67.6% had medical checkup every six months 9.6% yearly and 8.1% every two years (Ilesanmi, Omotoso, Alele, & Amenkhienan, 2015).

A review of literature in the area of study showed that routine health checkup did not yield much and no adequate information, no differentiation in data of staff who came for routine health checks and for consultation due to ailments were seen. The need for medical checkup cannot be over emphasized, and everybody is expected to get checkup as they age as it gives a good picture of their health status; hence this study is carried out to determine the knowledge, attitude and practice of routine health checkup in Tombia Community, Bayelsa State.

Objectives of the Study

Specifically, the study tends to:

1. Determine the level of knowledge of medical checkup among the elderly in Tombia community.
2. Determine the attitude of the elderly in Tombia community towards utilizing medical checkup.
3. Determine the level of practice of medical checkup by the elderly in Tombia community.

LITERATURE REVIEW

Brief Literature Review

Otieno and Macharia (2014) conducted a study on factors Influencing awareness and use of health Services in Kenya. The purpose of the study was to investigate factors that influence awareness and use of health services in Homa Bay County, Kenya. The study employed survey design and focused on health beneficiaries, District Health Management Team and other key health stakeholders, and used both quantitative and qualitative data. Quantitative data was collected through household interviews of 384 respondents and qualitative data was generated through Key Informant Interviews of 16 respondents. The study reveals that health financing,

service delivery, quality, accessibility and equity influence use of health services in Homa Bay County. It is for these reasons that the study recommends that the government should allocate adequate budget towards health services, avail adequate trained health workers, and improve infrastructure in health facilities as well as drugs and other supplies. There is also need for further research on cultural factors influencing use of health services.

Jimoh (2014) also conducted a study on the use of health care services in rural and urban areas: a determinant factor in planning and managing health care delivery systems. The objectives of the study is to determine the relative importance of the various predisposing, enabling, need and health services factors on use of health services; similarity between rural and urban areas; and major explanatory variables for compliance. A four-stage model of service was constructed with 31 variables under appropriate model components. Data is collected using cross-sectional sample survey of 1086 potential health services consumers in selected health facilities and resident milieu via questionnaire. Data is analyzed using factor analysis and cross tabulation. The 4-stage model is validated for the aggregate data and data for the rural areas with 3-stage model for urban areas. The order of importance of the factors is need, enabling, predisposing and health services. 11 variables are found to be powerful predictors of utilization.

Zeluwa (2012) also carried out a study on the factors that influence use of primary health care services in Nasarawa State, Nigeria. The study was carried out using the qualitative research methodology primarily using two data collection methods, the focus group discussions and individual interviews. A total of sixty participants were sampled, these consisted of ten members of staff, twenty non facility users and thirty facility users. Thirty individual interviews were conducted and four focus group discussions held with staff and facility users at the two clinics. Facility users were randomly selected as they attended the clinic on the data collection days and were invited to participate in the study. Every second patient attending the clinic was selected for the focus group discussion and every third person for the interviews. The staff participants were randomly selected based on their availability while non-facility users were selected using snowballing. Data was analyzed using thematic analysis method. Findings Two major themes emerged following data analysis; these were perception and experiences of facility users and barriers to compliance of health services. Users had a good perception of the services they received and are reasonably satisfied but certain deficiencies in the health care systems compromised the quality of service. Several factors were however hindering the compliance of these services and these include mainly institutional factors such as lack of infrastructure, equipment and staffing constraints; household factors such as cost of service and responsibility of decision making and other factors such as stigmatization and beliefs.

RESEARCH METHODOLOGY

Research Design

The study was conducted as a community-based cross-sectional survey for five weeks. A cross-sectional survey was used in which data were collected at more than one point in time.

Area of Study

The study was conducted in Tombia Community, Yenagoa Local Government Area of Bayelsa State,

Population of the Study

The target population for this study consisted of all the elders randomly selected from the quarters in Tombia Community. The inclusion criterion for the selection of participants will be that they have to be permanent residents of the community and will be between 40 years and above.

Sample size determination

This was estimated using the formula: $n = N/(1+N(d)^2)$

Where n = sample size

N = population size

D = level of precision (confidence interval)

$N = 1560$

$D = 0.05$

Thus $n = 1560 / (1 + 1560(0.05)^2)$

$n = 1560 / (1 + 0.25)$

$n = 1560 / 1.25$

$n = 318$

Sampling Technique

Sampling is a technique of selecting individual members or a subset of the population to participate in a study. The sampling technique that was used in this study was convenience sampling technique. Convenience Sampling involves making use of the available elements in the collection of data.

Data Analysis

Following completion of data collection, it was reviewed, organized and entered into a micro computer running the Statistical Package of Social Science (SPSS version.) software for windows Vista to validate and analyze the entries. The results were based upon the data obtained from residents. The survey was descriptive and data was summarized in counts and percentages.

Ethical Considerations

The study was approved by the Department of Nursing, Niger Delta University, Wilberforce Island, Bayelsa State. Letter of consent was presented at the palace of the paramount ruler for the purpose of seeking permission from the related authorities. Participants were properly briefed by the interviewer on the nature of study, its confidentiality, importance to the society and procedures for completing the questionnaire, and informed oral consent was obtained in all cases.

The researcher maintained the following ethical principles during the research exercise.

Confidentiality: The researcher ensured that information provided by respondents was treated with utmost confidentiality, hence, no name or addresses were requested for, in the questionnaire.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of respondent

Table 4.1 Percentage Distribution of Respondents According to Age

Age	Frequency	Percentage (%)
40-50	10	3
51-60	146	46
61-70	154	48
71-80	8	3
Total	318	100

Source: Field Survey Data; 2021

The result in Table 4.1 showed that the 3% were between the age range of 40-50years, again 46% of the respondent were within the age range of 51-60years, 48% were between the age brackets of 61-70years while 3% were between the age range of 71-80years respectively. This result shows that majority of the respondents were within the age range of 61-70 years.

Table 4.2 Percentage Distribution of Respondents According to Gender

Gender	Frequency	Percentage
Female	300	94
Male	18	6
Total	318	100

Source: Field Survey Data; 2021

Table 4.2 showed that 94% of the respondents were females while 6% were male. This result shows that majority of the respondents were female.

Table 4.3 Percentage Distribution of Respondents According to Marital status

Marital status	Frequency	Percentage
Married	120	38
Divorced	14	4
Widowed	175	55
Single	9	3
Total	80	100.0

Source: Field Survey Data; 2021

Result in Table 4.3 Showed that majority of the respondents 55% were widows, 38% were married, 4% of the respondents were divorced and 9% of the respondents were single. This result showed that the majority of cassava farmers in the study area are married.

Results

Table 4.4: Level of Knowledge of Medical Checkup Among the Elderly in Tombia Community

Statements	Yes	No
Health checkup is the process of assessing an individual's state of health so as to detect, treat and prevent any disease or illness.	318 (100%)	—
Health checkup reduces the incidence of infections among the elderly.	146 (45.9%)	172 (54.1%)
Health checkup should be done regularly and not for only one time in life.	300 (94.3%)	18 (5.7%)

The elderly are supposed to engage in health checkup.	299 (94.4%)	19 (6.0%)
Medical checkups can improve health of the elderly.	305 (95.9%)	13 (4.1%)
Health checkup brings improvement in the lifestyle of the elderly.	145 (45.6%)	173 (54.4%)

Table 4.4: All participants, 318 (100%) accepted that health checkup is the process of assessing an individual's state of health so as to detect, treat and prevent any disease or illness. Also, whether 'Health checkup reduces the incidence of infections among the elderly, 146(45.9%) said 'yes' while 172(54.1%) said 'no'. On if health checkup should be done regularly and not for only one time in life 300(94.3%) accepted this statement while 18(5.7%) did not accept. Two hundred and ninety-nine, representing 94.4% accepted that the elderly are supposed to engage in health checkup and 19(6.0%) did not accept. Regarding medical checkups can improve health of the elderly, 305(95.9%) said 'yes' while 13(4.1%) said 'no'.

Furthermore, on the statement 'Health checkup brings improvement in the lifestyle of the elderly' 145(45.6%) said; yes' while 173(54.4%) Therefore, 295(92.8%) had high level of knowledge and only 23(7.2%) had low level of knowledge on medical checkup.

Table 4.5: Attitude of the Elderly Towards Medical Checkup in Tombia Community

Statements	SA	A	D	SD
I am always willing to attend health examination because it is necessary and beneficial.	211 (66.4%)	107 (3.6%)	-	-
I like to key into existing programme of check-ups within the hospital.	7 (2.2%)	9 (2.8%)	189 (59.4%)	113 (35.5%)
High cost of health check-up makes many elders shy away from checking their health status regularly.	103 (32.4%)	51 (16.0%)	161 (50.6%)	3 (0.9%)
The elderly who visit the hospital benefit more from health examination.	149 (46.5%)	151 (47.5%)	10 (3.1%)	9 (2.8%)

In Table 4.5, out of 318 study participants, 211 (66.4%) strongly agreed that they are always willing to attend routine health examination because it is necessary and beneficial; 107(3.6%) agreed while none disagreed and strongly disagreed to the statement. On whether participant would like to key into existing program of routine checkup within the hospital, only 7(2.2%) strongly agreed, 9(2.8%) agreed, 189(59.4%) disagreed and 113(35.5%) strongly disagreed. As regards high cost of health check-up making many of the elderly to shy away from checking their health status regularly, 103(32.4%) strongly agreed, 57(16.0%) agreed, 161(50.6%) disagreed while 3(0.95%) strongly disagreed. Also, 149(46.5%), 151(47.5%), 10(3.1%) and 9(2.8%) strongly agreed, agreed, disagreed and strongly disagreed to the statement the elderly who visit the hospital benefit more from health examination. The final score for attitude of the elderly towards medical checkup was obtained by adding up participants' scores on all items in section C. As a result, 205(64.5%) had positive attitude while 113(35.5%) had negative attitude towards routine health checkup.

Table 4.6: Practice of Medical Checkup by the Elderly in Tombia Community

Statements	Always	Often	Occasionally	Never
Medical check-up is practiced among members of my family.	8 (2.5%)	3 (0.9%)	303 (95.3%)	4 (1.3%)
How often do you engage in health check-up to maintain a good	11(3.5%)	35	272 (85.5%)	—

health status?		(11.0%)		
I have had a health check-up within the past year.	9 (2.8%)	14 (4.4%)	120 (37.7%)	175 (55.0%)
I have had check-up for hypertension.	3 (0.9%)	21 (6.6%)	171(53.8%)	123 (38.7%)
I have had check-up for blood sugar level.	3 (0.9%)	7 (2.2%)	211 (66.4%)	97 (30.5%)

Table 4.6, Out of the 318 elderly that participated in the study, 8(2.5%), 3(0.9%), 303(95.3%) and 4(1.3%) accepted that medical checkup is practice among members of their family, always, often, occasionally and never respectively. On how often they engage in health checkup to maintain a good health status, 11(3.5%) said 'always', 35(11.0%) often, 272(85.5%) said 'occasionally' while no participant accepted that he/she never engaged in health checkup. 9 (2.8%) percent accepted that they have always had a health checkup within the past year, 14(4.4%), 120(37.7%), 175(55.0%) had it often, occasionally and never respectively. About having had checkup for hypertension, only 3(0.9%) said always, 21(6.6%) often, 171(53.8%) occasionally and 123(38.7%) never. Also, on having checkup for blood sugar level, 3(0.9%) responded 'always', 7(2.2%) said 'often', 211(66.4%) said occasionally while 97(30.5%) said never. Regarding the statement, 'I have done breast cancer screening', 6(1.9%) said they did it always, 55(17.3%) often, 97(30.5%) occasionally while 160(50.3%) said they never had breast cancer screening. On having screened for cervical cancer, no participant accepted that they did it always and often, 19(6.0%) said occasionally and 299 (94.0%) said 'never'. Additionally, concerning screening for prostate cancer, no participant also said always/often, only 2(0.6%) accepted occasionally while 316(99.4%) said they have never had prostate cancer screening. Participant's responses in this section were scored and the sum of scores was determined to compute the final score for the elderly practice of medical checkup. 147 (6.2%) practice, while 171(53.8%) did not practice.

Table 4.7: Chi-Square Analysis of relationship between the Knowledge elderly and Practice of Medical Checkup.

Level of Knowledge	Practice of checkup		Total	Df	Cal X ²	Crit X ²
	Adequate practice	Inadequate practice				
Poor knowledge	6 (5.4)	2 (2.6)	8	1	5.92	3.841
Good knowledge	30 (25.6)	8 (12.4)	38			
Poor knowledge	6 (6.7)	4 (3.3)	10			
Good knowledge	20 (24.3)	16 (11.7)	36			
Total	62	30	92			

*significant at (p<.05); df= 1; critical X² = 3.84.

Thus, result in table 4.7 reveals that, the calculated X² value of 5.92 was greater than the critical X² value of 3.84 at <0.05 level of significance and 1 degree of freedom. Thus, the null hypothesis was rejected. This means that there was a significant between the elderly knowledge and practice of routine health checkup.

DISCUSSION OF FINDING

The findings of research question 1 revealed that majority of the respondents had high level of knowledge of medical checkup. The findings were in line with Tahira, et al., (2017) in their study which revealed that majority of the respondents, had awareness about the knowledge and practice of periodic medical examination. The study also relates with Olayinka, et al. (2015) whose findings revealed good knowledge on medical

checkup but majority of the respondents agreed that 6 monthly medical check-ups is ideal. Overall, majority of those who were aware of medical check-up had ever had it done.

Usman, et al. (2016) findings also is in line with the above result. The high level of knowledge exhibited by the elderly in this study could be due to the fact that majority of them are highly educated and are exposed to seminars on medical checkup and have knowledge on the subject matter. Continuous sensitization is advocated to strengthen their knowledge. Findings from table 4.2 showed that majority of the respondents had positive attitude towards health checkup. The finding of the study is supported by Eke, et al. (2012), which showed that almost all, of the respondents had high expectations on the effectiveness of medical checkups on early detection of diseases. However, the present result of the study does not agree with Tahira et al. (2017), which revealed that only few of these respondents were aware of an existing program of check-ups. Almost all respondents attended a medical check-up at least once every year, with a slightly higher proportion among the non-medical staff. This reaction of the respondents towards medical checkup could be due to low morale of workers due to unsatisfactory working conditions among others. More effort will thus be required to achieve more qualitative and better health care delivery.

Result of the study on research question three revealed that majority of the elderly had not practiced medical checkup. This finding is in tandem with Eke et al. (2012) who showed in their study that only few of the elderly practice medical checkup. Age, gender and educational status were found not to affect practice of medical checkup significantly. The finding was supported by (Si Si Moss et al., 2014). On the other hand, the result of the present study is not in agreement with Akande, et al. (2004), in a study which revealed that most of the respondents had a medical examination since being employed in the hospital. Among those that had pre-employment medical examination done only few had the examination done before assumption of duty.

Only few of the respondents had ever had medical examination. The hypothesis result revealed that, the calculated X^2 value was greater than the critical X^2 value at <0.05 level of significance and 1 degree of freedom. Thus, the null hypothesis was rejected. This means that there was a significant relationship between the elderly knowledge and practice of medical checkup. The result is not in agreement with Akande et al. (2004), in their study which showed that Knowledge of respondents had no significant effect on the practice of Periodic medical examination. Most of the respondents had a medical examination since being employed in the hospital. It was found that there was a significantly higher level of PME practice among hospital workers who were encouraged to do PME by doctors. Eke et al. (2012) is in line with the findings of this study as there was a relationship between knowledge and practice of periodic medical checkups.

The low practice of periodic medical checkup in this study will not allow early detection of diseases. The study also shows high level of knowledge of medical checkup though the actual practice was poor by the nurses, this is contrary to what is expected, that health seeking behavior should have been higher among them due to their knowledge level and their place of work. The findings revealed that the practice of medical checkup was not affected by high level of knowledge.

SUMMARY AND CONCLUSION

Summary

This study examined level of awareness and health benefits of regular medical checkup by the elderly in Tombia Community. The specific objectives of this study includes to determine the level of knowledge of medical checkup among the elderly in Tombia community, determine the attitude of the elderly in Tombia community towards utilizing medical checkup and determine the level of practice of medical checkup by the elderly in Tombia community. The study adopted convenient sampling technique and simple descriptive survey design. The study made use of primary data which were retrieved from the field through the aid of structured questionnaires and data was analyzed using SPSS, data was summarized in percentages and tables were used for data presentation.

The findings of the study revealed that majority of the respondents had high level of knowledge of medical checkup. The study also revealed that majority of the respondents had positive attitude towards health checkup.

Result of the study further revealed that majority of the elderly had not practiced medical checkup.

The hypothesis result revealed that there was a significant relationship between the elderly knowledge and practice of medical checkup.

Conclusion

Based on the result of the study, it can be deduced that the elderly in the study area have good knowledge of health checkup but poor practice. It also reveals that they have positive attitude towards health examination. Sensitization and Mandatory continued education programs and annual medical examination should be conducted for the elderly in the study area to improve their knowledge, attitude and practice on routine medical checkups.

ETHICAL APPROACH

Faculty of Nursing,
Niger Delta University,
Wilberforce Island,
Bayelsa State

Dear Respondent,

The researcher is a Nursing Student of Niger Delta University, Wilberforce Island, Bayelsa State, conducting a research on Level of Awareness and Health Benefits of Regular Medical Checkup by the Elderly in Tombia Community

This questionnaire is a set of questions on the above-named topic. Your responsibility is to complete the questionnaire and express your sincere feeling about the items on the questionnaire.

Any information given will be treated with strict confidentiality.

Thanks, in anticipation.

Dr. Tari Amakoromo

Researcher

REFERENCES

1. Akande, T. M., & Salaudeen, A. G. (2014). Practice of Periodic Medical Examination among Hospital Workers in a Nigeria Teaching Hospital. *Nigerian quarterly journal of hospital medicine*, 14(3) 206-210. <https://doi.org/10.4314/nqjhm.v14i3.12722>
2. Asuke, S., Babatunde, J. M., & Ibrahim M. S. (2017). A Comparative Analysis of the Awareness and Practice of Periodic Health Examination among Workers of Public and Private Establishments in Zaria, North Western Nigeria. *Arch Med Surgical*, 2(2), 38-42. <https://doi.org/10.4103/archms.archms>.
3. Damiani, G., Federico, B., Basso, D. et al. (2012). Socio-economic Disparities in the Uptake of Breast and Cervical Cancer Screening in Italy; A Cross Sectional Study. *BCM Public Health*, 12, 99.
4. Eke, C. O, Eke N. O, Joe-Ikechebelu, N. N., & Okoye, S. C. (2012). Perception and Practice of Periodic Medical Checkup by Traders in South East Nigeria. *Afrimedic Journal*, 3(2), 24-29.
5. Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude Intention and Behavior: An Introduction to Theory and Research Reading*. MA Addison – Wesley.
6. Hunt, K., Adamson, J., Hewitt, C., & Nazereth, I. (2014). Do Women Consult More Than Men?. A

- Review of Gender and Consultation for Back pain and Headaches. *Journal of Semi Research and Policy*, 16(2), 108-117. <https://doi.org/10.1258/jhsrp.2010.009131>
7. Hoebel, J., Starker, A., Jordan, S., Richter, M., & Lampert, T. (2014). Determinants of Health Check Attendance in Adults: Findings from the Cross-Sectional German Health Update (GEDA) Study. *BMC Public Health* 14(913).
8. Ilesanmi, O. S., Omotoso, B., Alele F. O., & Amenkhienan, I. (2015). Periodic Medical Checkup; knowledge and gjh.sccsenet.org Global Journal of Health Science Vol. 12, No. 8; 2020.
9. Practice in a Community in South West Nigeria. *International Journal of Public Health Research*, 5(1), 576-583.
10. Isangedighi, A. J., Joshua, M. T., Asim, A. E., & Ekuri, E. E., (2017). Fundamentals of Research and Statistics in Education and Social Sciences. Calabar: University of Calabar, 92.
11. Joshua, M. T. (2016). Fundamentals of Test and Measurement in Education. Calabar: University of Calabar Press, 64.
12. Lampert, T. (2014). Smoking, Physical Inactivity and Obesity; Associations with Social Status. *Deutsches Arzteblatt. Int*, 107(1-2), 1-7. <https://doi.org/10.3238/arztebl.2010.0001>
13. Limm, S. S., Vos, T., Flaxman, A. D., Daniel, G., Shibuya, K., & Adair-Rohani, H. (2010). A Comparative Risk Assessment of Burden of Diseases and Injury attributable to 67 Risk Factors and Risk Factor Clusters in 21. Regions 1990-2010: A Systematic Analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380(9859), 2224-2260.
14. Lomborg, B. (2012). How healthy is the world? *British Medical Journal*, 325(7378), 1461-1466. <https://doi.org/10.1136/bmj.325.7378.1461> Mosby's Medical, Nursing and Allied Health Dictionary (3rd Ed., 190, 235). CV Mosby company.
15. Moser, K., Patrick, J., & Beral, V. (2009). Inequalities in reported use of breast and cervical screening in Great Britain; *British Medical Journal*, 338, 2025.
16. Olayinka S. I., B. Omotoso, F. A., & Ibidun, A. (2015). Periodic Medical Checkup: Knowledge and Practice in a Community in South West Nigeria. *International Journal of Public Health Research*, 5(1), 576-583.
17. Si-quing, L. (2019). Importance of Regular Physical Examination for Early Prevention and Treatment of Disease in Middle age and Elderly People. *ChinJ, Convalescent Medicine*, 14(5), 429-430.
18. Si Si Moss, J.R., Sullivan, T. R. Newton, S. S., & Stocks, N. P., (2014). Effectiveness of General Practice-based Health Checks; A Sytematic Review and Meta-analysis. *British Journal of General Practice*, 64(618), e47-e53. <https://doi.org/10.3399/bjgp14X676456>.
19. Sox, H. C. (2013). The Health Checkup, was it effective? Could it be effective? *JAMA*, 309, 2496-497. <https://doi.org/10.1001/jama.2013.5040>.
20. Tahira, S., Muhammad, A. & Shahzad, A. A. (2017). Awareness among Medical and Non-Medical Students About the Practice of Periodic Medical Examination. *JIIMC*, 12(2), 116-119
21. Umuerr, E. M., & Aiwuyo H. O. (2020). Prevalence and Correlates of Prehypertension and Hypertension Among Adults in Delta State Nigeria: A Cross Sectional Community Based Study. *Ghana Medical Journal*, 54(1), 48-57.
22. United Nation World Population Prospect. (2012). Revision cited 2014 Dec. esa.un.org/wpp2012_%20KEY%20FINDINGS.
23. Usman, S. O., Edet-Utan, O., Suleiman, A., Isola, I. N., Ojogbede, A., Akintayo-USMAN, N. O. & Adu, A.S. (2016) Periodic Medical Check-Up Among Three Nigerian South-Western States. *Journal of Contemporary Medicine*, 6(3), 174-182.
24. World Health Organisation. (2012). Innovative Care for Chronic Conditions; Building blocks for action. Geneva, Switzerland.
25. World Health Organisation. (2016). Towards a strategy for Cancer Control in the Eastern Mediterranean Region. 1st Ed. Cairo, World Health Organisation Regional office for the Mediterranean, 2010.
26. World Health Organisation. (2018). Global Data on life Expectancy in Nigeria. <https://www.vanguardngr.com>
27. World Health Organisation. (2019). Global Health Observation (GHO) Data: Raised Blood Pressure. Retrieved from: <http://www.who.int/gho/ncd/risk factors/blood pressure prevalence text/en/> (Accessed on 08/03/2019).