Research

A Comparative Cross-Sectional Assessment of the Preventive and Healthy Lifestyle Practices of Doctors in Port Harcourt, Rivers State

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Abstract

Introduction: Lifestyle modification in relation to disease prevention and outcome has recently received increasing awareness around the world and in Nigeria. Poor lifestyle choices make people susceptible to many chronic illnesses including thirteen cancers. Medical doctors are gate keepers and educators of health.

Objectives: The aim of the study was to assess the level of knowledge of healthy living and preventive health among doctors in Port-Harcourt and ascertain the practices and to investigate the barriers and facilitators of healthy living among doctors in Port-Harcourt.

Methods: It was a comparative cross-sectional study with purposive sampling method. The tool used was an online questionnaire. MS Excel and SPSS was used for data analysis. Ethical approval was obtained from UPTH ethical committee.

Results: A total of 201 doctors participated. With 54.7% being females and 53.2% within the 30-40 years age group. Resident doctors accounted for 42.8%. 92% received some form of lifestyle education; seminars (48.1%), CME's (47.0%), and social media (44.9%) were the top three. Just 15.2% knew what the daily portion of fruit was and 82.6% knew the cut off for obesity. 50% were aware of the recommended exercise frequency. 60% concluded that adults should sleep for 7-9 hours, however, 61.2% slept for 4-6 hours a day. 84.6% of respondents did not have a dedicated physician.

Conclusion: There is a knowledge gap among doctors which impacts everyday lifestyle choices regarding, diet, exercise and rest. More doctors need their own personal physicians and hospital management should establish strong lifestyle policies.

Keywords: Lifestyle, doctors, exercise, preventive health, Port Harcourt

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Introduction

Life style modification in relation to disease prevention and outcome has recently received increasing awareness around the world and Nigeria is not left out. This is evidenced by the increasing number of exercise groups and various health clubs around the nation. Worldwide, large numbers of people are experiencing various forms of ill health based on poor lifestyle choices.[1] Poor lifestyle decisions and habits would include, self-medication, improper diet, inadequate exercise, insufficient rest among others.[1] So many diseases and chronic illnesses have been associated with negative life style choices; hypertension, diabetes and cardiovascular disease etc.[1, 2] Notably, at least thirteen cancers have been implicated with negative life style choices including breast cancer (in postmenopausal women) oesophageal, kidney and pancreatic cancers.[2]

A systematic literature review comprehensively involving over 50,000 medical doctor participants in 17 countries over a period of 15 years, discovered that problematic alcohol intake among doctors increased over time by over 10%. Seven of the literature showed that males were more prone to problematic alcohol intake than women.[3]
The World Health Organization (WHO) defines healthy lifestyle as a way of living that lowers the risk of being seriously ill or dying early.[4] It involves eating healthy, adequate exercise, rest and sleep as well as smoking cessation, moderation of alcohol consumption and mental well-being.[4]

Worldwide, there has been increasing evidence that positive life style choices contribute to longevity.[1] Interestingly, increased affluence encourages a more sedentary lifestyle associated with increased consumption of less healthy food.[1] This sedentary lifestyle has been worsened by technological developments.[1] Entire communities have been known to be affected by negative lifestyle choices.[5]

It was postulated that Americans do not live as long as their counterparts in developed countries because of lifestyle choices.[5] The National Health Service (NHS) in the United Kingdom has recorded spending up to 9% of its budget on lifestyle related conditions, namely, obesity, smoking and alcohol consumption.[6]

With recent advances there has been a shift even in the developing countries from communicable to non-communicable diseases with a current ranking of up to 60% in certain regions.[7] Some countries in Europe and the United Kingdom have experienced both short- and long-term positive effects after putting laws into place to moderate lifestyle practices.[6] These include public smoking restriction, increasing taxes on alcohol and limiting importation of certain kinds of food with the aim of reducing consumption.[6] These go to buttress the fact that if people can consciously choose for themselves to practise and sustain positive lifestyle, the incidence and prevalence of certain diseases would be reduced,[1] which will in turn translate to less money being spent on health care which can be used for infrastructure.[6]

A study done in 2012, pointed out that though sub–Saharan Africa accounted for approximately a tenth of the world's population, it also accounted for the highest percentage of disease burden in the world.[8] Over time, an increased prevalence and incidence of non-communicable diseases has been reported in Africa and this is not unconnected with life style choices.[9, 10] The lack of well established and adequate institutionalised health care systems in Africa might also play a role in this.[9]

Medical doctors as one of the gate keepers of living and staying healthy ought to be the foremost promoters of a healthy lifestyle. It is expected that they lead by example. Doctors as health educators should be well versed in what healthy living and choices actually mean. It has been discovered that it is easier for doctors to give healthy lifestyle advice when they practise it and vice versa.[11] Inadequate practise will therefore serve as a potential limitation in giving advice.[11, 12, 13.] It is therefore imperative to assess the lifestyle practices of medical doctors.

The aim of this study was to assess the level of knowledge of the concept of healthy living and preventive health among doctors in Port Harcourt and ascertain the practice of the above, as well as to investigate the barriers and facilitators of healthy living and preventive health among doctors in Port-Harcourt.

Method

Study Area: was carried out in Rivers State in southern Nigeria. A state with two tertiary hospitals, over 15 secondary and 60 primary health care centres.

Study Design: It was a comparative cross-sectional study design with purposive sampling method.

***Sample size*:** required using the Cochrane formula was 173, however we had 201 respondents.

Study instrument: it was a five part questionnaire entered into Computer Assisted Personal Interviewing CAPI and disseminated online via google form to various social media groups for doctors.

Data analysis: Data was imputed into MS Excel and analysed with Statistical Package for Social Sciences SPSS version 23.

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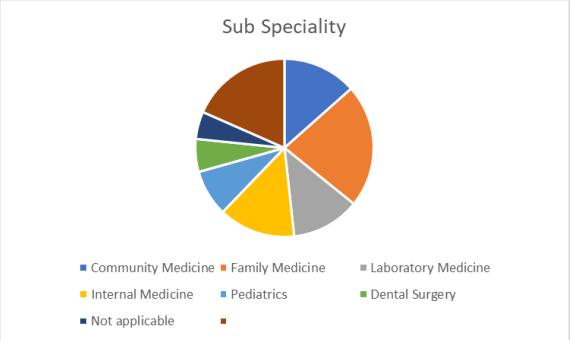
Sociodemographic variables were analysed using descriptive statistics, means and standard deviation for numerical variables and frequencies and percentages for categorical variables and results depicted in tables and charts. Inferential analysis was done using Fishers' Exact Chi-square test with p-value set at <0.05 level of statistical significance.

Results

A total of 201 doctors participated. There were slightly more females 110(54.7%) than males. Most 107(53.2%) of the respondents were within the 30-40 years age group and 86 (42.8%) were resident doctors.



The others category was spread out over 10 other departments

Table 1: Assessment of knowledge of preventive and healthy lifestyle among doctors

	Frequency (n=201)	Percent
Knowledge score		
Good (70-100%)	116	57.7
Fair (50-69%)	76	37.8
Poor (≤49%)	9	4.5

Ninety two percent (n = 185) of respondents admitted receiving some form of education on wellness and health. The three main sources were seminars 48.1%, CME's 47.0%, and social media 44.9%. No singular source was accounted for by up to 50% of respondents.

More than 94% agreed that a healthy lifestyle consisted of eating a balanced meal, sleeping adequately, getting regular health checks, screening and immunization as well as having regular exercise. Of the respondents 66.7% were aware of what the Body Mass Index (BMI) cut off for overweight is while 82.6% were aware of what the BMI cut off for obesity is. Approximately half (n = 101) knew that the recommended exercise frequency for an adult is 3 times a week. Majority, (n = 142, 70.6%) admitted to participating in some form of exercise and out of these 70.6%, a one-week recall revealed that 10.6% exercised on 3 days, 14.8% on 2days and 33.1% (n = 47) on one day. Less than half did up to 30minutes of exercise-on-those days.

In this Study, 60% (n = 121) of participants concluded that adults should sleep for 7-9 hours. However, 61.2% on the average sleep for 4-6 hours a day while 37.8% sleep for 7-9 hours. Of the total respondents, 38.2% take alcohol: wine, beer and lastly liquor and spirits in equal proportions. Out of those who take alcohol, majority 72% drink socially, 72% of those who take alcohol which equates to 27.5% of the total participants take alcohol socially or occasionally, 13.2% take alcohol weekly and 8.8% take alcohol daily. Ten percent of respondents smoked cigarettes. This number is equivalent to 20 out of 201 respondents. Out of this 10%, 65% have smoked for 1-5 years, 5% for 6-10 years, 10% for 11 to 15years and 20% for 16 to 20 years. As relates to daily quantity 80% smoked one to five sticks a day while 20% took between 6 and 20 sticks a day.

Table 2: Relationship between socio-demographics and smoking status among doctors in Rivers State

Characteristics	Smoker (%)	Non-smoker (%)	χ2	p-value
Sex				
Male	9 (9.9%)	82 (90.1%)	0.001	0.979
Female	11 (10.0%)	99 (90.0%)		
Age				
30 or less	0 (0.0%)	19 (100.0%)	2.968	0.323#
31-40	19 (11.9%)	140 (88.1%)		
41-50	1 (8.3%)	11 (91.7%)		
>60	0 (0.0%)	11 (100.0%)		
Designation				
House officer	0 (0.0%)	2 (100.0%)	4.943	0.493#
Medical officer	3 (7.7%)	36 (92.3%)		
Resident	10 (11.6%)	76 (88.4%)		
Consultant	4 (8.5%)	43 (91.5%)		
Private practitioner	0 (0.0%)	13 (100.0%)		
Lecturer	1 (14.3%)	6 (85.7%)		

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Characteristics	Smoker (%)	Non-smoker (%)	χ2	p-value
Others	2 (28.6%)	5 (71.4%)		

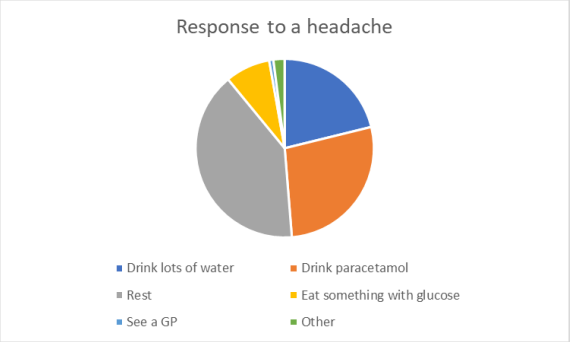
*=Statistically significant; #=Fisher's Exact Test

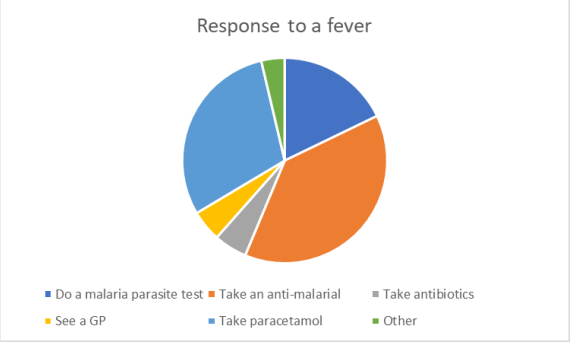
More than 94% of respondents agreed that the following constituted living a healthy lifestyle viz a viz, eating a balanced meal, sleeping adequately, getting regular health checks, screening and immunization as well as having regular exercise.

Just 15.2% were aware that an adult should have up to 5 portions of fruit and vegetable a day.
Of the participants, 31.8% take fruits every day, 35.3% every other day, and 22% just once a week. On fruit days 35.8% take one portion, 33.3% take two portions, and 13.9% take 3 portions.

Only 15.4% of respondents had a dedicated General Practitioner (GP). The most common response to a headache was to rest and take paracetamol tablets. The most common responses to a fever were to take anti-malarial medications and paracetamol with 28.9% admitting to doing an antimalarial test.

A gargantuan (84.6%, n = 170) of respondents did not have a dedicated physician and the graphs below show the typical response of respondents to a headache or fever.





A one year recall revealed that 97% (n = 195) of respondents had their blood pressure checked, 75.1% (151) checked their blood glucose, 58.7% (n = 118) had done a urinalysis, 47.8% (n = 96) had done a lipid profile, 14.9% (n = 30) had done an electrolyte, urea and creatinine test, 63.7% (n = 128) had done a full blood count at least once. Out of the females, 28.6% (n = 31) had done a pap smear, 80% (n = 88) self-breast examination, 19.1% (n = 21) had a breast scan and 15.4% (n = 19) a mammogram) at least once. While 26.4% (n = 21) of the men had a PSA assessment.

Discussion

This Most of our respondents, had received some form of information on health and wellness. Seminars, Continuing Medical Education (CME) and social media were the top three while medical school education came fourth. Undergraduate training is therefore deficient. It has been postulated that lifestyle medicine education should be emphasized at several levels in medical school.[14] This can be reinforced at the post graduate level. When effectively done it will cascade down to the society. Trainers of medical doctors can effectively utilize the three outlined modes to reach out to doctors.

Just a tenth of doctors in this study practised the minimum recommendation for exercise. This corroborates and is similar to what another study done in southwest Nigeria discovered; the health care professionals in that region had inadequate weekly physical activity.[15] Selvaraj et al noted that a study done in 2015 in Nigeria gave a self-reported exercise rate among doctors to be 22%.[16] This is higher than what was found in ours.

A study done in Malaysia established that physically active doctors had a higher propensity to advocate for healthy practices including exercise among patients with cardiovascular disease; the proverbial leading by example, comes to play here.[16] Lobelo buttressed the fact that physically active doctors were more likely to recommend physical activity in clinical practise.[17] More doctors in Port Harcourt need to be physically active.

A large percentage of respondents in our study were sleep deprived. This is in sync with a study done in northern Nigeria which revealed that doctors, especially junior doctors did not get adequate sleep.[18] All the respondents in that study did not have sufficient sleep. Adewole established a similar percentage among his patients in a family medicine practice. Most of his patients had improper sleep patterns.[19] Comparing the 2 studies, the doctors had a worse sleep behaviour. However, ours was slightly better than the above two.

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It is necessary for doctors to have the right priorities and re-organize their time. Lack of sleep can predispose to many negative effects including poor decision making, slow emergency response, likelihood of more mistakes and an increased propensity to be addicted to some form of stimulants. [20] This is not safe for a high-risk profession such as medicine. Among pilots, because of the hazards of a mistake, especially long-distance pilots, their sleep time is monitored professionally and there are established policies.[21, 22]

The doctors in this particular study take less alcohol than their counterparts in other parts of the world as evidenced by the following: In USA 10% of doctors take alcohol daily, this is more than 3 times higher than that found in our own study, another group discovered that 44% of doctors in a UK based study were involved in binge drinking.[3] Binge drinking was rare in our study. Excessive alcohol intake has been implicated in various disease states including cardiovascular disease and it affects the mood and cognitive function of the doctors and in the long run can impact the practise of the physician and the health of the patients.[3] Fortunately, those in our study who took alcohol, were moderate drinkers and less likely to be affected with the above conditions.

This percentage of those who smoked cigarettes in our study is far lower than that of doctors in Europe, as a prevalence of 33.9% was found among doctors in Italy, and it was 29% among medical students in Europe[24] Cattaruzza noted that doctors who smoked were less likely to give unsolicited smoking cessation advice and counselling to patients who smoked.[24] This is especially important as it can affect the outlook of those who smoke.
In this study no assessment was made for passive smoking which in itself carries a risk. Cigarette smoke contains a high amount of toxins and carcinogens and has been implicated in a variety of non-communicable diseases including but not limited to a plethora of cancers viz, lung, liver, colorectal, oral, pharyngeal, oesophageal, gastric, pancreatic, kidney, cervical and bladder.[25] Respiratory disorders, cardiovascular and eye diseases, skeletal disorders have also been implicated.[25] The list is overwhelming. Passive smokers are not left out. Though the occurrence of the diseases is dose dependent, no level of cigarette smoke is safe.[26]

The World Health Organisation (WHO) has a goal to reduce the numbers of smokers in the world especially because tobacco has been found to be responsible for the death of half of its users. More than 8 million people die yearly from tobacco use. Strikingly, 80% of over 1.3Billion Tobacco users in the world are found in low and middle-income countries of which Nigeria is one.[27]

Most respondents knew in general what a healthy lifestyle meant. However over three-quarters were not aware that an adult should have up to 5 portions of fruit and vegetable a day and just about a third of participants took fruits daily.
This is similar to what was obtained in a community-based study done in Lagos where slightly more than a third of respondents took fruits regularly.[25]

A large percentage of respondents took fruits at least once a week and this is good. However, the portions taken at each point in time was less than 5 and this can be accounted for by the fact that majority were not even aware of the recommended daily portion of fruit and vegetables. Another contributing factor was deficient feeding options at work. A South African study also revealed similar results. Hospital staff were found to have poor eating habits and choices which do not correlate to world standards.[28]
The "Five a day" began in 1988 in California and was adopted in 1991 as a national nutrition health campaign in America and is now the biggest nutrition campaign in the world. It was launched in the UK in March 2003.[29] It was an attempt to increase the daily fruit and vegetable intake by individuals to the WHO recommended 400g and reduce the incidence of stroke, heart disease and type 2 DM. Though there is a national policy of nutrition in Nigeria, there is no corresponding 5 a day campaign.

The findings of this study differ from a previous one done in Port Harcourt which discovered that slightly above half of the doctors had a registered general practitioner.[30] In 2019 in Nigeria, there was more than one incident of sudden collapse of doctors, either in the course of duty or otherwise, leading to loss of life.[31] More recently the World Health Organization edited the Physician's oath to include a clause reminding doctors to prioritise their health.[32] This is a pointer to the long-term culture of self-neglect and heroism by doctors. The physician has to heal himself.

Most of the doctors in this study did not have a personal physician. Doctors are strongly discouraged against self-medication. A study done in western Nigeria. (South and North) revealed that over 96% of participants prescribed drugs for themselves.[29]
Montomery et al in a review that spanned over 9 years and involved over 28,000 respondents identified that over 50% of doctors participated in self-treatment and identified reasons included concerns about confidentiality, inability to reverse roles and be a patient as well as not wanting to abandon their workstation.[33]
Less than one fifth of respondents had a dedicated physician and this is far less than the 50% in other parts of the world. The structure of the health care system in the environment plays a role.

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Most of the respondents in this study had regular routine checks. The response to BP and plasma glucose, FBC and urinalysis check is commendable. An American study showed that the evolution of already existing chronic diseases was similar between health and non-health personnel. The prevalence of these diseases was however lower among health personnel.[34] A study carried out in Ireland found out that doctors had bad health seeking behaviour.[35]

Another study showed that Physicians in Canada and America tended to neglect their health for various reasons including long work hours.[36] In our study we had a far better response by respondents to routine medical checks.
Overall, in this study, we had slightly different results from one done in Ilorin where resident doctors were found to have deficient lifestyle choices.[37] Up to 65% of the doctors in that study had at least one unhealthy lifestyle practice, which included, smoking, alcohol intake, consumption of fizzy drinks as well as inadequate sleep.[15]

In this study, many doctors had inadequate sleep, but smoking and excessive drinking were not predominant findings. Respondents identified the following as beneficial to doctors' general health; workplace policies, a robust health insurance package and including wellness and lifestyle training in medical curriculum. Majority said obstacles to a healthy lifestyle were long work hours, shift, extensive schedules and again, no workplace policies.

Lifestyle medicine is an emerging and crucial aspect of medicine. It needs to be imbibed by the doctors and taught and modelled to the populace. When this is effective, it will reduce hospital visits, improve overall well-being as well as reduce cost in health care system.

Individually, exercise, diet, alcohol intake, smoking, adequate rest, are all independent negative predictors (or modifiable and preventable risk factors) of non-communicable disease and when found together would have a negative multiplier effect.

Limitation: The results may be subject to social desirability bias due to the nature of the questions, however, the self-reporting feature of the survey, and reiteration of the anonymity of the survey were utilized to allow for honest answers.

Implications of the findings: Regular professional training should be included in both undergraduate and post-graduate training of doctors. Departments and hospitals should have policies and advocacies that encourage peer group practices especially for exercise. The NHIS can be optimized to work smoothly and more effectively so doctors are encouraged to use the services routinely. Further studies are required to explore each individual segment at length.

Conclusion

Most of the respondents have received minimal information about healthy lifestyle choices from medical school, CME's and social media. There is a knowledge gap which translated in various ways to everyday life. Doctors in this study excelled in routine medical checks but did moderately well with rest and exercise and very poorly with having a dedicated physician.

Declarations

Ethical consideration: Ethical clearance was obtained from the university of Port Harcourt teaching hospital ethical committee with reference UPH/ADM/90/SJL/VDLXI/1442

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