Vol. 2(1), pp. 75-82, June 2020
Article Number: 77ED79068830
ISSN: 2805-4202

http://www.academicjournals.org/AJHST

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African Journal of Health Sciences and Technology

Full Length Research Paper

Assessment of Health and Wellness Lifestyle Practices of Tertiary Institution Workers in the Phase of Prevalent Lifestyle Related Diseases

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Improved technologies and advances in vaccines have resulted in reductions in morbidities and mortalities from infectious diseases like HIV/AIDs, tuberculosis etc; but deaths and disabilities resulting from non-communicable diseases are on the increase globally. Lifestyle behaviours (LB) are believed to be related to health, wellness and quality of life of the citizenry. Therefore, this study assessed the health and wellness lifestyle practices of staff of a tertiary educational institution in the phase of prevalent lifestyle related diseases. An analytical cross-sectional study which involved self-administration of structured questionnaire on health and wellness to 472 respondents. Descriptive and inferential statistics of Chi-square statistics were used to analyze data obtained at alpha level of 0.05. Respondents whose age ranged between 23 and 64years comprised 45.8% males and 54.2% females. Their general knowledge on participation in moderate physical activity (GKMPA) as a lifestyle habit was good (60%). They also had high stress avoidance strategies (77.7%), avoidance of unsafe sexual practices (76.3%), and adherence to speed limits and usage of seat belts while driving (58.8%). However, knowledge on the use of fire safety devices was poor (28.8%). Age (X2=12.090, p=0.034) and staff status (X2=11.639, p=0.001) were significantly associated with GKMPA aspect of LB. Significant association occurred between gender, age and religion were respectively significantly associated (p<0.05) with fatty diet restriction, avoidance of destructive habits and possession of fire extinguisher aspects of LB. Finally, safe sexual orientation was significantly associated with age (X2=20.590, p=0.014) and educational status (X2=10.936, p=0.027). Most workers in tertiary institution have positive lifestyle behavior towards physical activity as an aspect of wellness requirement.

Key words: Health, Lifestyle practices, Tertiary institutions, Workers.

INTRODUCTION

An increasing number of studies have reported that six of the ten leading factors contributing to the global burden of disease are lifestyle related and they include unsafe sex, high blood pressure, tobacco use, alcohol use, high cholesterol and obesity (Forouzanfar et al., 2015; Mewton et al., 2019; Sharma & Majumdar, 2009). Lifestyle related illness, such as heart disease and stroke, cancer, diabetes, and lung disease, negatively affect millions of

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people worldwide (Bezner, 2015). Lifestyle related illness, also called Non-Communicable Diseases (NCDs) or chronic diseases are the major cause of morbidity and mortality in most countries around the world. Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally (Mahabalaraju and Mahabalaraju, 2017).

In United states alone, lifestyle-related illnesses also contribute to the rising healthcare costs and account for 75% of the nation's total health care costs (Durstine et al., 2013). Spending on healthcare costs account for about 16% of the gross domestic product in the USA or US$1.9 trillion (Farhud, 2015). Over 80% of deaths from non-communicable diseases worldwide are estimated to occur in low- and middle-income countries (Holmes et al., 2010) like Nigeria. Non communicable diseases are now seen to affect the poor of the poorest countries in the world with its impact greatest on the poor countries of sub-Saharan Africa of which Nigeria occupy a significant position having overall prevalence of 32.8% (Ekpenyong et al., 2012). Also, the economic cost of NCDs in Nigeria in 2005 was about 400 million dollars from premature death due to NCDs (Ekpenyong et al., 2012).

Lifestyle diseases characterize those diseases whose occurrence is primarily based on the daily habits of people and are a result of an inappropriate relationship of people with their environment (Sharma & Majumdar, 2009). A large number of medical researches confirmed that 60% of lifestyle diseases were caused by unhealthy lifestyles (Yuan et al, 2015), and as a result poor self-rated health and quality of life among individuals (Marques et al., 2019). Research reports have also indicated that unhealthy lifestyle related diseases can be prevented and controlled (Yuan et al., 2015) and a comprehensive approach with emphasis on including health information may be of help (Marques et al., 2019). There is the changing trend from non-communicable disease treatment to prevention globally (Salinas & Kones, 2018) and health management is a panacea in the trend within the global health progress with health communication and education especially getting more attentions, in the efforts to reduce the burdens associated with lifestyle related diseases (Yuan et al., 2015). Instant and aggressive action/attention are required to break the trend of lifestyle related diseases. There is the need to direct efforts towards identification of major risk factors and acquisition of knowledge of the causation of lifestyle diseases in every population. There is however a scarcity of literature on the level of knowledge of citizens on some basic lifestyle behaviors that are related to health especially among the citizens in the South-south geopolitical zone of Nigeria, not even among people living in any of the urban communities. This research therefore seeks to study the level of knowledge of staff members of a tertiary educational institution in the south-south geopolitical zone of Nigeria on lifestyle behavior.

METHODS

Study Design and participants

It was an analytical cross-sectional survey conducted among the staff of a tertiary educational institution in the South-south geopolitical zone of Nigeria. Ethical approval was sought and obtained from the University of Benin Health Research Ethics Committee. Respondents consisted of academic and non-academic staff of the University of Benin, Benin city, Nigeria, who are all 18 years of age and older regardless of years of service. A total of 400 questionnaire forms were administered by the researchers to staff members of the University who consented to participate in the study across faculties of the University.

A convenience sampling method was employed in the conduct of the study. Staff were invited from across faculties and departments of the university and only those who consented were allowed to participate in the study. The questionnaires were self-administered and were retrieved as soon as they were filled.

Instrument

A validated Wellness Lifestyle Questionnaire which assesses different wellness dimensions of lifestyle behaviors of the respondents was used for the study. The questionnaire consisted of two parts, socio-demographic information and health and wellness knowledge awareness. Socio-demographic information included sex, age, educational level, employment status (type), marital status and religion, while the health knowledge awareness aspect constituted general questions assessing knowledge on health.

The health and wellness lifestyle behavior aspect of the questionnaire has a total of 30 questions with each question having an option of "yes" or "no". The wellness features include physical activity, nutrition, how to manage stress, avoidance of destructive habits, practice of safe sex habits, adoption of safety habits like usage of seat belts and adherence to safe speed limits while driving, personal health habits and knowledge of environmental protection.

Data analysis

Data collected were analyzed using SPSS (Version 16.0, Chicago IL, USA). Descriptive statistics (means and percentages) were obtained and strengths of association of measured parameters were tested using Chi-square statistics. A probability level of 0.05 or less was used to indicate statistical significance.

RESULTS

Socio-Demographic Characteristics of Participants:

A total of 472 valid questionnaire forms out of 500 were retrieved and analyzed. This gave a response rate of 94%. Participants' ages ranged between 23 and 64years and they were 45.8% males and 54.2% females. The maximum educational qualification of any respondent is the Doctor of Philosophy (PhD) degree while the minimum educational qualification is the senior secondary certificate. The results showed that 16.1% of the respondents were senior secondary school certificate holders, 44.9% had higher national diploma or Bachelor's certificate, 24.6% were holders of Master's degree certificate and 14.4% were doctor of philosophy (Ph.D) degree holders. Only 20.3% of the respondents were

Table 1. Socio-Demographics Characteristics of Respondents (N=472)

Variables	Categories	Frequency (n)	Percentage
Gender	Male	216	45.8
	Female	256	54.2
Age (years)	18-25	20	4.2
	26-35	112	23.7
	36-45	156	33.1
	46-55	100	21.2
	56-65	72	15.3
	>65	12	2.5
Educational Status	SSCE	76	16.1
	HND/BSc/Bed	212	44.9
	MSc/M.Ed	116	24.6
	PhD	68	14.4
Staff Status	Academic	96	20.3
	Non-Teaching	376	79.7
Marital Status	Single	116	24.6
	Married	332	70.3
	Divorced	8	1.7
	Widow	16	3.4
Religion	Christianity	460	97.4
	Islam	8	1.7
	No religion	4	0.8

academic staff members while the rest 79.6% were non-teaching staff which include administrative, secretarial and laboratory staff. In terms of marital status, 24.6% of the respondents are single, 70.3% were married, 1.7% were divorced while 3.4% were widows or widowers. With respect to religion, 97.4% claimed to belong to Christian religion, 1.7% were of Islamic religion while 0.8% of the respondents claimed not to belong to any religion. The results also revealed that 4.2%, 23.7%, 33.1% and 21.2% of the respondents were of 18-25years, 26-35years, 36-45years and 46-55years respectively. 15.3% were between 55- 65years and 2.5% were aged 65years and above respectively Table 1.

Summary of Lifestyle Behavioural Variables:

With respect to the interpretation of responses of the respondents to the healthy lifestyles behaviors questions as indications of positivity, there was a general moderate knowledge of the respondents to healthy lifestyle behaviors. Majority of the respondents (60%) had positive lifestyle behavior towards physical activity as an aspect of wellness requirement. Meanwhile only 39.8% of these agreed that they do exercises for flexibility at least two days a week. Only about 51.1% of the respondents have positive behavior towards nutrition as an aspect of wellness, nevertheless, only 33.9% and 39.8% of these respondents have positive behaviors towards selection of appropriate servings from food guide pyramid each day and consuming adequate calories that they need to expend each day. 77% of the respondents in this study have positive lifestyle behavior and attitude towards identifying stressors and managing stress in their life. In addition, a good majority of the respondent (82.7%) in the study have positive behavior of avoidance of destructive habits like not smoking or using tobacco products, avoidance of abuse of alcohol or drugs (prescription or illegal) and not taking over the counter drugs. With respect to practice of safe sex as lifestyle behavior, 76.3% of the respondents expressed practice of positive lifestyle behavior of either abstinence from sex or limitation of sexual activity to a safe partner and practice of safe procedure to avoid sexually transmitted diseases (STDs) Table 2. Only about 58.8% of the respondents adopted safety habits which involve use of seat belts and adherence to speed limits when driving. Only 28.8% of these respondents reported having fire extinguishers in their homes and checking them regularly to ascertain its working condition.

Association between Socio-Demographic Characteristics and Lifestyle Behavior Parameters

Age of the respondents was significantly associated with each of participation in physical activity ($X^2=12.090$, $p=0.034$), avoidance of drug abuse ($X^2=11.808$, $p=0.038$), and abstinence from sex or limitation of sexual activity to a safe partner ($X^2=14.204$, $p=0.014$). The result showed that gender was significantly associated with restriction of the amount of fat in their diet ($X^2=6.654$, $p=0.017$). There was also a significant association between educational status and sexual orientation ($X^2=10.936$, $p=0.027$), between staff status and knowledge of involvement in moderate physical

Table 2. Frequency Distribution of Respondents on the Main Items of Lifestyle Behavioural Questionnaire (N=472)

Variables	Frequency (n)	Percentages (%)
Having knowledge of involvement in moderate physical activity most days of the week as an aspect of wellness requirement	283	60.0
Involvement in flexibility exercise at least three days a week	188	39.8
Having knowledge on the importance of nutrition as an aspect of wellness requirement	241	51.1
Knowledge on selection appropriate servings from food guide pyramid	160	33.9
Restriction of amount of fat in diet	188	39.8
Knowledge of identification of daily situations in daily life that cause stress	367	77.7
Avoidance of destructive habits like not smoking or using tobacco products	390	82.7
Abstinence from sex or limitation of sexual activity to a safe partner	360	76.3
Adoption of safety habits like usage of seat belts and adherence to speed limits when driving	277	58.8
Possession of fire extinguishers in the homes and checking regularly to ascertain its working condition	136	28.8

Table 3. Association between Socio-Demographic Characteristics and Lifestyle Behavior Parameters of the Participants (N=472)

Lifestyle Behavioural Parameters	X^2 (p-value)					
	Age	Gender	Marital status	Edu. Status	Staff status	Religion
Knowledge of involvement in moderate physical activity	**12.090 (0.034)***	5.567 (0.352)	1.079 (0.782)	7.652 (0.105)	**11.639 (0.001)***	0.204 (0.721)
Restriction of amount of fat in diet	5.339 (0.376)	**6.654 (0.017)***	2.227 (0.527)	1.147 (0.887)	0.802 (0.453)	0.161 (1.000)
Ability to identify situations in daily life that cause stress	2.848 (0.723)	1.049 (0.413)	0.769 (0.857)	4.026 (0.402)	0.101 (0.751)	0.050 (1.000)
Avoidance of destructive habits like not smoking or using tobacco products	**11.808 (0.038)***	1.201 (0.825)	4.132 (0.494)	5.892 (0.401)	0.924 (0.585)	0.022 (0.372)
Abstinence from sex or limitation of sexual activity to a safe partner	**20.590 (0.014)***	0.048 (1.000)	6.898 (0.075)	**10.936 (0.027)***	3.250 (0.097)	0.022 (1.000)
Possession of fire extinguishers in the homes and checking regularly to ascertain its working	7.421(0.191)	1.052 (0.412)	2.954 (0.399)	3.814 (0.432)	1.768 (0.202)	**9.424 (0.006)***
Adoption of safety habits which involve use of seat belts and adherence to speed limits when driving	1.073 (0.956)	0.100 (1.000)	0.432 (0.934)	4.412 (0.353)	1.163 (0.119)	0.882 (1.000)

activity (X2=11.639, p=0.001) as well as between religion and the possession of fire extinguisher (X2=9.424, p=0.006) as shown in Table 3.

DISCUSSION

This study evaluated healthy lifestyle practices among

tertiary education institution workers in the phase of worsening lifestyle related diseases trend in Nigeria and the world at large. Lifestyle related diseases are strongly associated with risk factors or behaviors, such as physical inactivity, unhealthy diet, and tobacco use, however, they are largely preventable and controllable by availability and affordability of ideal healthcare services including improving level of awareness, closing gaps in health systems and adopting health care targets (Salines & Kones, 2018) and not on disseminating health knowledge alone (Verma et al., 2019). The outcome of this study has revealed a moderately good positive healthy lifestyle behavior among the staff of the institution. Lifestyle habits may have a direct influence on people's health conditions. An inadequate diet, a sedentary lifestyle, alcohol consumption, and smoking, as well as stress, may favor the development of morbidities, especially chronic non-communicable diseases (CNCDs) (Setto et al., 2016). The present study revealed that majority of the respondents had positive lifestyle towards physical activity participation.

Reports of studies have shown that a small percentage of adults are engaged in the recommended levels of physical activity (Iwuala et al., 2015) and that health workers which include doctors, pharmacists, physiotherapists, etc may not be good role models of physical activity participation despite their knowledge on its importance as a lifestyle habit (Iwuala et al., 2015). Physical activity is one of the most important lifestyle items. It has a very important role in the prevention of lifestyle related diseases and health promotion, and enhances psychological performance, increases friendly gatherings, improves night's sleep, and is considered an appropriate recreation (Abdi et al., 2015)

The results of the study revealed that only about half of the respondents had positive attitudes towards nutrition as a lifestyle habit. Poor eating habits are a risk factor for obesity and other chronic non-communicable diseases, such as heart diseases, diabetes, and certain cancers (Setto et al., 2016). Majority of studies in the aspect of nutritional intake and knowledge have been conducted among University students and not on staff. Findings from majority of such studies have reported that students have a poor dietary intake that might have a harmful impact on their health and well-being (Okafor et al., 2018), health and academic performance (Ashraful et al., 2018), pose them to health risks (Sakamaki et al., 2005) and revealed different variables as reasons for unhealthy dietary intakes among students (Adenegan & Adeoye, 2011). A study conducted among shift-working population in Monash University has reported dietary-specific shift-related unhealthy nutritional pattern that can lead to poor health among the population (Bonnell et al., 2017). The present study revealed that a high percentage of respondents had positive lifestyle habit towards stressor identifications and stress management. Findings from the present study are consistent with reports from previous studies. Report of a similar study among staff and students of Faculty of Medicine and Health Sciences, Stellenbosch University however revealed that higher percentage of the studied staff have negative lifestyle habit towards stress management (Koen et al., 2017). Findings from another study from rural India which evaluated work place stress in health university workers has indicated a high stress level with principal stressors as work environment related conditions and poor work culture among the study population (Mishra, et al, 2011).

The study showed that majority of the respondent had lifestyle behavior of avoidance of destructive habits like not smoking or usage of tobacco products and abuse of alcohol or drugs.Tobacco consumption is the second major cause of death and the fourth most common risk factor for diseases, worldwide (Abdulateef et al., 2016; Taheri et al., 2014). Majority of the studies on smoking of cigarette or use of tobacco in the university communities have been conducted among students and not staff. Findings from the present is in contrast with literature reports of many previous studies among students where reports of gaps in the level knowledge of the students regarding risks of cigarette smoking, tobacco cessation strategies, and in their attitude and behavior towards offering tobacco cessation advice have been found to exist (Dania et al 2015; Taheri et al., 2014). However, a study among undergraduate students of the University of Nigeria, Nsukka revealed that approximately half of the studied students had good knowledge about cigarette smoking and its health implications (Amorha et al., 2017).

The outcome of the present study showed that majority of the respondents practiced safe sex lifestyle behavior of either abstinence from sex or limitation of sexual activity to a safe partner and to avoid sexually transmitted diseases. There are no previous studies on university staff to buttress or refute the outcome of this study. However, literature from studies with university undergraduate students as respondents has indicated that risky sexual practices and behaviours exist amongst university students generally (Imaledo et al., 2012; Kwigizile et al., 2013) and especially female undergraduate students (Hoque, 2011). In addition, reports have also indicated that poor reproductive health knowledge, negative attitude and high prevalence of risky sexual activity among university students (Ejembi & Otu, 2004) and only a few of the sexually active students used any form of protection during their last sexual episode (Imaledo et al, 2012).

The results of the study showed that only a little over half of the respondents adopted safety habits which involve use of seat belts and adherence to speed limits when driving. Similar marginal compliance with use of seat belts while driving have been reported by private

vehicle drivers in similar studies in different cities like Makurdi, Benue state (Popoola et al., 2013) and Enugu in Enugu state (Agu et al., 2017) across Nigeria. Road traffic injuries are a major and neglected public health challenge which according to the World Health Organization (WHO) reports claim 1.2 million people and leave 50 million others injured every year (Woldegebriel et al., 2019), despite the fact that using seat belts can reduce risk of fatalities in a road traffic crashes by 40-50% among front seat occupants and by 25-75% among rear seat car occupants (Popoola et al., 2013). A similar university based study which assessed seat belt use in University of Cape Coast campus, Ghana reported very poor attitude towards seat belt use by drivers, front right passengers and rear-seat passengers with female drivers and female front-right passengers found more compliant with wearing of seat belts than their male counterparts (Ogunleye-Adetona et al., 2018). In addition, a study conducted among University of Ibadan drivers on the effect of a road safety education intervention on road safety knowledge in Ibadan, Nigeria revealed that the intervention resulted in an initial increase in road safety knowledge including adherence to speed limits by the intervention drivers (Olumide & Owoaje, 2016).

The outcome of the present study showed that the knowledge of the respondents on safety precautions like usage of fire extinguishers at home and checking it regularly to ensure that they are in good working conditions is high. The authors did not find literature on fire safety knowledge among tertiary educational staff in Nigeria to buttress or refute this outcome. However, the outcome is in contrast with the report from a study conducted among students of Ahmadu Bello University, Zaria, Nigeria on students' preparedness for possible fire emergency on the campus which revealed a low level of awareness and knowledge on safety and preparedness against fire disaster (Akosu et al., 2018). In addition, the report of a study conducted in Dar es Salaam, Tanzania, to investigate the level of fire disaster preparedness considering the availability and condition of firefighting facilities as well as the knowledge on fire management among the selected 10 higher learning institutions which revealed among other things that majority of the respondents had very low knowledge on how to operate firefighting facilities like the fire extinguishers installed in the buildings and had never received any training on firefighting and prevention (Kihila, 2017) is not in agreement with the findings from the present study.

The present study revealed that gender was associated with knowledge on involvement in moderate physical activity most days of the week. This observation is in tandem with findings from reports from other studies where men and women were reported to differ in exercise habits and reasons for exercise (Craft et al., 2014); and also the reports of a study among nine Libyan universities students where female students were found to be particularly at risk for low level of physical activity (El Ansari et al., 2014).

The finding from the present study revealed that gender was significantly associated with nutrition habits among the respondents is consistent with the observations from similar studies though among a sample of university students in Central Michigan, United States, where female students were found to have greater nutrition knowledge than male students (Pirouznia, 2001), and among college students in Kuwait where more males reported poorer healthy eating habits compared to females (Alkazemi, 2018). Gender was not found in this study to be significantly associated with knowledge on administration of first aid care or maneuvers among respondents. Findings from other studies have however reported low level of knowledge on administration of first aid care in emergence situations among general population that are not related with gender are in agreement with our observation (Khatatbeh, 2016; Midani et al., 2019). However, reports of a study among the Viennese population which revealed an overall poorer knowledge and awareness concerning basic life support (BLS) and the use of automated external defibrillators (AEDs) is in agreement with findings from the present study (Krammel et al., 2018).

The results of the present study revealed that sociodemographic characteristics particularly of educational status, staff status and religion of the respondents did not significantly affect most of their lifestyle behaviors. This recent finding is in contrast with previous literature reports which revealed that sociodemographic characteristics of educational status, employment status, age, gender, mother's education and gender are predictors of lifestyle habits of inhabitants of Varna in Bulgaria and Glasgow and Edinburgh in Scotland (Uitenbroek et al., 1996) and health behaviors of Mexican college students (Ulla & Perez-Fortis, 2010). The outcome of this study revealed that there was no significant association between marital status of the respondents and knowledge on practice of safe sexual procedures. This observation is in disagreement with the findings of Kwigizile et al., 2013, which posited that marital status has influence on knowledge of practice of sexual risky behaviors and limitation of sexual activity to a safe partner among unmarried individuals.

CONCLUSION

Lifestyle related illnesses contribute to the rising cost of healthcare in our society and increase burden of illness globally. Healthy lifestyle aimed towards prevention of non-communicable diseases has been generally known to aid in combating this and leading to better quality of

life. Components of unhealthy lifestyle include; unsafe sex, blood pressure, tobacco use, alcohol use, high cholesterol and obesity. There is evidence that unhealthy lifestyle related diseases can be prevented and controlled and adequate health information is of benefit. Hence the need to improve knowledge and awareness on healthy lifestyle behaviors with emphasis on nutrition, safety and avoidance of risky lifestyle behaviors across sociodemographic and socioeconomic lines.

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