



Evaluation of the Common Ailments among staff who attended the Staff Clinic from 2016-2019 at the National Open University of Nigeria, Abuja.

Évaluation Des Maladies Courantes Chez Les Personnes Qui Ont Fréquenté La Clinique Du Personnel De La National Open University Du Nigéria, Abuja De 2016 À 2019

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Abstract

In Nigeria, generally staff clinics provide different services according to their specific needs and resources (financial and human resources). It is necessary to evaluate the ailments that mostly brought staff to the clinic in order to report and recommend to the management further action to employ in order to improve the health of the staff for better productivity. Therefore, this study evaluated the ailments mostly presented in the NOUN clinic by the staff retrospectively from June, 2016 to June, 2019 as a baseline data to provide useful information to help management to provide needed support services that may improve the health of their employees. The objective of this study was to describe the socio-demographic characteristics of subjects attending the NOUN staff clinic and the pattern of their disease entities in order to identify any emerging health challenges, proffer solutions as well as provide basis for comparison and further research. Total Raw Data/Cases was 4461, but cases without adequate information were 109 (2.44% attrition). Total cases used for the study was 4352. The results revealed that the six ailments highest in prevalence were: Malaria (34.35%), common cold (15.40%), abdominal pain (12.91%), Common cough (7.88%), Hypertension (7.86%) and Diarrhoea

(5.58%). Malaria affected middle-aged adults (40-59 years) than the young adults (20- 39 years). Common cold affected the younger adults more than the middle-age adults. Abdominal pain affected the academic staff (AS) more than the non-academic staff (NAS). The older aged people (60 years and above) were most affected by common cough, hypertension is high in both middle-age adults and old adults and diarrhoea affected the old adults the most. The highest first six ailments experienced by NOUN staff are in conformity with ailments experienced in other government establishment of this nature. Health education should be positioned to increase the knowledge of staff in staying healthy.

Key words: NOUN staff clinic, Ailments, Academic staff, Non-Academic staff, Health records

Résumé

Au Nigéria, les cliniques du personnel fournissent généralement des services différents en fonction de leurs besoins et ressources spécifiques (ressources financières et humaines). Il est nécessaire d'évaluer les affections qui ont principalement amené le personnel à la clinique afin de signaler et de recommander à la direction de nouvelles mesures à prendre afin d'améliorer la santé du personnel pour une meilleure productivité. Par conséquent, cette étude a évalué rétrospectivement les affections principalement présentées dans la clinique de NOUN par le personnel de juin 2016 à juin 2019 comme données de base pour fournir des informations utiles et aider la direction à fournir les services de soutien nécessaires qui peuvent améliorer la santé de leurs employés. L'objectif de cette étude était de décrire les caractéristiques sociodémographiques des sujets fréquentant la clinique du personnel de NOUN et le profil de leurs entités pathologiques afin d'identifier les problèmes de santé émergents, de proposer des solutions et de fournir une base de comparaison et de recherche supplémentaire. Le total des données brutes / cas était de 4 461, mais les cas sans information adéquate étaient de 109 (attrition de 2,44%). Le nombre total de cas utilisés pour l'étude était de 4352. Les résultats ont révélé que les six affections les plus fréquentes étaient : le paludisme (34,35%), le rhume (15,40%), les douleurs abdominales (12,91%), la toux commune (7,88%), l'hypertension (7,86%) et la diarrhée (5,58%). Le paludisme affecte plus les adultes d'âge moyen (40-59 ans) que les jeunes

adultes (20-39 ans). Le rhume a plus affecté les jeunes adultes que les adultes d'âge moyen. Les douleurs abdominales affectaient plus le personnel académique (PS) que le personnel non académique (PNA). Les personnes âgées (60 ans et plus) étaient les plus touchées par la toux commune. L'hypertension est élevée tant chez les adultes d'âge moyen que chez les personnes âgées et la diarrhée a le plus touché les personnes âgées. Les six premières affections les plus importantes subies par le personnel de la NOUN sont conformes aux affections éprouvées dans d'autres établissements gouvernementaux de cette nature. L'éducation sanitaire doit être positionnée de manière à accroître les connaissances du personnel pour rester en bonne santé.

Mots-clés: Clinique du personnel de la NOUN, maladies, personnel académique, personnel non académique, dossiers médicaux

INTRODUCTION

The World Health Organization (WHO) defined health as far back as 1948 as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 2019). No doubt this definition has been improved upon by some studies, but it still remains a fundamental description of health. WHO also pointed out that “the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition” (WHO, 2019). This right to health must be sought after by the personal effort of the individual. Health seeking or care seeking behavior has been defined as any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy (Kakkar, Kandpal, Negi, & Kumar, 2013). Health seeking behaviour shows the willingness of individuals to preserve life which has a positive outcome on the person, the family, the workplace, and the Nation at large.

An understanding of the occurrence of common health problems and medicine-use practices in the treatment of common health problems in a community is of public health importance, which is why a staff clinic (also known as on-site clinic) is there to offer healthcare services at the worksite and can provide employees access to both prevention and treatment of illnesses.

According to O'Keefe & Anderson (2017), the current focus is now on health promotion, wellness, and primary care services. Employers, employees, and policy makers are showing an interest in workplace wellness programmes. Most clinics in America now provide primary care services, management of chronic diseases, and preventive care. The most common primary care problems include respiratory ailments and dermatological issues; the most common chronic disease management issues are hypertension and lipid management (O'Keefe & Anderson, 2017). In the developed world, when an employer provides an on-site and near-site clinic as a benefit to employees, there are many advantages for all parties. The clinic provides convenient, cost-effective preventive care and can [coordinate care](#) with the independent primary care physician, to help promote higher quality outcomes for the patient (Michael, 2015).

In Nigeria, generally staff clinics provide different services according to their specific needs and resources (financial and human resources). Payment for healthcare is mainly out-of-pocket in Nigeria, with a few individuals benefiting from the National Health Insurance Scheme (NHIS) (Auta, 2012). Clinics empower employees to manage chronic conditions. Staff clinic located in the working place allows employees to receive care quickly and conveniently throughout the regular workday with less time away from tasks. More importantly, on site clinics help early identification of illnesses (Marinič, 2015; O'Keefe & Anderson, 2017). When employees have better access to convenient, lower cost healthcare, they are less likely to develop illnesses that keep them away from work or spread illnesses to their colleagues at work.

Brief history of NOUN clinic in Abuja

The NOUN staff clinic started operating from Lagos but moved to Abuja in June, 2016. It is currently located at the ground floor of the faculties building in NOUN. It was headed by a qualified matron (Nurse) from its inception in Lagos until February 2019 when a medical officer was seconded to be the Head of the clinic. Full services to staff continued just as it was in Lagos. However, only slightly over 50% of the faculties moved from Lagos to Abuja (four faculties and postgraduate school were in the headquarters as at the time of this study). It is hoped that meaningful findings can be made to better prepare the available and other staff that are yet to arrive for disease prevention to make

them healthier for their work and in terms of productivity.

At the National Open University of Nigeria (NOUN), the staff clinic is primarily to attend to emergencies at work and to assist staff in attaining good health to do their work and reduce the amount of time workers spend away from work visiting off-site healthcare providers. That has made staff clinics popular among employers. It is necessary to evaluate the ailments that mostly brought staff to the clinic in order to report and recommend to the management further action to employ in order to improve the health of the staff for better productivity.

This study evaluated the ailments mostly presented in the NOUN staff clinic by NOUN staff from June, 2016 to June, 2019 as a baseline data to provide information to help management to provide needed support services that may improve the health of NOUN employees. Also, the pattern of disease entities may help to identify any emerging health challenges. It is envisaged that studies may emanate from the findings of this study that may help the staff to improve their wellbeing; especially as data governs our lives more than ever.

Objectives of the study

The objectives for this study are:

1. Identify the most prevalent diseases among NOUN staff from 2016-2019
2. Examine the distribution of common diseases among specific variables (age, gender, and staff type) of NOUN staff from 2016-2019.

Research Questions

1. Which are the prevalent diseases among NOUN staff from 2016-2019?
2. What is the distribution of common diseases among specific variables (age, gender, and staff type) of NOUN staff from 2016-2019?

MATERIALS AND METHODS

Clinic attendance data was collected from June 2016 to June 2019 under anonymity with the permission of the medical Head of the clinic. Descriptive survey design was used for the study. Using SPSS 20 the data was collated and analyzed using percentages (%), frequency counts, mean and graphs.

Data Analysis

Total Raw Data/Cases = 4461

Cases lost to Attrition = 109

Percentage Attrition = 2.44%

Total Data/Cases after Attrition = 4352

Ethical consideration: Although no ethical issues associated with the study, permission was sought from the Medical Officer in charge of NOUN clinic.

RESULTS

Table 1: General Descriptive Statistics of the Data

Variables	Frequency	Percentage (%)
Gender		
Male	2712	62.3
Female	1640	37.7
Age Groups (Years)		
Young Adults (≤ 39)	1925	44.2
Middle-aged Adults (40 – 59)	2423	55.7
Old Adults (≥ 60)	4	0.1
Type of Staff		
Academic Staff (AS)	403	9.3
Non-Academic Staff (NAS)	3949	90.7
Number of Cases Per Year		
2016	706	16.2
2017	1526	35.1
2018	1335	30.7
2019	785	18.0
Total	4352	100

Table 1 shows that more males than females attended the staff clinic (62.3%), middle-age adults (55.7%) had a higher number of clinic attendance. The non- academic staff (90.7%) were more in number in the study. The highest clinic attendance was recorded in the year 2017 (35.1%) and 2018 (30.7%) respectively.

Table 2: Frequency Distribution of Top 10 Cases

S/n	Diagnosis	Frequency	Percentage (%)
1	Malaria	1495	34.35
2	Common Cold	670	15.40
3	Abdominal Pain	562	12.91
4	Common Cough	343	7.88
5	Hypertension	342	7.86
6	Diarrhoea	243	5.58
7	Ulcer	179	4.11
8	Typhoid	96	2.21
9	Boil	85	1.95
10	Wound Dressing	74	1.70

Table 2 reveals that Malaria had the highest number of cases 1495 (34.35%), followed by common cold, abdominal pain, common cough and hypertension, with prevalence rate of 15.4%, 12.9%, 7.9% and 7.9% respectively while wound dressing was number 10 with 1.70% prevalence rate.

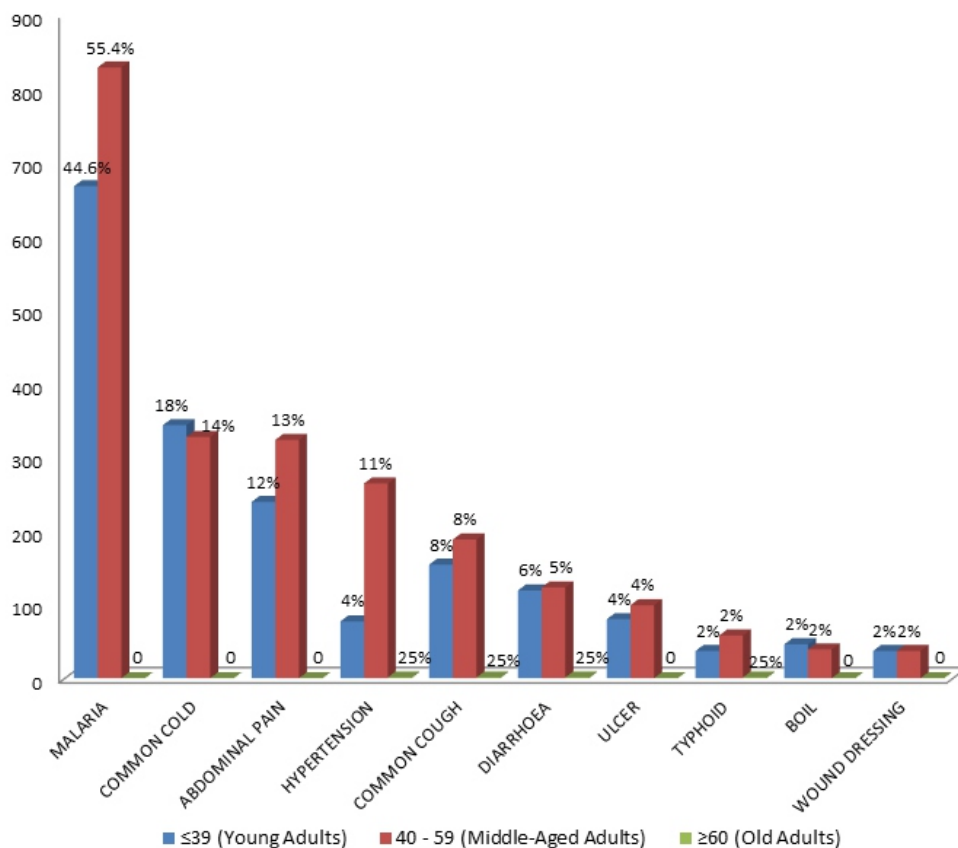


Fig. 1 Prevalence of Top 10 Cases within Age Groups. The % is calculated within Age-Group E.g. the % of middle-age adults that have hypertension is $264/2423 \times 100 = 11\%$ (total number of old adults available is 2423). The bar depicts the counts of age-groups that have ailments, e.g. 77 young adults have hypertension, 264 old adults have hypertension, while 1 old adult had hypertension.

From Fig. 1, Malaria had the highest, the prevalence in young adults (44.6%) and the middle-aged adults (55.4%). Common cold slightly occurred more in young adults compared to older adults (18% to 14% respectively). The prevalence of abdominal pain was slightly higher in middle-aged adults (13%) than young adults (12%). Old adults had the highest Hypertension prevalence of 25%, followed by middle-aged and young adults with prevalence rates of 11% and 4% respectively.

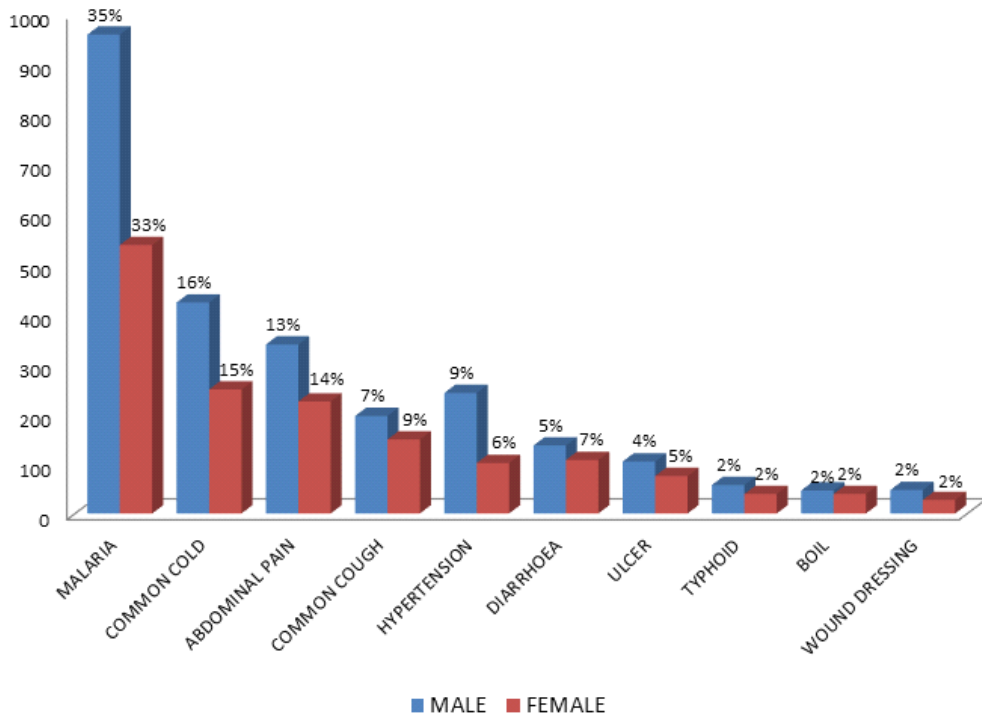


Fig. 2 Prevalence of Top 10 Cases by Gender. The % is calculated is within gender. E.g. the % for malaria in males = $958 / 2712 \times 100 = 35\%$ (2712 is the total number of males available for the study). The females that have malaria is $537 / 1640 \times 100 = 33\%$. (1640 is the total number of females available for the study). The bars depict the counts of males & females that have ailments.

From Fig.2, the prevalence of malaria was almost similar among male (35%) and female (33%) staff. Prevalence of hypertension was also higher in males (9%) than females (6%). The top-five cases among male staff were malaria, common cold, abdominal pain, hypertension and common cough while that female staff include malaria, common cold, abdominal pain, common cough and diarrhoea.

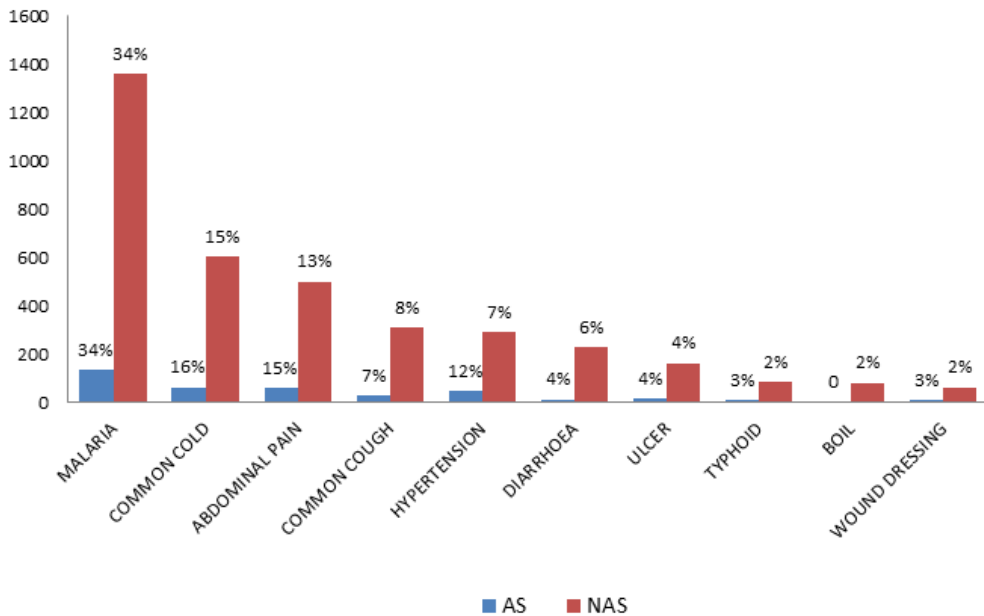


Fig. 3: Prevalence of Top 10 Cases by number of available academic staff (AS) & non-academic staff (NAS). The percentage (%) represents the number of ailments calculated within the group of the staff e.g. the % of malaria within AS is $135/403 \times 100 = 34\%$ (the total number of AS is 403 and 135 of the number had malaria). The bar depicts the number of ailments in each staff category. From Fig. 3, the prevalence of ailments among AS and NAS were at par in most of the diseases (only 1% difference in most cases. However, abdominal pain was 2% higher in AS, hypertension was 5% higher in AS; diarrhoea and boil were 2% higher in NAS).

DISCUSSION

Workplace clinics (staff clinics) have emerged in many workplaces to help limit the time staff leave their duty posts other places to access health care; and also increase staff productivity at work. This study examined the National Open University of Nigeria (NOUN) staff clinic attendance from June 2016 to June 2019.

From the result of this study, a total of four thousand, three hundred and fifty-two (4,352) employee attendance to the clinic was recorded within the period studied. This statistic does not necessarily imply only the staff domicile in the NOUN headquarters at Abuja. It may have included the attendance of other staff in Abuja metropolis as well as the attendance of staff who is visiting; that travel down for meetings and other purposes nationwide. Also, one person may have attended the clinic two or more times. However, the record is well documented for clinic attendance within this period.

More males visiting the clinic may be a reflection of the health status of the males; perhaps the females are healthier, or the males are more health conscious. This finding of men visiting the clinic more than the females appear to be at variance with the report of the World Health Organization (2020) where they reported in World Health Statistics that men were less likely to seek care for all kinds of health issues. However, it could also be that there are more males in the system (NOUN) than females; all these are points for further investigations. From the age group distribution of the clinic attendees, NOUN appears to have more young and middle age people in the establishment, this may be because NOUN is a relatively young University (less than 20 years) or the Management of NOUN has made deliberate effort to employ relatively young people in the University for better productivity. It may also be that the old people in the university are avoiding using the clinic because they want absolute privacy. Latunji and Akinyemi (2018) observed that employees may be reluctant to use workplace clinics because of concerns about privacy. They further remarked that many employees already fear their employers will use their health information against them. The academic staff (AS) attendee was relatively small compared to the non-academic staff attendee (NAS). This implies that the number of AS employed in the University may be smaller than

the number of NAS employed in the University. The number of NAS being more than AS in this study appears to be in line with what operates in most academic institutions (Aghaji, 2006; Baltaru, 2019). However, the NAS attending the clinic more than the AS may probably reflect a better health-seeking behaviour among the NAS.

In the years 2017 and 2018, the attendance rate appeared higher than the other years because the full years' attendance records were considered, while in 2016 and 2019, only half year records were considered for the study. Since the focus of the study was on common ailments among staff, the available data used was considered informative enough.

The ten most common ailments diagnosed in the NOUN staff clinic for the period under study were captured in table 2. The ten diseases diagnosed in descending order were:

1. **Malaria (34.35%),**
2. **Common cold (15.40%),**
3. **Abdominal pain (12.91%),**
4. **Common cough (7.88%),**
5. **Hypertension (7.86%),**
6. **Diarrhoea (5.58%),**
7. Ulcer (4.11%),
8. Typhoid (2.21%),
9. Boil (1.95%), and
10. Wound dressing (1.70%).

The ailments that had minimum of 5% occurrence were discussed in this study (that is the first six ailments on this list).

Malaria remains endemic in Nigeria (Muhammad, Abdulkareem & Chowdhury, 2017), it is still one of the diseases of public health importance. It is therefore not surprising that it is the highest occurring ailment presented in the staff clinic. Malaria must not be ignored or taken with levity because it is among the first ten diseases that still causes death in Nigeria (Muhammad et al, 2017). The staff may need more health education on preventive measures of malaria. Malaria affected middle-aged adults (40-59 years) than the young adults (20- 39 years). Perhaps the older adults (> 60 years) have more

resistance or immunity to the malaria parasites as they appear not affected. This finding is at variance with other studies where it was reported that the younger adults are more prone to malaria because they may not have acquired enough resistance or immunity to malaria parasites (Wotodjo, Doucoure, Diagne, et al., 2018). Malaria also affected more males than females. This may be because men tend to keep more late nights than women and as such more predisposed to mosquitoes' bite. Additionally, it may be that the females eat more healthily because many a time, women prepare food by themselves and can make such food nutritious and protective against infections. The men on the other hand, tend to buy food from vendors which may not be nutritious and protective because the vendors want to maximize profit. However, this finding contravenes the finding of Diiro, Affognon, Muriithi et al. (2016), where they reported that male-headed households adopted more practices for malaria prevention than female-headed households. With this finding, the issue of gender and malaria prevention appears highly controversial. Further studies may be needed to know the exact position. It was also observed that the academic staff (AS) and the non-academic staff (NAS) had the same prevalent rate of malaria cases; both have a high occurrence of malaria. They must immediately seek medical advice when they suspect that they have malaria to avoid complications. Health education to increase awareness, campaign and monitoring of the use of nets remain crucial to avoid malaria resurgences. It is advised that the university management should make Rapid Diagnostic test kits available to better diagnose malaria.

Common cold which is the second highest occurring ailment is quite common in Nigeria being closely related to a dusty environment and it is easily spread from one person to another. It is caused by multiple viruses (Incze, Grady & Gupta, 2018). From the finding in this study, it affected the younger adults more than the middle-age adults. This may be related to the lifestyle of the younger people. They may trek longer distances in a dusty environment more than the middle-age adults. The males and females manifested almost the same rate of occurrence; the AS and NAS also had almost the same rate of occurrence. The disease can be prevented by avoiding dusty areas and persons with the disease. One way of easily overcoming the disease is to boost one's immunity with fruits and vegetables that are rich in antioxidant vitamins such as vitamins C and A as well as taking a lot of water. One should avoid dusty

environment; damp dusting or cleaning is encouraged. It is better for the staff with cold to keep away from work to prevent infesting others. Caution must be employed if the cold lasts more than 10 days; further investigation may be put in place. The Management can help to make multivitamin drugs especially vitamin C available in the clinic to boost the immunity of the staff.

Abdominal pain is the third common ailment. This diagnosis appears quite vague as abdominal pain is a symptom of a disease and should be considered as an emergency except the cause is very certain. From the finding in this study, the symptom appeared to be at par in the males and females, as well as in the young and middle-age adults. However, the AS appeared more affected than the NAS. Since many diseases can cause abdominal pain, it is advised the staff with abdominal pain be referred to appropriate healthcare facility for further investigation and expert management.

Common cough is the fourth presentation of ailments in terms of occurrence. For the first time the old people (60 years and above) are most affected, while the young and middle-age adults are almost at par. The females are more affected than the males but the NA and NAS are also at par in the occurrence of the ailment. Song, Morice, Kim et al (2013), had reported that elderly women tend to have common cough and it may be chronic for different medical conditions. Common cough may be a sign of an underlying disease when it exceeds one week, it may be a sign of respiratory infection, especially lower respiratory infection which has been listed among the first ten diseases that cause death in Nigeria (Muhammad et al, 2017). A conscious intervention like this will ensure that staff is less likely to come to work with an illness, which then may be spread to others or which may make them less capable of doing their jobs properly. The finding of old women being more affected is supported by the report of Song et al, (2013).

It is advised to transfer the patient to a hospital for further management if condition exceeds two weeks. However, the clinic should be provided with cough medicine and broad-spectrum antibiotics to manage the patient for the first week before transfer to hospital if condition persists.

Hypertension is the fifth presentation of ailments in terms of occurrence.

Hypertension simply means a rise in blood pressure or high blood pressure; the systolic blood pressure rises beyond 120mmHg and the diastolic blood pressure rises beyond 80 mmHg (Anker, Santos-Eggimann, Santschi, et al., 2018). Age is a powerful risk factor for hypertension, death, and cardiovascular death. In most studies age is directly linked to increase in blood pressure ([Everett](#) and [Zajacova](#), 2015). This is because with age, there is increased vascular dysfunction (Anker, Santos-Eggimann, Santschi, et al., 2018). The findings in this study reveal that hypertension is high in both middle-age adults and old adults; the old adults have the highest occurrence among the three age groups. The males also had a greater occurrence than the females; this may be associated with the family role expectation demand put on the men as compared to the females in the society. Men having a higher prevalence were also reported by [Everett](#) and [Zajacova](#) (2015) when they observed that men younger than 65 years consistently have higher levels of hypertension compared to women of the same age group. The academic staff is more affected than the non-academic staff; this may also be explained by the nature of work carried out by the AS. Academic work is very demanding and the academics most times have to work late in the night with little or no sleep or rest. Obviously, his lifestyle predisposes to hypertension. Another study carried out by [Landsbergis](#), [Diez-Roux](#), [Fujishiro](#) et al. (2015) reported that Hypertension prevalence is associated with lower job decision latitude, higher job demands, and job strain; this probably confirms why Academics may be more predisposed to hypertension. The management may need to conduct a seminar or workshop on work balance for academics as well as stress reduction activities. This is very important since hypertension can lead to stroke which has been reported to be among the first ten diseases that cause death in Nigeria (Muhammad et al, 2017).The clinic should also be equipped with antihypertensive drugs for treatment. Some patients identified with serious hypertension must be referred to bigger hospitals for expert management.

Diarrhoea is the sixth presentation of ailments in terms of occurrence. Diarrhoea may also be a sign of other underlying abdominal conditions, for example, diarrhoea may be manifested when there is food poisoning, gastritis etc. The findings reveal that the old adults are mostly affected while the occurrences in young and middle-age adults are at par. The older adults' susceptibility may be due to relatively low immune system that is more

manifest in old age. However, this finding is at variance with the finding of Tetteh, Takramah, Ayanore et al. (2018) where they reported that the incidence of diarrhoea was lower in older adults (> 60 years). In this study, the females were more affected than the males and the NAS were also more affected by diarrhoea than the AS. It is not clear why the females are more affected, though this finding also confirms the report from Tetteh, Takramah, Ayanore et al. (2018) where they also reported from their study in Ghana that females were more affected with diarrhoea than males. In this study, the academic staff being more affected by diarrhoea may imply that they may be more involved in public eating.

The management needs to ensure that antidiarrheal drugs and antibiotics are made available in the clinic as well as intravenous infusions to be given as emergency because diarrhoea can be deadly due of loss of fluid, bringing about fluid imbalance in the body. It is of note that diarrhoea has also been grouped among the first ten diseases that cause death in Nigeria (Muhammad et al, 2017). The finding in this study calls for health education on the need to imbibe hygienic eating, drinking water from a clean and trusted source as well as frequent hand washing before and after eating must be explained to the staff. Hygienic food handling and packaging must also be stressed during health education.

In Conclusion, NOUN clinic is an example of how an on-site clinic can be a positive strategy to reduce healthcare costs while promoting and enhancing the health of employees. The highest first six ailments experienced by NOUN staff are in conformity with ailments experienced in other government establishment of this nature. However, since some of the ailments have been listed as fatal (malaria, hypertension, diarrhoea and persistent cough); thus, health education intervention is needed so that the staff can take care of their health better. The university management must increase efforts to provide drugs and equipment to enable adequate and speedy attention given to staff when they come to the clinic for healthcare in order to promote wellness and make the staff more productive.

Recommendations

- Increase healthcare equipment and drugs for patient healthcare

management

- The management of NOUN should organize Health education workshops/seminars for members of staff to address these six most common ailments in the university.
- There is need for the NOUN management to collaborate with the employee's independent primary care physician for better management of the health of staff.

Electronic Health Records should be implemented in the NOUN staff clinic for better follow up on staff treatment.

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