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Professor Adelani Wakili Tijani

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Professor of Public Health Nursing

SUMMARY OF PRESENTER'S BIODATA

Adelani Wakili was born in Ajigbagun Compound, Molete Quarters Iwo, Osun State of Nigeria to the family headed by Alhaji Salawu Akanmu Tijani – a Primary School Headmaster. He attended District Council Primary School Araromi, Iwo, and the United Methodist High School, Araromi, Iwo. He later proceeded to Olivet Baptist High School, Oyo for Higher School Certificate. He gained admission to the Obafemi Awolowo University, Ile-Ife, Osun State for (BNSc) degree in Nursing from 1988 to 1994. From 1997 to 1999, he was at the University of Ibadan, Oyo State for MSc degree in Human Nutrition, specializing in Clinical Nutrition & Diet Therapy. He started work as a nurse tutor at the School of Nursing, Eleyele, Ibadan in 1998. Because it was (and still) mandatory for BNSc holders to register with the Nursing and Midwifery Council of Nigeria as Nurse Educator before they could be recognized as professional nurse tutors, he had to undergo a one year postgraduate diploma in Education (PGDE) at the Ambrose Alli University, Ekpoma, Benin City from October, 2000 to August, 2001. Upon successful completion of the PGDE course, he was registered as a full Nurse Educator with the NMCN in 2001. He went back to the University of Ibadan for the Master of Philosophy degree in Human Nutrition, specializing in Public Health Nutrition, from 2001 to 2004. In 2005, he began his PhD programme at the University of Agriculture, Abeokuta where he bagged his PhD degree in Human Nutrition with specialization in Public Health Nutrition.

Adelani has worked as the proprietor of Precious Life Convalescent and Maternity Centre which was later upgraded by the Oyo State Government to a full-fledged hospital – Precious Life Hospital and Nutrition Rehabilitation Centre. He worked as a Nurse Tutor, Senior Nurse Tutor and later Principal Nurse Tutor at the School of Nursing, Eleyele, Ibadan before he transferred his service to the Ladoke Akintola University of Technology, Ogbomoso, Oyo State to join other lecturers in pioneering the establishment of the Department of Nursing of the institution in 2003. He rose steadily from the humble rank of Lecturer II to Associate Professor of Public Health Nursing in 2013. He was already two years in the readership rank at LAUTECH before he moved to Bayero University, Kano to join others to put the new Department of Nursing on a sound footing. The Department has since been fully accredited by the National Universities Commission and the Nursing and Midwifery Council of Nigeria.

While at LAUTECH, Adelani utilized his annual leave periods to work as a Senior Lecturer and later as Reader at the Universities of Lagos and Ilorin respectively. He first came to the northern Nigeria as a Youth Corper in 1994 and was posted to the Specialist Hospital, Sokoto, Sokoto State for his primary assignment, but later redeployed to the School of Nursing, Eleyele Ibadan Oyo State due to the Nigerian political crisis (known generally as June 12, 1993 crises) at that time. He came back to the North as an External Examiner for the BNSc programme, and later to teach as a visiting Associate Professor to the Postgraduate Nursing programme of the Ahmadu Bello University, Zaria. He has been the Head, Department of Nursing at LAUTECH from 2011 to 2013; Pioneer Coordinator of BNSc Part-Time programme of LAUTECH; and at Bayero University Kano, he has been Head of Nursing Sciences Department from 2015 to date. He has served in various capacities including administrative, academic and examination aspects of nursing with various bodies such as the Nursing and Midwifery Council of Nigeria, the West African Health Examination Board and with many universities across Nigeria and beyond. Adelani Tijani became a Professor of Nursing with effect from January, 2015. He has attended many academic conferences on health matters within and outside Nigeria. Notable among the countries he has visited to present academic papers include the U.S., the U.K. South Africa, Zambia, Sierra-Leone and Ghana to mention a few.

Within the period he got to BUK, he has been appointed as: Member, Inaugural Lecture Committee; Member, University Laboratory Management Committee and Editorial member, College of Health Sciences Journal.

He has received a number of awards mainly on service excellence from many organizations and bodies. Few examples include: '***Grand Pedagogue of the Order of Nightingale*** **(GPON)'** award from the National Association of Nigerian Nurses and Midwives, Olabisi Onabanjo University Teaching Hospital Complex Sagamu Ogun State on 12th May, 2008**; '*The Best Head of Department'*** award in the College of Health Sciences, LAUTECH, Ogbomoso on 1st September, 2012; the '***Distinguished Service'*** Award in June, 2014 and another '***Distinguished Service'*** award in July, 2016.

His hobbies include reading novels, listening to music, leisure trek. He is a member and a one-time president of BOAGSONS Club of Nigeria, Ibadan– a social club. He is happily married to Asiata Olabisi in June 1996 and the union is blessed with four children: Adekemi, Aderonke, Adedayo and Adeleye.

Wholesome Alimentation - Path to Radiant Health

Preamble

It is with immense gratitude to God Almighty that I stand before this august assembly today to deliver this inaugural lecture titled: **"Wholesome Alimentation - Path to Radiant Health".** What do I mean by this? **Alimentation** is just a bookish way of saying '*to feed*', '*to nourish*' or '*to supply nutrient'* to someone in need; while **'wholesome'** means '*supporting body growth and development'* or '*supporting good health*'. As a way of reminder, the word **'nurse'** itself comes from the French word: *'nourice'* and from Latin word *'nutricius'*. Therefore, nursing means to nourish, to care and to support. It is no wonder then that the nurse has a big role to play in wholesome food consumption of the people.

Today's inaugural lecture is the 24th in the series in BUK since its inception. That the 24th inaugural lecture is being delivered by my humble self - a boy born on 24th April, some years back, makes it very unique indeed! I believe strongly that my birthday and the number of my inaugural lecture on the presentation list are cosmologically related. This inaugural lecture is also the first to come from our prestigious Faculty of Allied Health Sciences, and the third to come from the College of Health Sciences; the first, from the College, being from Professor Mohammed Kabir of Department of Community Medicine in 2015, followed by that of Professor AbdulRasaq G. Habib – the first Provost of the College on 27th April, 2017.

Today's inaugural lecture is especially unique in that it is one coming from the ***first Professor of Nursing in northern Nigeria,*** and indeed, the eighth inaugural lecture ever to be given by a nurse in the whole of Nigeria. The first inaugural lecture given by a nurse in Nigeria was that of Professor (Mrs) Elfrida Adebo – the former substantive Head of Nursing Department, University of Ibadan in 1984. The second and third were given in 1998 and 2004 by Professors Musa K. Jinadu and Reuben Bolu Kunle Fajemilehin respectively, both from the Obafemi Awolowo University, Ile-Ife. The fourth one was given by Prof. Adeleke Ojo of Igbinedion University Okada, Benin City in 2009 while the fifth and seventh ones were respectively given by Professors Ezekiel Olasunkami Ajao (on 5th May, 2016) and Joseph O. Aina (on 12th October,

2017), both from Babcock University, Ilisan, Ogun State. The two of them happen to be my respected teachers and mentors at the Obafemi Awolowo University and the University of Ibadan respectively. The sixth inaugural lecture was given on the 12th May, 2016 by Prof. (Mrs) Mildred John of the University of Calabar.

List of Professors of Nursing Appointed in Nigeria since Inception

It is worthy of note that Nursing at the university level in Nigeria has just started gaining worthwhile recognition and global acceptance, hence the dearth of professors and other senior nursing academic in the entire nation. Mr. Vice Chancellor Sir, It will surprise you to know that the entire number of professors of Nursing in Nigeria are not up to the number of the professors we have in Agriculture in BUK alone! They are just eighteen (18) and they are:

1. Prof. (Mrs) Elfrida Adebo – 1984, from University of Ibadan (Deceased)
2. Prof. Musa K Jinadu – 1997, from Obafemi Awolowo University, Ife (Retired)
3. Prof. Reuben Fajemilehin – 2004, from Obafemi Awolowo University, Ife
4. Prof. Adeleke Ojo – 2007, from Igbinedion University, Okada Edo State
5. Prof. Ezekiel Ajao – 2007, from Babcock University, Ilisan Remo Ogun State
6. Prof. (Mrs) Mildred John – 2008, from University of Calabar, Cross River State
7. Prof. Joseph O Aina – 2008, from Babcock University, Ilisan Remo Ogun State
8. Prof. (Mrs) Paulina Ezenduka -2010, from Nnamdi Azikiwe University, Nnewi
9. Prof. Oyibo - 2010, from Niger Delta University, Bayelsa
10. Prof. (Mrs) Iwese – 2011, from Niger Delta University, Bayelsa
11. Prof. (Mrs) Ehimere – 2015, from University of Nigeria, Nzukka
12. Prof. Rasidi Akinade Salawu – Feb. 2016, from Babcock University, Ilisan Remo Ogun State
13. Prof. Adelani Wakili Tijani – April 2016, from Bayero University, Kano.
14. Prof. Okhiai – 2016, Ondo State University of Medical Sciences, Ondo State

15. Prof. (Mrs) Prisca Olabisi Adejumo – February 2017, from University of Ibadan
16. Prof. Bayo Lawal Ajibade – April 2017, from Achievers' University, Owo Ondo State
17. Prof. A.N Anarado – August, 2017, from University of Nigeria, Nzukka
18. Prof. (Mrs) Omolola Irinoye - October , 2017 from Obafemi Awolowo University, Ife

Of this number, six (6) are females. One of them is late, while another one has retired from active service, leaving only 15 in the service of over 27 universities offering Nursing programme at the moment. Mr. Vice Chancellor, Sir, I am number 11th of these active 15 professors. Also, I am the first professor of Nursing with special interest in Public Health, specifically in Family Care Nutrition at the moment.

There are few nurses appointed to full professors of Nursing outside Nigeria. Virtually all of them are well known; they are less than ten in number, and are mainly in South Africa, Bostwana, the United States and United Kingdom. There is also one expatriate appointed a professor of Nursing on contract basis by Ahmadu Bello University, Zaria, Nigeria in 2012 – the former Head of Nursing Sciences Department of ABU– Prof. Hayat Gommaa Imam. Presently, there are ten (10) Associate Professors of Nursing across Nigerian universities who may join the league of full professors very soon.

Nursing as a university programme started in 1965 at the University of Ibadan, but for almost four decades, only three (3) universities were known to run the programme. These are the University of Ibadan Oyo State, Obafemi Awolowo University, Ile- Ife, Osun State and University of Nigeria, Nsukka. Also, the growth of those available departments was too slow and other universities were very reluctant to start BNSc programme until year 2000 when many universities suddenly developed serious interest. This was not unconnected with a particular circular that emanated from the International Council of Nurses (ICN) Conference in Geneva in year 2000. The ICN developed a vision then that by year 2010 all nurses across the globe would be university graduates; and before one knows what was happening, nurses in developed world like the U.S., Canada and U.K. had keyed into the vision within few years. Nurses in Nigeria too had no choice than to key in. Within a short time, possession of BNSc

degree became a must for nurses to cross over to Grade Level 15 and above in the states and the Federal Civil Service. To accommodate the huge number of people desiring a degree in nursing, many universities suddenly woke up from their slumber and commenced the programme.

List of Departments of Nursing in Nigeria and their Date of Establishment

1. University of Ibadan – 1965
2. Obafemi Awolowo University Ile-Ife – 1973
3. University of Nigeria Nzukka – 1983
4. Ahmadu Bello University Zaria – 1997
5. University of Calabar – 1997
6. Babcock University, Ilisan – 1997
7. Niger Delta University, Bayelsa – 2000
8. Ladoke Akintola University of Technology, Ogbomoso – 2001
9. University of Benin – 2002
10. Nnamdi Azikiwe University, Nnewi – 2003
11. Igbinedion University, Okada Benin City – 2003
12. University of Port Harcourt – 2003
13. Ebonyi State University – 2003
14. Imo State University – 2003
15. University of Maiduguri – 2005
16. National Open University of Nigeria (NOUN) – 2006
17. University of Jos – 2007
18. Ambrose Alli University Ekpoma – 2006
19. Madonna University, Elele Rivers State – 2006
20. Bayero University, Kano – 2008
21. Afe Babalola University, Ado Ekiti – 2009
22. University of Lagos – 2010
23. University of Ilorin – 2010
24. Lagos State University, Ojoo Lagos – 2011
25. Usmanu Dan Fodiyo University, Sokoto – 2012
26. Osun State University, Osogbo – 2013
27. Federal University, Kebbi – 2013

However, only two universities followed the international standard in running the BNSc programme by establishing a Faculty of Nursing. These are Niger Delta and Babcock Universities. Others were established as departments, though UI, OAU and LAUTECH are currently at advanced stages of becoming a faculty in their respective institutions. Some Departments of Nursing that were found wanting in human and material resources have been rationalized by the accrediting bodies – NUC and NMCN. Examples include the Lead City University, Ibadan. Also, University of Jos, University of Maiduguri, NOUN and Madonna University nearly suffered a similar fate as they were sanctioned for some years before they buckled up. The Lead City University, Ibadan which established the BNSc programme in 2006 but was rationalized by the NUC sometimes around 2010 is currently trying to restart the programme all over again. Recently, many universities have joined the ranks of universities establishing Departments of Nursing, but they are still at the teething stage. These include: Federal University, Birnin-Kebbi, Achievers' University, Owo, Ayo Babalola University, Ikeji Arakeji, Ondo, Oduduwa University, Ile-Ife, Adeleke University, Ede, Bowen University, Iwo, Ondo State University of Medical Sciences and others.

Also, because of the large number of nurses desiring the BNSc degree, which facilities in the existing universities could not cope with, the Obafemi Awolowo University, Ile-Ife pioneered the establishment of the programme on part-time/ODL basis in 2007. LAUTECH, Ogbomoso followed suit in 2009. Ebonyi State University, Abakaliki and Bayero University joined the train in 2012 and 2015 respectively, making BUK the fourth university to establish the BNSc programme on part-time basis. Also, Ahmadu Bello University, Zaria has just started trailing BUK by commencing the programme in September, 2017. I am happy to inform this gathering that I was the pioneer coordinator of the programme in LAUTECH and the programme has been a huge success as it has turned out close to 1000 practising nurses with BNSc degree in various hospitals across the length and breadth of this nation before I left the university.

Staring the growth of nursing faculty in the face is the acute shortage of manpower, especially senior academics who could nurture the programme to maturity. Apart from about five (5) universities that have required number of senior academic, majority are still battling with how to improve the quality of their respective academic staff. These are the Obafemi Awolowo University,

Ile-Ife where almost all its lecturers possess PhD, and has two professors, a reader and two senior lecturers. University of Ibadan too is okay as it recently promoted three of its senior academic to one full professor and two readers; and almost all its lecturers possess PhD. The University of Nigeria, Nzukka and University of Calabar are similar to the University of Ibadan in this regard. Babcock University is exceptional in that it has three professors, a reader and three senior lecturers. Being a private university, its management has been able to recruit retired but not tired nursing academic from home and abroad. ABU, Zaria too has carefully mapped out plans to join the train of developed Departments of Nursing, through its postgraduate programme where all its lecturers who do not possess PhD are currently studying for it.

Mr. Vice Chancellor Sir, I make bold to say that BUK Nursing Department I am currently heading will soon join the league too, as, with the extraordinary assistance of ABU to our Department in admission process, all lecturers in my Department will soon possess PhD. Not only that, the Senate of BUK at its 353rd meeting held on 31st May, 2017 approved the commencement of four postgraduate programmes for our Department. These are: Postgraduate Diploma in Nursing Sciences (PGDNS) for nurses with non-nursing degrees and Postgraduate Diploma in Nursing Education (PGDNE) for would-be nurse tutors among BNSc holders. These two programmes were approved to begin in the 2017/2018 session. MSc Nursing is to begin when we have graduated the first set of PGDNS and PGDNE; and PhD to start in three year's time when we have graduated a set of Masters candidates. We promptly notified the NMCN about our proposed PGDNS and PGDNE for its consideration and ratification. This is necessary because the graduates of the PGDNE programme would be required to register with the NMCN as nurse educators while PGDNS graduates would require a memo from NMCN to all employers of nurses nationwide to accord all rights and privileges due BNSc holders to PGDNS products too.

To the glory of God, the NMCN, at the maiden meeting of the recently-constituted council on 13th June 2017, approved the two programmes for BUK. Also, we recently added another feather to our shinning cap by winning an enviable place in the commendation list of NMCN in the results of the Qualifying Examination for General Nurses held in May, 2017. We presented 77 candidates and scored 94% success. By the time we start to turn out PhD candidates in this university, the whole world will know that there is a fast

growing Department of Nursing in BUK Nigeria for we shall make our products very unique in all respects!

My Journey to BUK

Mr. Vice Chancellor Sir, my journey to BUK is fortuitous as working far away from my family is the least thing that I ever imagined. Earlier in 2006, an opportunity to cross to a federal university came my way when my former teacher and mentor - Prof. Bolu Kunle Fajemilehin invited me to join the academic staff of the Obafemi Awolowo University Ife. I didn't honour the invitation for two reasons then. One, because I was comfortable being in the best state university and the third best overall in Nigeria as at that time. At the same time, LAUTECH Nursing Department was also rated by the NMCN as being the best in Nigeria, and a model for other upcoming Departments of Nursing. Therefore, I felt fulfilled and very proud to be part of the team that made the university reach such enviable height. I saw no reason to leave for any other university. Secondly, I was reluctant to work under some of my teachers who taught me during my undergraduate days at Ife; some of them are still much around in the university. Some of my friends saw many *opportunities* at Ife but I couldn't see any that surpassed where I was at LAUTECH; so I declined.

Again in 2010, when the University of Lagos was about to establish its Department of Nursing, my mentor again, invited me to Unilag. I followed him utilizing my annual leave to, so to say, test-run Unilag. I joined him in starting the programme and I was scheduled to continue as the Head of Department immediately he finished his sabbatical leave. I stayed for six months. I had actually prepared myself for Lagos life, to dedicate my energy to building the nascent department to maturity, but again, my vision was cut short by the megalopolitan nature of Lagos. I would leave my friend's house (my place of abode) at RCCG area for my workplace at the College of Medicine/LUTH Idi-Araba around 6am every morning and would not reach my destination until 11am – a distance of just about 10km! Also, in the evening, I would leave office around 6pm and would not get home until after 10pm. Traffic was always heavy all days, and one would be held up in traffic for hours on Lagos roads.

For me, I was, and still am not cut out for such stressful living condition, so I approached the Provost of the College to provide me with accommodation on

campus but he said the policy of the University was that only professors were entitled to accommodation within the College of Medicine / LUTH compound. Then I was a Senior Lecturer. I told the Provost then that unless I got accommodation within the compound or in the university rented quarters around Idi-Araba, Mushin or Ojuelegba or even at Akoka – the site of the main campus, I would have no choice than to quit. The provost didn't believe I could leave Unilag to go back to LAUTECH and he was really surprised to see I vamoosed after my leave expired and I wrote to that effect. I went to see him later upon invitation, but it was too late for him to make me change my mind.

Few weeks after I left Unilag, I was contacted by the authorities of University of Ilorin and I went to join another senior lecturer to establish the institution's Department of Nursing. My welfare was taken with all seriousness at Unilorin by Prof. Ishaq Oloyede – the then VC and now the much celebrated JAMB Registrar; and this enabled me to put in my best. I would have probably remained in Ilorin but for the entreaties made by some of my highly respected professors in LAUTECH who appealed to me to go back to LAUTECH so that the department would not collapse. The reason being that out of the three of us that were then senior lecturers in LAUTECH, two of us (I and another person) had written to leave. These respected senior colleagues appealed to both of us to return and we did. Had we refused, it would have been very devastating to LAUTECH's Department of Nursing because, apart from the three of us that were Senior Lecturers, others were Lecturers I and II, and none of them possessed PhD. Unilorin too did everything to convince me to stay as the former VC (Prof. Oloyede) promised me his support in anything that could make me stay, but again, my former professors had won my heart before I went to see the VC. To balance my relationship between the two, I went back to LAUTECH full-time, while I took visiting appointment with Unilorin immediately. I relinquished the visiting appointment when I got to Kano on full-time basis.

I got to know about the existence of BUK Nursing programme in November, 2013 when I went to ABU Zaria as external examiner. My long-time friend and current HOD Nursing of ABU – Dr. S.N Garba mooted the idea of my joining BUK as a visiting lecturer. I agreed and I was coming to teach the students when BUK offered me the appointment. The first time I came in 2014, I was warmly received by Mal. Umar Lawal who took me to the then C-MAC of

AKTH and the administrator of the Department – Dr. (now Prof) M.S Mijinyawa. I must confess that the reception I received from Prof. Mijinyawa on my first visit encouraged me to keep coming as I was afraid of the security situation in Kano then. He allayed my fears and was generally nice to me. I continued this throughout 2014, but in July of that year, he requested me to come either on annual leave or permanently, as without senior nursing academics like me on ground, the Department might not get accreditation.

When I told Dr. Garba my discussion with Prof. Mijinyawa, his response convinced me that the two of them had discussed and had concluded to invite me here. I cannot really say why I warmed up to the invitation, I just know that my spirit didn't resist it. When I told my family about my intention to come to stay and work in Kano, a family meeting was called where something that looked like a riot act was read out to me, that I should not go to any unsafe place to work, Kano inclusive. Some of my friends and associates could not fathom, why I chose to work in Kano. They reasoned that: '*if you don't want LAUTECH again, why reject Unife, Unilag, and Unilorin jobs at various occasions and now chose to work a thousand kilometres away from us - friends and family!'.* All these comments made me to reject the offer initially.

However, Prof Mijinyawa and the former VC – Prof. Abubakar Rasheed persisted. They both convinced me of the purpose of human existence, that is the need to serve humanity and that I would be doing just that by serving my profession – nursing and indeed, my country anywhere duty calls. I told my family, and I specifically sought the blessing of my octogenarian father, and all agreed that I should first come to work for some time by utilizing my annual leave, to 'test the ground' in Kano. Since the time I resumed in BUK for leave work in 2015, my association with the former Vice Chancellor has been wonderful and this made me feel at home. The current VC and the Dean of my faculty too are not different in the way they received and are still receiving me. Really, my relationship with the VC, the Dean and other senior members of the University management could be likened to that of *a rat relaxing in the same place with elephants*. That is why when my leave work ended, it was easy for me to accept the offer of permanent appointment here. Really, Prof Adebola – the Dean, Faculty of Dentistry and Prof. Akintade Dare (former Head of Radiography Dept) played major roles in my acceptance of permanent job here.

Mr Vice Chancellor Sir, I received my first salary as a Youth Corper, the lowest rank in the civil service career, in Sokoto State - the north-western region of Nigeria in 1994. It is interesting to note that I have also received my first salary as a professor, the topmost rank possible in the university service, here again in north-western Nigeria. As a true believer in Almighty God, I have come to the conclusion that nursing indeed is my pre-destined career and north-western region here is the place God has reserved for me to serve humanity and glorify His name through that profession. Sir, I am set to fulfil my destiny.

Who is a Nurse?

Those ladies in white gowns and those women in skirts and blouses, what do they do? Are they really needed in the provision of hospital services, or are they just errand ladies and *mamas* for the medical doctor in the discharge of his duty? These have been the questions most people ask from time to time. Very few believe that men are in nursing. How could a man, who has ambition at all, and wants to be relevant in life choose nursing as a career? The urge to answer these questions made Tijani, Makinde and Adedini (2006) conduct a research study among secondary school students in Ibadan on their perception about choosing nursing as a future career. Two reputable schools each in public and private secondary schools were chosen for the study. Questionnaire and focus group discussion were the instruments used to gather data. Results showed that majority of the respondents had high regard for nurses as independent healthcare practitioners needed in the hospital; they saw nursing as a profession meant for both male and female genders and were willing to take it up as career. However, the researchers discovered that majority of them would love to be in the profession to enjoy opportunity of working overseas while few believed they could easily get job immediately after graduation from the college, unlike other disciplines where it took people years to get job.

From time immemorial, various forms of nursing works have been attributed to different categories of people. Traditionally, we all know women to be the home caregivers, feeders, comforters and dependable companions to rely upon during periods of storm and vicissitudes of life. Globally, and specifically in Africa, it is very rare to see a woman under normal circumstances abandoning the responsibility of food preparation, caring and comforting her children during critical periods. Likewise, in the holy books – Quran and the Bible, there are ample evidences of nursing and midwifery duties credited to various

prophets. According to Ajao (2016), a nurse, viewed from the spiritual point, is someone who nurtures, nourishes, replenishes and restores people back to life. In the work of Tijani (2003), quoting Virginia Henderson (1963), nursing is viewed as being concerned with assisting an individual–sick or well–in the performance of daily activities that can contribute to his recovery (or peaceful death) that the person could have performed unaided if he had the necessary strength, will or determination, and to do this in such a way that the individual will gain independence as rapidly as possible.

However, if nursing is taken as a vocation or home duty for the female gender, or for anyone who thinks he can, that would be tantamount to an oversimplification of the artistic, humanitarian and the scientific knowledge inherent in the discharge of the succinctly packaged skills of nursing. Nursing could be likened to Law, which people don't really value until they are in trouble and are desperately in need of someone who could get them out of the problem. Apart from the high sounding names: *Barristers, solicitors and advocates* lawyers are called, common people take them as '*elejo wewe'* (talkatives). You sometimes hear Area Boys saying: "*Wetin lawyers dey do self; no be talk-talk dem dey do? And dey come dey shakara like that!"* However, we all are aware of the usefulness of hiring a lawyer no matter one's oratory or command of the use of the English language. This is why a common bricklayer cannot equate himself to an architect or an engineer. Prof Adeleke Ojo, my old teacher and highly respected professional would say: *"That one can change the spark plugs of one's car engine doesn't make one a mechanical engineer"* .

Let's take the example of a simple nursing procedure like a bed bath. Though a patient may not value a nurse bathing him on the bed, but certainly the physical, as well as emotional constraints of illness sometimes prevents a patient from doing it perfectly unaided in a way that will not interfere with his therapeutic regimen. We have seen tragic cases of some patients who have claimed to "know how to" by attempting to perform a nurse's duty by themselves and have ended up in the mortuary! One should know that performance of just the rudimentary part of the gigantic skills inherent in any professional practice doesn't make one a professional.

Primarily, the functions of a nurse are four-fold: restoration of health, alleviation of suffering, maintenance of health and rehabilitation of client back

to his pre-morbid state. Virtually all the specialities in medicine are in nursing. Therefore, mentioning the responsibilities of a nurse in just few words will be inadequate for this kind of academic discuss. Suffice to say that the duties and responsibilities of the following nurses differ greatly: Medical/Surgical Nurse, Maternal and Child Health Nurse (Midwives), Mental Health/Psychiatric Nurse and Public Health Nurse. Within these specialities of professional nurses are sub-specialities based on their respective specific input in patient's welfare. For instance, nurses in each of Accident and Emergency, Intensive Care, Peri-operative, Orthopaedic, Ophthalmic, Renal etc all belong to Medical Surgical Nursing speciality.

The focus of the present lecture is on the academic journey of a public health nurse. Of course, it is implied that there are sub-specialities in this speciality as well. Before talking about sub-specialities, let's look at who a public health nurse really is, as well as what he does.

A Public Health Nurse and His Responsibility to the Community

Allender, Rector and Warner (2014) saw a public health nurse as someone who cares for people in their respective places of habitation other than in the hospital, and these include but not limited to schools, market places, places of worship, old peoples' homes, factories, recreational centres, prisons, asylums, IDPs camps, and even places under bridges used as homes by some less privileged people. A public health nurse takes upon self the well-being of the people in these places. The services he renders is quite different from those within a hospital wall where he works interdependently. In the hospital setting, sometimes the nurse bases his intervention on patients upon the medical and health information provided by other health personnel like physicians, laboratory scientists and others and not only on the patient's complaint. Whereas, in the community, the public health nurse must utilize all his senses to see, touch, perceive, smell and synthesize information to provide care, not only to an individual in need but the entire family and the community at large. This, he must do all alone as no other health professional would be with him in carrying out this onerous responsibility.

Someone who desires to be a public health nurse must first of all become a general nurse by sitting for the professional examination of the Nursing and

Midwifery Council of Nigeria (NMCN) and this include candidates of nursing training from all schools and colleges plus BNSc students from universities. After passing the general nursing examination and getting registered with the NMCN as a Registered Nurse (RN), the individual must sit for another higher examination of NMCN before being qualified to register and sit for professional examination for Public Health Nursing Officers of Nigeria (PHNO). Because of the immense relevance of the Public Health Nurse in the healthcare management of the public, their training and examination is currently being handled by the West African Health Examination Board - a body comprising public health nurse managers in the West African sub-region. It is after passing the PHNO examination of this board that the individual could approach the nursing regulatory body in his home country to register as a PHNO. In the case of Nigeria, the candidate would approach the NMCN.

As stated earlier, the functions and responsibilities of a public health nurse are enormous and multidimensional. For instance, a PHNO has a role to play in peoples' habitation – how conducive to health is the home; in people's work – how health-friendly is their work; and in people's food intake – when, what and how they eat with regard to their health. It all depends on which area of practice one chooses to operate.

People in the Community and their Habitation

At a time, studying people's habitation caught my attention. I wondered why some people deliberately decide to dwell in unsafe homes. I wasn't particularly interested in residential buildings as I know most people have no choice about where they live. Socio-economic status is usually a huge determinant. One can choose to live with lizards and rodents, termites, cockroaches and some not so social animals like scorpions and snakes. It all depends on one's economic status. However, my concern really was not on those who could not afford better living conditions—this could be regarded as their station in life and very little intervention could be achieved. However, I focussed on people who could afford good structures for a home but chose to stay in an inconducive environment. According to Olaniran, Akpan, Ikpeme and Udoffia (1995), the quality of life one enjoys is greatly determined by the environment in which one lives.

In a study on the health-related quality of life by Sredl (2004), good quality life was likened to money in a bank. The researcher believed that just as removal of money in a bank rendered the bank useless, so also the removal of good quality in the life of an individual renders such life unworthy of living. In an attempt to ascertain the reason why people unconsciously remove quality in their lives, Tijani (2006) carried out a study on health risks inherent in corrugated iron sheet-made shops (popularly called *containers*) among market women in Ibadan. Through oral interview, some shops owners who were selling household materials in those shops were used as study sample. Contrary to expectation, poverty wasn't the reason why people chose to construct such types of shops, as majority of the respondents could afford brick-made shops, but they believed the corrugated iron sheet-shops offered more protection against burglars. Extreme heat, more especially during hot weather and electrocution during raining season were discovered to be the major risks of staying in corrugated iron sheet-made shops. To prevent heat stroke and electrocution, the shops owners were advised to lay the interior of the shops with appropriate insulating materials and to ensure the electrician tucked the electric cables inside plastic pipes before fixing on the corrugated iron-sheet wall of the shops. See figures 1*(a)* and 1*(b)*.

(a) *(b)*

Fig 1: *Corrugated iron sheet-made shops: a). Occupied with wares and b). Just freshly constructed by a local welder*

Food Consumption of the People

I later developed interest in peoples' food intake as I watch, with shock, how some people munch practically anything that comes their ways. In food consumption, palatability and hunger satisfaction alone should not be one's concern, rather the primary aim of food ingestion should centre on whether the food supports the health status of the individual concerned. How wholesome is the food intake? In studying diet, some foods have been identified to exacerbate symptoms of some disease conditions while some nutrients are known to destroy the pathogens affecting the individual. For, instance, it is known that peptic ulcer patients should refrain from eating spicy foods with too much pepper. If they refuse, they would soon be candidates for gastrectomy when their guts become perforated due to continual consumption of pepper. In the same way, a hypertensive patient who always adds extra salt to already prepared meals would soon come down with other cardiovascular diseases.

On the other hand, when talking of foods that are wholesome and body-friendly, fruits and vegetables readily come to mind because they contain large quantities of ascorbic acid. Apart from being an antioxidant, a preservative and food enhancer, ascorbic acid readily fights some pathogens to a stand still. Scurvy and common cold (catarrh) are age-long diseases that flee the body at the sight of vitamin C. Many wonders, in terms of support to body, have been ascribed to vitamin C. One of the area where it is said to have tremendous support to the body is in haemopoiesis (blood production). Anaemia has been fingered as a leading cause of death among our pregnant women and children under 5 years. About 10 years ago, our maternal mortality rate (MMR) as a nation was so alarming and embarrassing that the government of the day then listened to the cry of healthcare practitioners on the need to do something concrete to tackle the problem.

According to WHO (2006), the life time risk of a woman dying in pregnancy-related complications in sub-Saharan Africa was 1 in 14 compared to 1 in 4000 or even 1 in 10,000 in some developed countries. At that time, MMR for Nigeria was 800 per 100,000 live births whereas other countries in West Africa that were not as endowed as Nigeria had far less figure; Gambia had 560, Ghana 540, Liberia that just came out of war then had 760. In 2008, the Federal Government of Nigeria (FGN) for once recognized the role of the nurse – specifically the midwife in ameliorating the problem. The FGN, through the

NMCN made it compulsory for newly-qualified midwives to serve the country for one year before getting fully registered as midwives. In the programme, Midwifery Service Scheme, each state, more especially, the vulnerable ones post midwives for compulsory duty in villages where pregnant women hitherto had no access to qualified midwives. The effect was very dramatic as there was significant drop in MMR in those states. However, about three years ago when most of our state governors refused to pay the monthly token to these young midwives, their presence in those states reduced significantly. Who is to blame? We all know that a hungry man is an angry man!

To ascertain the beneficial effect of vitamin C on blood production, Tijani et al,. (2014) carried out a study on teenage pregnant women. The effect of supplementing a regular diet with ascorbic acid on haematological indices was studied in teenage pregnant women attending antenatal clinics of three government hospitals in Ibadan, Nigeria. Informed consent was obtained from 45 subjects. The subjects were divided into two groups: experimental group comprising 30 subjects and control which comprised 15 subjects. Baseline records of four blood parameters were obtained from all the subjects before each member of the experimental group was given a daily dose of 100mg ascorbic acid (vitamin C) supplement for four (4) weeks. The initial records of the haemoglobin levels, haematocrit value, red blood cell count and plasma ascorbic acid concentration of the experimental subjects ranged between 6.4 to 19.6g/100ml, 24 to 37% , 1.62 x 10^6 to 3.87 x 10^6/mm^3 and 0.00mg/100ml to 1.47/100ml respectively. In the control subjects, these ranged between 10.0 to 19.2g/100ml, 24 to 38%, 2.63 x 10^6 to 4.37 x 10^6 /mm^3 and 0.05 to 1.46mg/100ml respectively also.

The experimental group that was given a daily ascorbate load of 100mg above their normal dietary intake for a four-week period recorded a general increase in the blood parameters. The haemoglobin level, haematocrit, red blood cell count and plasma ascorbate levels rose from 7.1 to 20.0g/1000ml, 30 to 39%, 2.14 to 4.22 x 10^6 and 0.20 to 2.06mg/100ml respectively. The low levels were still recorded in the control group after 4 weeks study period and this ranged between 10.3 to 18.2g/100ml, 24 to 37%, 2.94 x 10^6 to 3.64 x 10^6 /mm^3 and 0.00mg/100ml to 1.45mg/100ml in that order as well. The 4.8 x $10^6 mm^3$ which is the normal standard value of red blood cell and 40 – 47% which is that of the haematocrit, were not met by all the subjects at the initial record. After 4 weeks

of supplementation (in the experimental subjects), these two values were still not met though there were some appreciable improvement. Generally, the data obtained from the study showed that ascorbate supplementation produced a positive haematological response in teenage pregnant women.

However, it is not only getting more midwives and supplementing regular diet with ascorbate that could solve the problem of MMR in Nigeria. Adequate feeding is a real panacea to the problem. Our people are not feeding well! People need to have access to good and nutritious diets at all times. We as a people have not exploited the arrays of foods in our surrounding to tackle this problem effectively. Virtually all Nigerian lands are blessed with fruits and vegetables that we can make use of to combat anaemia. Several studies have pointed out that inadequate feeding is playing a very serious devastating role in the perennial increase in Nigerian MMR. In the work of Ajayi, Olike and Adeola (1989), nutritional anaemia was discovered to be very rampant in developing countries and vitamins and mineral deficiencies were the specific nutrients that were lacking in the people. According to the authors, most deaths in pregnant mothers resulted from inability to afford blood transfusion perinatally since most women in labour have been diagnosed to be anaemic at antenatal period.

Nutrition education is seriously needed by our people to inculcate in them a good feeding habit. We sometimes hear students on campus saying the slogans for their meal skipping pattern: 1 – 0 – 1; 0 – 1 – 0 or 1 – 0 – 0. Ideally, one should eat every 3 - 4 hours so that there could be food in the stomach for gastric juice and hydrochloric acid to find something to act upon at all time, otherwise peptic ulcer can develop in one easily. The food does not necessarily need to be heavy at a time. This is why the Europeans do not practise the rigid three square meal pattern as done by Africans. The European would take a cup of tea with a piece of biscuit or a small slice of bread every 2 – 3 hours, hence making his total meal time about six to eight times per day, whereas in many communities in Africa, for instance, our meal times are strictly morning, afternoon and night and our total meal consumption may be more than thrice that of the European. This is because we cherish heavy meals. The hard fact is that no matter how heavy, the food in the stomach will get digested and leave the stomach empty after about 4 hours of consuming the meal. No wonder the problem of peptic ulcer is more common among us.

Tijani and Keshinro (2008) looked into the nutrition education and how it could be effectively utilized to improve the nutritional status of Tuberculosis (TB) patients in a government hospital Ibadan. A random sample of 60 patients was selected out of 110 total population of TB patients receiving treatment at that time. Pre-tested questionnaire was used to assess their socio-economic status and nutrition knowledge. The base-line nutritional status was assessed using height, weight, body mass index (BMI) and mid-upper arm circumference and 24-hour dietary recall. Then, nutrition education intervention which comprised group discussion, use of food charts, food models and food demonstration was given once weekly to the patients for 6 months. After six months intervention, their new nutrition knowledge and nutritional status were assessed. Their anthropometric data and nutrient intake were then compared with Food and Agriculture Organization/World Health Organization (FAO/WHO) standards. The results revealed that the patients' knowledge in nutrition improved rapidly following the nutrition education given. The intervention resulted in significant increase in mean weight of the patients from 46.4 ± 7.7kg to 51.7 ± 7.1kg. Also, mean BMI values of the patients increased from 18.04 ± 0.78 to 20.23 ±1.96. The patients met the WHO dietary allowance for energy, protein, vitamin C, iron and calcium only after intervention. The study was able to affirm that nutrition education intervention could help improve nutrition knowledge and status of TB patients.

In my search on the food intake of the community, I also looked at the most common ailment in our midst – Malaria. It is a general knowledge that we are what we eat. If we eat well, we stay healthy and vice versa. However, our food intake may not be able to keep us in good health if we don't take time to avoid malaria. Many people do have 3 to 4 bouts of malaria attack in a year, and when malaria attacks the vulnerable groups like pregnant women and Under-5 children, the devastating consequences are always very great. Government has intervened in this regard by making the treatment of malaria free of charge for these two groups under the Primary Health Care Scheme. Also, various methods have been put in place to eradicate mosquitoes which harbour the malaria parasites. i.e. the strains of plasmodium. However, achieving this has been a herculean task as plasmodia, have refused to leave the African soil. Plasmodia have fiercely fought back by developing strains which are resistant to common drugs of choice - *Chloroquine*. Also, other drugs too like *Camoquine, Amodiaquine, Fansidar* etc. have become ineffective in attacking

plasmodium in human blood. It is because of this that the WHO (2005) tackled the problem of resistant malaria headlong by introducing combination of drugs; but such combination must have *Artemisin* among the drugs.

After the drugs have been in circulation for about four years, Tijani, Oluyedun and Adisa (2009) tried to study the effect of *Artemisin* combination therapy (ACT) on malaria treatment in Ibadan. 98 patients who had just been diagnosed of malaria, through identification of malaria parasite in blood, formed the study sample. They were served questionnaire after completing the dose of ACT and their blood sample showed absence of plasmodium. Most (87%) of the patients attested to the effectiveness of ACT in treating malaria but 65% complained bitterly about the exorbitant cost of the drugs at that time. The researcher recommended to government free distribution of the drugs to pregnant women and U5 children as well as great subsidy to other members of the community. It is probably because most people couldn't afford ACT then that made the National Primary Health Care Development Agency convinced the Federal Ministry of Health to embark of free distribution of the drugs to the vulnerable members of the community.

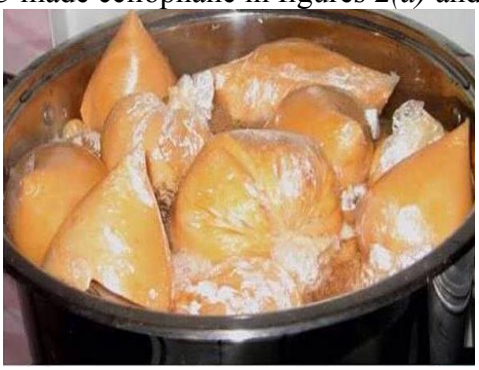
My Search for Carcinogens in Foods

Cancer occurrence has been on the increase in recent times worldwide. Every 1 in 50 of the admitted cases of hospital in-patient in tertiary health facilities in developing countries has cancer-related diagnosis (Centre for Disease Control, 2015). According to the America Cancer Society (2016), the incidence of all forms of cancer from year 2008 to 2012 is 454.8 per 100,000 population and cancer mortality rate is currently put at 171.2 per 100,000. Incidence of cancer in countries within the African continent has been found to be similar. It is 3.1 per 1000 population in North Africa, 3.2 in West Africa, 3.3 in Central Africa, 3.3 in East Africa and 3.5 in South Africa. However, occurrence of cancer can be predicted 15 years before it actually weighs down its victim. It is detected through a simple blood test which shows bio mark to predict cancer. The real cause of cancer though unknown, lifestyle habit has been implicated in the occurrence of cancer. Various reports have shown that foods consumed by many Nigerians have some level of carcinogens in them. The port of entry of carcinogens could be from the farm, maybe as a result of pesticides and germicides used during planting, or during cooking or packaging. Also,

carcinogens may contaminate food from preservatives, from storage or from containers used in packaging the food.

Moin-moin

It is very easy to consume carcinogen in *moin-moin.* Recently, the Federal Minister of Agriculture warned Nigerians on their dangerous preparatory method of *moin-moin* for instance. Audu Ogbeh actually based his advice on the reports of research studies. See the picture of moin-moin wrapped with PVC-made cellophane in figures 2*(a)* and *(b)*.



(a)

(b)

Fig 2: *Moin-moin wrapped with cellophane is very dangerous*

Fig 3: *Hot food wrapped in cellophane is very dangerous*

moin-moin is made from bean paste mixed with water, onion, pepper and palm oil. The ideal thing is to scoop the mixture in leaves and place in a container to cook till it is ready for consumption. But today, people see the use of leaves as being *"primitive"* and now used nylon made of polyvinchloride (PVC) to wrap their moin-moin. In a study conducted by Adeoye and Tijani (2009) on people's

preference for food service in ceremonial outings in Ibadan, as much as one–third of the respondents had no specific preference. They were asked to choose among cellophane, leaf wrappers, plastic and ceramic plates. In fact, as much as 65% preferred cellophane with an excuse that they could see through the transparent cellophane the quality and quantity of food they could consume at a glance; and that taking foods in wraps enable them to take the number of wraps that could satisfy them without necessarily wasting food. It was also surprising that about three-quarters of them condemned leaves as they saw wrapping foods in leaves primitive and old fashioned.


Fig 4: *Moin-moin wrapped in leaves is highly beneficial*

People are ignorant of the fact that PVC releases benzene and dioxine, which are known carcinogens, into their foods. If one uses leaves that our fore-fathers have been using for long, one stands a better chance of getting large quantities of vitamins of B and C group as additional, free of charge nutrients added to the food. In the case of moin-moin, it tastes better and more appetising than the ones wrapped in cellophane. I wish to tell this gathering that using cellophane to wrap foods in our homes or at parties constitutes serious danger of inadvertently consuming large amounts of carcinogens. If you attend a ceremony where foods like *semovita, amala*, or pounded yam is wrapped with cellophane, the best thing is just to take a small bite of beef in the stew, and possibly with a small sip of bottled water, drop your gift for the celebrant (if you go with any) and leave. Never be tempted by the scintillating aroma of the stew to consume the food in cellophane! See figures 5.


Fig 5: *Staple foods in ceramic plates or leaves is ideal, and not in cellophane wrap!!!*

Loaves of Bread

Another common example of where one can inadvertently consume carcinogens is in loaves of bread. Bread is one of the staples commonly consumed by people of all socio-economic classes. The rich and poor as well as the literate and illiterate alike do consume it frequently. Bread is made mostly from wheat flour and sometimes from cassava flour which are processed to loaves in bakery industry. However, various methods of preparation of bread sometimes makes its consumption constitute danger to human health. The main ingredient causing health problems to bread consumers is **potassium bromate**, an additive to flour in bread preparation.

Potassium Bromate is a chemical substance used worldwide in the milling and baking of bakery products. The bromate ions (Broz) exist in a number of salts in which the most common are potassium and sodium bromate. Among others, potassium bromate is preferred in terms of usage. This slow-acting oxidant was first introduced as a bread improver in 1916 (Atttang, 2003). Potassium bromate serves as an oxidizing agent, flour improver or maturing agent. It also serves as flour enhancer, neutralizer, dough conditioner which prevents dough for falling and at the same time yield many loaves. Despite this distinct quality of potassium bromate that have endeared it to bakers, there has been vehement objections globally because it is a non-natural derivative used as food additives with serious adverse health consequences.

According to Attang (2003), the Foods and Drug Administration in America in 1992 and 1993 tested several loaves of bread in circulation and made a surprising discovery that many of the loaves had detectable levels of bromate.

In the United Kingdom, 28 brands of loaves were tested for bromate by the food science laboratory in 1989. Three quarters of the loaves also had significant levels of residual bromate in Britain. Therefore, in 1993, the Joint Expert Committee on Food Additives (JECFA), Food and Agricultural Organisation (FAO) and World Health Organisation (WHO) recommended that potassium bromate be removed from the list of approved flour treatment agents. Many other countries like Canada, Greece, Japan, Belgium, Nigeria, to name a few have followed the WHO directive and banned the use of potassium bromate. The trend worldwide now is the discontinuance of potassium as a dough enhancer and its replacement by many other different alternative additives like Ascorbic acid, L-Cysteine Hydrochloride, Butylated Hydroxyarisone, Ascorbic Palmitate, Ascorbic stearate either singly or in combination (Ishiade, 1994).

In Nigeria, this universally-acclaimed choice dough oxidant has been in use since 1945 (Attang, 2003). In 1993, the then Food and Drug Administration (FDA) banned the use of potassium bromate without much compliance by bakers. In 1995, the National Agency for Food, Drug Administration and Control (NAFDAC) resumed the banning of potassium bromate. Since then, effort to totally eradicate the use of this evil chemical has continued. According to Olaitan (2003), potassium bromate causes alteration in the normal sequence of cells in human DNA. Once the sequence of a single cell changes, development of cancer follows. Studies have shown that prolonged period of administration of potassium bromate on rat and mice has resulted in cancer of the kidneys and thyroid gland (Ishiadate, 1984 and Ajayi, 2003). There is every possibility that people on habitual consumption of bromate-containing bread could develop cancer of similar organs. Apart from being carcinogenic, consumption of potassium bromate over a long period of time has been known to decompose vitamins A, B1, B2, E and Niacin, which are the main vitamins available in bread. Therefore, habitual consumers of bread are only piling up calories and the devastating consequences would manifest in their health status sooner or later!

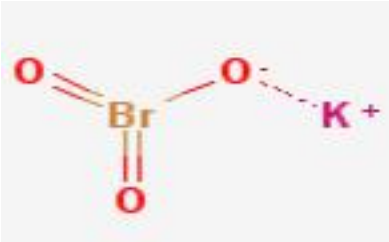


Fig 6: *Physical Properties of Potassium Bromate (KBrO3)*

Fig 7: *Bread containing Potassium Bromate*

Fig 8: *Bromate-free loaves*

Actually, addition of potassium bromate to flour increases the volume of the flour and the bakers get more cuts which invariably bring more profit. Also, it gives bread a fine texture that makes it more attractive to consumers. Bakers who don't use the additive in their flour usually produce bread that are coarse, gritty to touch and which do not appeal to buyers. Consequently, our people have been consuming '*fine, smooth-textured loaves*' believing that is the good quality bread over a long time. No wonder the occurrence of cancer cases in our hospitals has been on an alarming increase.

To really ascertain the level of compliance to the ban of potassium bromate, Tijani and Kolade (2008) carried out a study on this among bread bakers in Ibadan. The objectives was to find out the processes involved in bread making. 70 respondents were selected which comprised 25 bakers and 45 casual workers with at least two years of continuous work in bakery. Oral interview and focus group discussion were the instruments used to gather data. The results showed that majority of the respondents - 78.6% used potassium bromate as additive to enhance the quality of their flour, as they confirmed it makes the bread more attractive to buyer apart from more cut they got from the flour. All the respondents – 48 (100%) that used the additive were aware of NAFDAC ban on its use, but they said it was impossible to stop using the bromate and still remain in business. As much as 72.9% of them claimed that any bread baker who chose to obey the NAFDAC law to stop using the bromate would soon get liquidated and pack out of business as no one would buy his loaves. Approximately, three quarters of the respondents dismissed the claim that bromate has any health implication as 77.1% of them said their families, including themselves, had been eating the same loaves they produced as daily meals over long period of time without having any health challenge.

When confronted on how they had been escaping NAFDAC's law enforcement agents, majority were silent as only 15.3% said they hid the product away whenever NAFDAC came for their occasional unannounced factory inspection. Also, 5% admitted that they usually *'played ball'* with the agents whenever they were caught red-handed when on-the-spot test on their loaves revealed bromate content. Our attempt to know what the details of *"playing ball"* meant was vehemently resisted and the researchers had to tactically apologize to the bakers to ensure further cooperation on the study. The 21.4% that didn't use the bromate said they were aware of the carcinogenic effect of the additive through series of lecture that NAFDAC exposed them to. Hear one of them:
"May God forgive me of my former sins when I didn't know that potassium bromate causes such a huge health problem". And to think that because of money, I caused an incurable disease to my customers!"

Another one said:*"Taa ba n rin, t'owo o ba see san an, a ka a leri ni oro buredi sise yi o,"* meaning: *if my hands refuse to swing back and forth while walking, I will rather fold them on my head. i.e. if making bread will make me*

offend my maker (God), I will rather remain poor by getting out of bread making business".

The results actually revealed that bakers were aware of the carcinogenic effects of the additive, but the urge to make more profit coupled with uninformed public who really prefer the bromate-containing loaves make bakers to continue its use. Also, government's ban on the additive was not effective because consumers were not carried along in the campaign. It was then suggested that people's awareness of good quality bread be intensified. A visit to any open market where bread is sold in Nigeria usually reveals the wanton display of these smooth, fine-textured bread. Even some bakers, who initially complied have thrown patriotism overboard and joined the train of bromate users when their customers – the bread hawkers abandoned their loaves for those containing bromate. Government's effort to curb the use of bromate through NAFDAC, while late Prof. Dora Akunyili was its head, was very poor. This was surprising as the then NAFDAC boss was a no-nonsense woman. Maybe NAFDAC concentrated too much of its effort on curbing the production and distribution of fake and counterfeit drugs, reserving very little for food safety. However, if one rates the level of compliance then as 20%, I am afraid, it probably has dropped to less than 5% by now as there seems to be general relaxation of the rule at the moment because most loaves seen on display now are fine, smooth-textured loaves. The danger in this type of loaves is now clearer to this audience, I suppose!

There is serious need for government to either set up another body to deal with food safety or inject more professionals like public health nurses with interest in people's food consumption, nutritionists and food technologists into NAFDAC to make the body deal decisively with food safety for the masses. NAFDAC's efforts in food safety was and is still being appreciated in sachet water production only. Currently, virtually every sachet water consumer looks for NAFDAC number before gulping the water down the throat; although not all NAFDAC numbers seen on sachet water could be genuine anyway! I am aware of the role of the Standards Organization of Nigeria (NSO) in all substandard products, but this body seems to be concerned with imported goods only.

Cow Skin (Ponmo)

As a Public Health Nurse, another common food that caught my attention is cow skin popularly called *Pomo* or *Ponmo*. This is cow skin/hide that has been processed for consumption. It is a very popular 'meat' source in many homes in south-western Nigeria. In fact, quite a large number of people prefer *ponmo* to muscle and organ meat in their diet. My observation within the time I got to northern Nigeria has shown that *ponmo* is not as popular here as it is in the South-west. People in this part of the country actually prefer to use the cow skin/hide for leather, which is what it is meant for. Basically, there are two varieties of *ponmo* viz:

- **White/Cream/Off-white Colour:** The hair is removed from the hide by soaking it in boiling water, and then using blade to shave off the hair. This type is relatively safer for consumption.
- **Brown Ponmo:** In this variety, the hair and skin are subjected to high level of heat, so as to burn out the fur. After this process, the skin is washed several times and then boiled for hours so as to ensure that it is softened. The burning, in this case, makes brown *ponmo* anathema to whoever desires good health, as we shall see in the course of this lecture. See figures 9 and 10.

Fig 9: *Eating white ponmo is preferable*

Fig 10: *Brown ponmo is highly carcinogenic*

Nutritional Value of *Ponmo*

According to Ogundimu (2015), nutritional value analysis of a 100gram piece of *ponmo* is as follows:

Calories	-	150g;
Total fat	-	**4g**;
Saturated fat	-	**1g**;
Polysaturated fat	-	0g;
Monosaturated fat	-	0g;
Trans fat	-	0g;
Choesterol	-	0g;
Sodium	-	0g,
Potassium	-	0g;
Total carbohydrate	-	0g,
Dietary fibre	-	0g;
Sugar	-	0%;
Protein	-	0%;
Vitamin A	-	0%;
Vitamin C	-	0%;
Calcium	-	0%;
Iron	-	0%.

There is abundant quantity of incomplete protein called collagen in *ponmo*, as such it is not good to consume on frequent basis because collagen lacks tryptophan, an essential amino acid. From the above analysis, we can see that

ponmo contains nothing but empty calories which can be likened to carbonated (soft) drinks people serve their visitors. As food, *ponmo* is even worse than carbonated drinks as it adds to the fat content of the body, as such constituting great risk to people with cardiovascular diseases like hypertension, diabetes and the likes.

Also, for the following three reasons, one should abstain from *ponmo*: One, some of the animals killed and used for *ponmo* actually have skin diseases. Some of these diseases are such that ordinary boiling cannot kill the pathogens. Therefore, when such meat and *ponmo* are consumed, the disease could be transferred to the consumer. Also, some of the killed animals might have just received injection for some ailment; yet our people go ahead to kill them. Because the chemical injected to the animal might not have been fully absorbed into the animal's blood stream, the consumers of the *ponmo* inadvertently consume the chemical, and this could result in some form of anaphylactic reaction in them. This is even more common in environments where people do not call veterinary doctors to ascertain the health of the animals they kill for consumption.

Two, the most common danger of eating *ponmo*, more especially the brown ones, is the tendency to consume polycyclic aromatic hydrocarbons (PAHs) - the chemical content of rubber tire, charcoal, and other materials used to burn the cow skin. During burning process, the *ponmo* is subjected to unclad flames, therefore different unhygienic substances such as trash, wood, charcoal, rubber tyre are thrown into the furnace to sustain the blazing heat for a long time in a bid to ensure total burning of the hair on the cow skin. Apparently, these materials for burning change the colour of the animal skin to brown. Unfortunately also, these chemicals got percolated into the skin and this constitutes an unwanted anti-nutrients that *ponmo* eaters consume. Ingestion of plastic material in terms of PAHs has been shown to be carcinogenic. Because of this, development of cancer cell is a very likely occurrence in the body of habitual consumers of *ponmo*. Thirdly, closely related to this is the epidemiological studies that have linked intestinal tract cancer to the frequent intake of smoked foods generally.

To assess the level of addiction to *ponmo*, Ogungbemi and Tijani (2014) carried out a study on preference for meat/fish types in diets among restaurants' food

consumers in Osogbo. The results revealed a staggering likeness for *ponmo* by the people. As much as 68% of the respondents prefer *ponmo* to skeletal or organ meat in their diets. When asked the type of *ponmo* they like, as much as 76% of *ponmo* consumers actually preferred the brown type. This is the more dangerous type because of the possibility of consuming PAHs as previously explained. Majority (65%) of the respondents were not aware of any danger associated with eating *ponmo*; even when the researchers tried to explain the need to abstain from the brown type if at all they must eat *ponmo*, 45% of them refused to believe. Rather, some of them said nonchalantly, "*What is my business about what will kill me, are you people saying we should not eat any food again because of death?"*

Another respondent said, "*Why is it that you - these health people now condemn virtually all the foods we have been eating long before many of you were born?"*

Health education is seriously lacking in this country. Nigeria has developed to a stage that we should start putting labels on nutrition content of any food whatsoever, so that people can willingly choose food even if it has implication on their health. This is what is in operation in advanced countries like the US, U.K and even in some Arabian countries. In Nigeria, the only 'food' with such information is the cigarette where it is conspicuously written: "*Smokers are liable to die young"*. Despite this, some people still smoke, but the smokers know they willingly chose their destiny, so to say. Why can't we adopt similar thing for all foods? However, in spite of these disadvantages, *ponmo* has a good point. Eating *ponmo* could bring solace to the poor. The under privileged members of the society usually buy it because it is cheaper than beef, and by so doing, they derive the psychological feeling of consuming adequate diet with complete *'meat'*. At least, it is better than a meatless diet, they console themselves.

Health Risks Inherent in Foods Packaged in PVC Containers

Another area I have directed my attention is on food containers. I discovered the use of Styrofoam containers was gaining ground among the people. Both the literate and illiterate alike love to use Styrofoam containers simply because it looks decent to handle. However, there are dangers inherent in packaging food in such kind of containers which many people are still ignorant about. Packaging is important in preparation and serving of food. It protects foodstuff,

but can also be a source of chemical food contamination. Polyvinyl chloride (PVC) containers soften upon exposure to heat and return to their original condition at room temperature. This is as a result of the addition of additives and stabilizers such as phthalates and nonylphenols during production. However, there have been some health concerns regarding these stabilizers and plasticizers. Recently, cancer occurrence has been on the increase globally. Food packed in PVC containers have been shown to contain carcinogens. The general populace is primarily exposed to vinyl chloride mainly from ingestion of foods or other items that may contain low level of vinyl chloride that has leached from PVC containers into the food; and when ingested over a long period of time, can cause cancer in the body of the consumer. The phthalate and nonylphenol are not chemically bound to the materials they are added to, so they can be released from the products that contain them and when ingested, can cause cancer.

Kano, being the state with the largest population in Nigeria, with over nine million people was observed to have virtually all its road-side food vendors, *bukateria*, canteens, restaurants and eateries making use of PVC containers to sell their food. For this reason, Sanusi, Garba, Kuki and Tijani (2017) conducted the study with the sole aim of assessing whether carcinogens (phthalate and nonylphenol) actually leach into foods packaged in polyvinyl chloride containers. Two food vendors were selected using multi stage sampling technique. Twenty four food samples were bought from the two selected food vendors. Experimental research design was used to carry out the study, extraction was done and the samples were analysed using GC-MS. The results showed the following:

1 Phthalate and nonylphenol actually leached into foods packaged in Styrofoam disposable plates.
2 Likewise, phthalate and nonylphenol too leached into foods packaged in plastic containers.
3 However, neither phthalate nor nonylphenol leached into ceramic plates whether the food contain oil or not.

Health is wealth. Consumption of healthy foods help to minimize health-related problems. So, care should be taken with regards to the types of containers used in packaging food. Based on the findings of the study, it is safe to conclude that

phthalate and nonylphenol do leach into Styrofoam disposable packs and as well as into plastic food containers, whether the food contains oil or not; although, it leaches more into oily foods. The results affirmed the safety of ceramic plates in food packaging as far as leaching of phthalate and nonylphenol into food are concerned. From the literature, it was shown that the more flexible a PVC container is, the more it will be capable of leaching these carcinogens. This is because these carcinogens are the additives and stabilizers added to PVC during its production. Therefore, the more the additive and stabilizer added to PVC, the more flexible it is. See figures 11 and 15. It is therefore recommended that ceramic plates be used to package food as far as fight against cancer is concerned.

Based on the findings of the study, the following recommendations were made;

1. PVC producing companies should use alternatives to phthalates and nonylphenol as additives and stabilizers during production.
2. Phthalate and nonylphenol containing materials should be properly labelled from the company, so that the populace will know the type of material they are buying as well as know the type of foods they can package in such containers.
3. The agency for food safety, NAFDAC should ban the production of PVC materials with these carcinogenic substances.
4. The general populace should be enlightened on the dangers of consuming foods packaged in such containers.

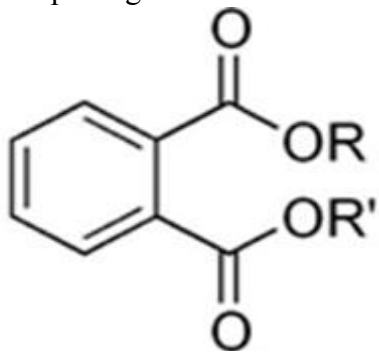


Figure 11: *Chemical structure of phthalate (**Source:** Stephen (2015))*

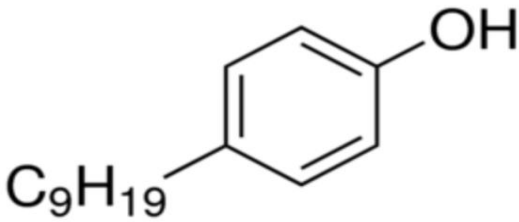


Figure 12: *The molecular structure of nonylphenol* (C15H240) (**Source:** Bontje, Hermens, Vermeire and Damstra (2012)).

Fig 13: *Styrofoam food containers are very dangerous*

Fig 14: *Vegetable stew in plastic food containers. This is not ideal*

Fig 15: *Oily food in plastic containers (oil aids leaching of phthalate and nonylphenol) into the food*

Fig 16: *General warning against packaging foods in Styrofoam containers*

Fig 17: *Clear plastic food containers are also not good*

Fig 18: *Ceramic plates and cups: The ideal food/drink containers*

Other Foods and Drinks

Kolanut

In my adventure on food intake of the community, I have also beamed my searchlight on kolanut *(Cola nitida)*. I didn't show much interest in bitter kola *(Garcinia cola)* because there have been numerous studies on it which revealed its importance to man: its beneficial effect on vision has endeared it to ophthalmologists; its wonderful fight against infertility makes it a treasured diamond to obstetricians and gynaecologists; its effect on sharpening the memory makes it an essential tool for psychologists, nurses and all those who train young ones and its healing properties, when combined with honey have been well documented in literature. Likewise, its antibiotic, analgesic and antiphlogistic (anti-inflammatory) properties have never gone unnoticed. Though, *Garcinia cola* is not thought to be of any importance among the natives. The documented benefit of the cola is little known to the masses. That is why our people do not see *Garcinia cola* other than for entertainment. To further ascertain the perceived uselessness of bitter kola, Yoruba have these to say about it:

"Ki ni anfaani Orogbo, ti a paa ti ko ni awe, ti a je to tun koro, ti a tun fee la dana ti Sango tun waa ni omo iya oun ni? Which literally means: *Of what benefit is bitter kola? We cut it, it has no parts like kola nut. We then chew in the mouth, it tastes very bitter. Then as a last resort, we tried to use its tree to make firewood for cooking, yet, Sango – the god of thunder, threatens.*

Nigerians however do consume kolanut a lot. In fact, it always baffles me what nutrients therein in kolanut that makes our people derive so much pleasure in its consumption all the time. Because of this, I decided to research into it. Kolanut is seen as a kind of refreshment, snack or item of entertainment for visitors in every region of this country, more especially in eastern and northern Nigeria. Kolanut is the nut of the kola tree, a genus of trees native to the tropical rainforest of Africa, classified in the family *Malvaceae*, sub-family *Sterculioideae* (Dack and Reed, 2009). Kolanuts have been used in West African and Anglo-American herbal medicine as an antidepressant. Kolanut is best known for its caffeine-containing seeds and are chewed as a stimulant (Burkill, 2000). The seed also contains many active ingredients that are useful in pharmaceutical industries and in the production of kola-type beverages, dyes, wines and confectioneries (Ashiara, Sano and Crozier, 2008).

Kolanut is one of the nuts consumed for cultural purposes in many parts of Africa, especially in West African societies (Vaughan and Geissler, 2009). Kolanuts are reported to suppress sleep, hunger and thirst and have been used in western and central Africa for thousands of years to treat headaches, migraine, dysentery and diarrhoea (Burkill, 2000; Barwick and Van der, 2004). On account of their sleep suppressing effect, Kolanut chewing is now very popular among students, labourers and drivers on long distance journeys in West African countries (Mednick, et al., 2008). Long distance drivers are usually under intense stress. In Nigeria, the majority of them are self-employed and are owners of the vehicles they drive and some drivers make daily or weekly monetary delivery to the owners of the vehicle they drive. The drivers face the highway on high speeds on daily basis, sometimes making more than one trip on their usual route. Consequently, in order to reduce or minimize this stress, some drivers believe that the use of substances such as alcohol, cigarette, kolanut, marijuana, amphetamines and other stimulating agents of the central nervous system will significantly improve their performance and prevent them from tiredness and sleep as long as possible (Barry, et al., 2008).

Studies in Nigeria and other countries have shown a high prevalence of use of psychoactive substances, among various categories of drivers. However, the ability of these substances to stimulate the central nervous system usually impairs concentration on driving (Bamgboye, 2007). The use of these substances have been associated with the occurrence of motor vehicle accidents. While the relationship between alcohol use and driving have been studied in different parts of Nigeria, literature on the use of other stimulants such as kolanut and cigarette smoking are sparse (Smith, 2002). Studies have also shown that adverse effects of sleep deprivation such as fatigue, headaches, and poor mental and motor functions affect negatively the full concentration required in driving (Bamgboye, 2007 and Smith, 2002).

It was based on this that Tijani, Oladeji and Adetutu (2013) carried out a study on the consumption pattern and perceived benefits of kolanut among long distance drivers in Ojoo Motor Park, Ibadan. 101 respondents were selected through stratified sampling method and were given questionnaires. Ages of respondents ranged from 18 – 65 years, mean (±43.7). The results showed that 69% of respondents consumed kolanut daily, especially when driving. Majority – 75% believed kolanut consumption reduces fatigue, stress and

stimulates the body to perform better. In addition, 73% believed kolanut increases mental activities, dispels sleep and hunger (86%), suppresses hunger and makes journey less stressful (85%), and ensures clear vision needed in driving (80%). However, majority of them (63%) agreed that kolanut consumption did give an unsightly dull brown colour to the teeth, causes toothache and decay (33%), causes insomnia and therefore general body discomfort (50%), and 66% believed its frequent consumption causes high body temperature.

It was discovered that the perceived discomforts associated with kolanut consumption could not deter the respondents from consuming kolanut as 63% of them said kolanut staining of teeth could be prevented by brushing teeth immediately after consumption or brushing three times daily. But there was no evidence to show that the drivers did brush their teeth immediately after consuming kolanut or three times as claimed, because up to 83% of them did stop only once or twice in restaurants in their usual 8 to 14 hour journey. The researchers then suggested to the FRSC to organize, on frequent basis, health education to enlighten the drivers on the need to drive without the influence of stimulants; and if they must chew kolanut, it should be during the resting period at restaurants where they usually stop over. Then, they should be advised to brush their teeth immediately after consumption. See figure 19.




Fig 19 : Kolanut *(Cola nitida)*, bitter kola *(Garcinia cola)* and stained teeth

Public Water

There are indications that public water may not be safe for human consumption as against the general belief. Apart from corrupt practises where water engineers or the directors of works deliberately pump untreated water into the community, having embezzled funds meant for water purification, adequately purified water could easily get contaminated through broken pipes on the streets, from storage tanks at home, in containers used to fetch/store water or even from the cup used for drinking. Recently, *Daily Trust* an independent Nigerian newspaper conducted a study on public water in seven (7) states in Nigeria and published the results in its daily edition of the paper on May, 2, 2017. The results showed the presence of microbial organisms that exceeded the

maximum permissible level by the WHO and the Nigerian Standard for Drinking Water Quality (NSDWQ) limits. The seven states include Abuja, Lagos, Kaduna, Enugu, Plateau, Katsina and Kano.

According to the report, water samples taken in all of the states showed figures that exceeded the 0cfu/100mi maximum permissible level by the WHO and NSDWQ. Also, thermotolerant Coliform–i.e. the commonly used bacterial indicator for sanitary quality of water–discovered in the water samples too exceeded the maximum permissible level of 10cfu/100ml. This report is a pointer to institutional failure. In a situation where we cannot get uninterrupted electricity for 5 hours/day and the water supply is not health-friendly, government is indirectly telling us all to be our individual water corporation and electricity provider, so to say.

The problem now is that various sources of water for the people in the community are not health-friendly enough and in fact, some sources of water have been constituting dangers to the community. While the water sources like streams, wells and rivers used by the common people harbour pathogenic organisms that cause various forms of illnesses, boreholes–the main source of water for the elite and affluent members of the society too harbour carcinogens. Aside from environmental degradation like landslides and earthquakes which sinking large numbers of boreholes could cause, in the underground, the water might also be exposed to natural radionuclides and nature's occurring hazardous metals *(As, Cd, Co, Cr, Cu, Hg, Pb, Sn, and Tl)*. These heavy metals, as they are called, are toxic with carcinogenic properties. Therefore, it is highly recommended and essential that water from boreholes be sampled for laboratory analysis and biochemical analysis before consumption.

Further study on water by Ababio et. al., (2011) reveals it as a common substance that rarely occurs in its purest form in nature. According to Helmenstine (2013), the chemical formula for water is usually written as H_2O or HOH. The pH value of drinking water reflects how acidic or basic it is where 'pH' stands for "potential of Hydrogen", referring to the amount of hydrogen found in water. The pH is measured on a scale ranging from 0 - 14. A pH measurement of below 7 means acidic and of above 7 is basic or alkaline; while 7 is the neutral point (Well Care Water System Council, 2007). The pH scale offers a measurement of how acidic or basic a solution is and this is determined

by its concentration of hydrogen ions. Pure water is an example of a neutral solution (Dinesen, 2010 and Richards, 2013). The pH scale is important in order to know how acidic or basic a solution is.

One can easily measure the pH of a solution using a special kind of scale referred to as litmus strips, paper or fluid which changes colour when placed in an acidic or basic medium. In acidic solutions, blue litmus paper turns red, and red turns blue in basic solutions. The litmus paper is thus an indicator for the measurement of the pH value of water. According to the US Environmental Protection Agency (2007), public water system should maintain a pH level between 6.5 (slightly acidic) to 8.5 (alkaline). However, Helmenstine (2013) emphasized a neutral pH of 7 as ideal for wholesome water. Salzwedei, (2013) also affirmed that normal pH of drinking water should be within the range of 6.5 to 8.5. However, some municipalities, such as Boston in the US, have started treating their water to be as alkaline as 9.3 pH as they affirm slightly alkaline water benefits the body by maintaining optimum acid-base balance of the body. Further work by the author showed that the pH of water is affected by temperature; when its temperature goes up by 25^0C, the pH decreases by 0.45 and therefore becomes more acidic. This probably explains why higher pH are required in potable water as immediately after consuming water, it gains more heat from the body thereby making it become acidic. To maintain the neutrality of water therefore, its pH needs to be slightly alkaline before consumption.

Water pH testing is therefore vital if optimal health is to be maintained. Young and Young (2003) strongly recommend drinking of liberal amounts of alkaline water (having a pH of 9 to 11) which they discovered is capable of neutralizing stored acid wastes from the body. Drinking of at least 4 litres of alkaline water per day is recommended for healthy living. Human body is made up of 70% water while water content of blood is 94% (Young and Young, 2003). Getting water to drink is still a problem to majority of Nigerians, more especially during the dry season. See figures 20 and 21. The situations depicted are typical of what obtains in many Nigerian communities during the dry season.

Fig 20: *Typical scenario of the difficulty Nigerians go through in getting water*

Fig 21: *Some are forced to visit ponds and stagnant water sources*

In an attempt to assess the pH of water in the community, Tijani, Bello, Sanusi, Handson and Nwachukwu (2015) conducted a study on the pH value of drinking water among residents of Ayegun area of Ibadan, Nigeria. After obtaining permission from respective households, eight water samples were collected from four water sources within the 11 wards comprising Ayegun. The sources include wells, rivers, boreholes, sachet water from two different water

packaging companies. Two samples each were collected in clean containers except the sachet water that were already packed in polythene (PVC) bags. The samples were analysed in the laboratory for their respective pH values. Two methods were used in the analysis: simple dipping of red and blue litmus papers to determine the acidity/alkalinity/neutrality of the various samples; and determination of the actual pH values of the samples through mixture of the samples with litmus solution. The emerging colour was then compared with standard colours for various degrees of acidity and alkalinity. Also, 5 persons each, making a total of 20 people were interviewed on their experience about the water they consume in their locality. A self-developed interview guide was used. The results revealed that sources of water in Ayegun Village were: river (9.2%), well (32.8%), borehole (17.6%) and sachet water (40.4%). When analysed, results showed pH of river water to be 9.3; 5.8 for well; 8.7 for borehole while 5.7 was recorded for sachet water. The ages of respondents ranged from 22 to 66 with a mean 46 ± 5.3, and they comprised 7 males and 13 females. The results showed that 67% of them were civil servants, 13% farmers, 11% traders and 9% artisans. It was also shown that majority of them (93%) were settlers in Ayegun area while their places of occupations were in various areas of Ibadan city. Upon request about their views on the health implications of the water they drank in the area, majority of them - 64% did not notice any detrimental effect of the water on their health.

However, 80% of respondents with sachet water as the main water source gave various complaints about the odour and how they felt after consuming the water. The water samples were collected from the four water sources for observation with the naked eye for physical contaminants, level of taste and for observation for microbial load under a microscope showed that well water contained sand particles and was tasteless; river too contained sand particles and salty in taste; borehole contained no particle and was tasteless while sachet water too contained no particle but had a sharp taste on the tongue. The results of the hypothesis tested showed statistically significant differences among pH values of the four water samples analysed. The study was concluded by giving advice to government to supply potable water, through the public water system, to Ayegun area as that is the only source through which the water pH 07 could be ensured.

Food and Water Contamination

Indeed there are ample evidences that show serious contamination of the food and water intake of the people in the community. The way and manner many of us buy and take snacks on the streets leave much to be desired. While some elites believe that street foods are likely to be contaminated with pathogens, very few people believe that foods and snacks in standard eateries with big sounding names are not any better. Studies have shown that most of the junk foods are detrimental to the adequate functioning of the heart and the entire human cardiovascular system. I didn't bother much on these junk foods in my studies as there are lots of work on them already, but I carried out some studies on street foods. I mean on the foods sold by *kose/akara*, puff-puff, chin-chin sellers. In many cases, these street foods are served in old newspapers and wrapped in polythene (PVC) bags popularly called *nylon* among the Yoruba and *leda* among the Hausa. It was discovered that the ink of the printed matter on the newspapers leached into the food and is inadvertently consumed. These have been shown to cause serious illnesses in consumers. In a similar manner, nonylphenol and phthalates which are normal constituents of PVC *leda/nylon* bags, and which are known carcinogens also leached into the foods they are used to wrap.

The consequences of consuming foods in these wrappers, apart from chronic ailments, are mainly diarrhoeal diseases, the effect of which is fatal in children, more especially the Under-5 babies. According to WHO report in the African region, diarrhoeal diseases are the leading causes of morbidity and mortality in children Under-5 years of age (WHO African Report, 1996). It was indicated that each child in the African region has five episodes of diarrhoea per year and that 800,000 children die each year from diarrhoea and dehydration. Of the estimated total, 10.6 million deaths among children younger than five years of age worldwide, 42% occur in the African region.

Several studies have linked the pathogen causing diarrhoea to contaminated weaning foods in developing countries. According to Black, Brown, Becker, Esrey (1990), Gomes (1991) and Oluwafemi (2011), up to 70% of diarrhoeal episodes in children under weaning could be due to pathogens transmitted through food and water. Unfortunately, the importance of food safety in the prevention of diarrhoeal diseases is often overlooked or neglected among Africans. It is often observed that the strategies for prevention of diarrhoeal diseases and associated malnutrition are limited to promotion of breastfeeding and improving water supply and sanitation, thus neglecting the need to educate

food handlers, particularly mothers, in food safety (Henry, 1989). The advantages that breast milk accord to the baby are well-documented. However, after six months, breast milk alone is not sufficient both in quantity and quality to meet the nutritional requirements of the child, especially in energy and micronutrients such as iron, zinc and vitamin A. As the child grows older, therefore, it is necessary to supplement the breast milk with other foods which start as liquid foods and slowly progress to solids.

During the weaning process, the introduction of foods other than breast milk into an infant's diet begins, and gradually, breastfeeding is reduced until it finally stops (Kikanfunda, Walker and Tumwine, 2003). The weaning period is very critical in the life of a child and if not well managed, might lead to malnutrition and other health implications (Okafor, Ozumba, Oribanjo, Onu, Dauda and Olatunji, 2008). Breast-feeding as a major source of infant nutrition has been shown to protect children against the development of diarrhoea in Africa and other parts of developing world (Uwaegbute, 1990). In contrast, foods given as complementary feeding probably contribute to the occurrence of diarrhoea in infants. There are ample studies that demonstrate the relationship of hygiene practices to increased risk of diarrhoea. Moterjemi, Kaferstein, Moy and Quevedo (1993) showed that early introduction of milk-formula or solid food increases the child's exposure to enteropathogens and has been associated with increased rates of acute diarrhoea.

In an attempt to appraise the hygienic status of the weaning food and drinks used by mothers, Tijani, Oladeji and Ogungbe (2015) carried out a study titled: "Microbial contamination of weaning foods: A risk factor for diarrhoea and subsequent malnutrition in children in Osogbo, Nigeria". The aim of the study was to assess the microbial contamination of foods used in weaning as well as the mothers' hygienic practices in food preparation for the children in Osogbo. Weaning food samples were obtained from five areas within Osogbo Local Government Area. An experimental research design was employed. The samples were analysed for microbial load at the microbiology research laboratory, Federal University of Technology, Akure. The experiment involved the use of standard microbiological methods for isolation and identification of existing microorganisms in food samples collected. The results showed the mean bacteria count was $35 \times 10^3 \pm 5 \times 10^2$cfu/ml and the mean fungal count $1.3 \times 10^3 \pm 1.2 \times 10^2$cfu/ml. These values exceeded the standards for food safety

limits as set by the Foods and Agricultural Organization (Bacterial load ≤ 10,000cfu/ml; fungal load ≤ 700 cfu/ml). A total of 30 microorganisms comprising 16 bacterial species, and 14 fungal species (4 yeasts species and 10 mould species) were isolated. The organisms include bacteria, moulds as well as yeasts.

The bacterial species were: *Acinetobacter calcaecelicus, Bacillus coagulans, Bacillus substilis, Micrococcus luteus, Aerococcus viridans, Branhamella catarrhalis, Staphylococcus aureus,Corynebacterium xerosis, Bacillus cereus, Lactobacillus lactis, Streptococcus lactis, Lactobacillus ferrentium, Lactobacills plantarum, Zymomonas mobilis, Thiocapsa rosea and Thiocapsa roscopersicina.*

The yeasts species isolated were: *Candia vini, Saccharomyces cerevisiae and kleokellaapiculata.* The mould species found were: *Candida albiclum, Penicillium italicum, Aspergillus falvus, Aspergillus repens, Articulospora inflata, Pleurothecium recurvatum, Pseudotorula hoterospora, varicosporium inflata and Gonatobotryum sapiculatum.*

The results further showed that only 20% of the subjects got their water supply from borehole in which water ran through pipes to supply households. The rest 80% got theirs from hygienically doubtful sources: 40% got water from community (open) well where only one water drawer was shared by all; 20% from personal household (covered) well; rest 20% got water from municipal water which they stored in big containers at home (to last up to 7 to 10 days). The assessment of the microbial load of the water used to prepare food were found to contain pathogenic microorganisms.

The assessment of the microbial load of the water used to prepare food were found to contain pathogenic microorganisms. The environment where food was being prepared was also found to have contributed to food contamination. From the study, 60% of the houses used pit latrines; only 20% household had functional water closet systems. In 40% households, there were physical presence of flies in the latrine area and visible stool around the latrine. Evidence of food contamination was revealed by the percentage of the children that had gastrointestinal ailments: 80% of the subjects said they usually visit health facilities within Osogbo four to six times per year on account of diarrhoeal

diseases affecting their children. Similarly, 60% of them had lost babies in the past as a result of unresolved gastrointestinal ailments; and 40% still had family friends and relations having their children under hospital admission due to various childhood diseases. The study concluded with the recommendation to government for provision of potable water on daily basis to the populace through the provision of pipe-borne municipal water. It was also recommended that government should enforce digging of at least a ventilated improved pit latrine in every household to curtail the spread of faeco-oral infection which are facilitated by flies.

Under-5 Malnutrition and Underlying Causes in the Community

Malnutrition is a serious public health disaster in developing countries, with the hospital paediatric ward overwhelmed with cases of severe malnutrition, killing children aged between six months and five years. Nurses and other health workers have been battling with the problem of more children in need of nutrition rehabilitation. The trend in malnutrition among children worldwide remains static with the greatest problems found in those countries with the highest birth rates (Dickerson, 2001). In Nigeria, food insecurity results from poverty, intra-regional differences, internal displacement due to various disasters, and gender imbalance in food allocation. Other reasons are poor intra-household food distribution with younger ones at the receiving end, poor knowledge on healthy way of food preparation, and inadequate storage facilities.

In a bid to ameliorate these problems, Omisakin, Tijani and Asekun-Olarinmoye (2011) carried out a study on the utilization of mothers' counselling and participation in good feeding practices in rehabilitation of malnourished children. The study employed mothers' counselling and participatory approach in ensuring quick recovery among malnourished children. A cohort of 60 eligible mothers who had children diagnosed of malnutrition were selected as study sample. The mothers and their children were grouped into test and control groups of 30 each. In the test group, the anthropometric measurements of the children were obtained before and after 8 weeks of intervention. Each mother was involved in the rehabilitation of her respective malnourished child using local foods. In addition to counselling given to the mothers in the test group, growth monitoring was done for malnourished children.

The results showed a positive relationship between mothers' counselling and the recovery rate of malnourished children. During the 8-week intensive counselling, a significant change was noticed in malnourished children in the test group; appetite returned, oedema disappeared, and the children began to participate actively in running around and playing with colleagues–hallmark of healthy children. The effect of counselling was seen in an increase in the mean weight and thigh circumference. The weight increased from 9.2 ± 1.92kg before to 12.2 ± 2.3kg after counselling. The same pattern was observed in the mean mid-upper arm circumference which increased from 12.53 ± 1.9 to 26.3 ± 2.9cm. To confirm the efficacy of the counselling, it was noticed that, in the control group which received no such intervention, there was only a slight increase in the mean weight of the children from 9.2 ± 1.93kg to 9.8 ± 1.5kg as well as a slight increase (0.7 ± 0.2cm) too in the mean mid upper arm circumference. The study concluded that the strategies of mothers' counselling and participation in food preparation could save cost of care, prevent malnutrition and improve nutritional status of children.

Mr Vice Chancellor Sir, my passion for adequate feeding of infants also took me to the University College Hospital (UCH) Ibadan where I, together with three of my colleagues (Olayiwola, Oladeji and Adetunji, 2013) carried out a study on how exclusive breastfeeding of low birth weight (LBW) babies was used to ensure the survival of those babies. LBW babies are those born with weight less than 2.5kg within the first hour of life. According to Cohen (2005), before a significant postnatal weight loss occur, the birth weight of an infant is the single most important determinant of the chances of its survival. In those days, and even up till now in some societies, people in Africa are used to wrapping the LBW baby with lots of mother's wrappers, placing it very closed to a well-lit lantern and feeding the baby with large quantity of gruel made from cereals. The belief was that warmth provided by the lantern and the large quantity of the food would ensure quick adaptation of the child to this world and would make the child gain weight rapidly for it to survive the relatively colder environment than mother's womb.

Quite a number of children have died using this method of homecare while a negligible few survived. WHO (1995), through the Inter-Agency Group for Action on Breastfeeding has categorized the addition of fluid in form of water drops or syrup of multivitamins, oral rehydration solution to infant feed before

six months as among the risky behaviours that threatens child survival in the world. Therefore, while the provision of warmth for LBW babies by our local people is in order, the combination of breast milk and gruel at that stage of life must have contributed significantly to the death of those LBW babies.
The recommendation of WHO on exclusive breastfeeding does not exclude LBW infants. In the work of Lutter, Mukhopadhyay and Mahajan (1992), it was discovered that infants who were exclusively breastfed in the first four months of life weighed more than those babies whose diet had water and other fluid in addition. People, health workers inclusive, probably forget that LBW infants are among the babies that require exclusive breast feeding for the first six months of life. The situation among health workers could be partly explained by the neo-natal routine care which technically discourages mothers from staying with their babies in the hospital ward. The situation is further compounded by the mothers who perceived their babies being 'too small' to curdle and therefore difficult to bring to breast for feeding purpose. LBW in itself is caused by one the following:

- Preterm birth (before 37 weeks of gestation);
- Restricted intrauterine growth which could be secondary to many possible factors such as malaria, multiple pregnancies, placental problems, chromosomal anomalies, poor nutrition, alcohol and tobacco use; and
- Environmental factors among other causes.

Tijani and others conducted a study to examine the exclusive breastfeeding of LBW neonates as a correlate of child survival strategy at the UCH, Ibadan. It was a retrospective study with the main purpose of finding means of ensuring the survival of LBW neonates.

Using random sampling method, 300 LBW neonates were selected as sample size. The medical case notes of the sample were used as research instrument. The results showed that out of the 300 participants, 52 (17.5%) were less than 1.0kg at birth, 142 (47.3%) were between 1 – 1.5kg, 86 (28.7%) were between 1.5 – 2.0kg, 14 (4.7) were between 2.1 – 2.5kg while 6 (2.0%) were 2.51kg and above. Also, from the results, 180 (60.0%) were fed with breast milk exclusively, 16 (5.3%) were fed with artificial milk (infant formula) while 104 (34.7%) were fed with a mixture of both breast milk and artificial milk. The results of the hypotheses tested showed the following:

1. Null hypothesis was rejected in hypothesis I. It revealed that there was significant difference in weight gain between the exclusively breastfed LBW and non-breastfed neonates.
2. Also, the same situation occurred in hypothesis II. There was significant difference in incidence of diarrhoea between the exclusively breastfed LBW and non-breastfed LBW neonates.
3. Similarly, in hypothesis III, there was no significant difference in incidence of chest infections between the exclusively breastfed LBW neonates and non-exclusively breastfed LBW neonates.

In conclusion, the study shows that exclusively breastfed LBW neonates gained weight rapidly, had reduced occurrence of diarrhoea and chest infection, the combination of which drastically reduced mortality of the neonates. Therefore, every mother, whether she has given birth to normal weight or LBW baby, should be encouraged and supported to breastfeed her baby exclusively for the first six months of life.

The problem of malnutrition is a widespread one which leaves no member of the community untouched. Not only the illiterate and self-employed labourers are affected, even the civil servants are not left out of this hydra-headed problem. Tijani, Olayiwola, Olunusi and Oguntona (2010) demonstrated that civil servants in Oyo State were malnourished in their study on micronutrient status of female civil servants in Oyo State. A five-month study was conducted to assess the micronutrient status of female civil servants in Oyo State, Nigeria through the assessment of biochemical indices. By means of a simple random sampling, a sample of 647 was drawn from a total population of 13,500 female civil servants. A 24-hour dietary recall was used for micronutrients intake. Haematological and biochemical analysis of blood and urine samples for micronutrients were done. The ages of the subjects ranged from 18 to 59 with a mean 40.80 ± 10.14. In the sample, 54.3% were polytechnic graduates, 18.6% university graduates and 10.7% were school certificate holders. The haematocrit, haemoglobin and red blood count values of the subjects were within respective normal range of 35 - 49%, 11.7 – 18.3g/100ml and 4.2 – 6.1mil/mm^3. The iodine status of the junior (51.5ug/l) and intermediate (50.7ug/l) civil servants showed mild deficiency. The urine iodine intake of the senior and management cadres (103.6ug/l and 149ug/l) fell within the optimal range (100 – 199ug/l). The micronutrient consumptions of majority of the civil

servants were below recommendation in iodine, iron, calcium, zinc and vitamins A. The zinc consumption ranged from 81 – 97% of RDA. The subjects in lower cadre were deficient in micronutrients generally. It was recommended that the income and allowances of the female civil servants be increased based on health, nutrition and carrying capacity.

Single Motherhood Practice as a Cause of Poor Nutrition in the Community

Eating right sometimes results from the type of family one hails from. It is true that educational status and socio-cultural factors play a role in ones feeding pattern. Also, having both parents have been discovered to have significant influence on the feeding pattern of the household. In Nigeria, the practice of single parenthood where females especially decide to raise a child alone is now on the increase. Single parenthood, a practice of rearing a child by just one parent, was an unknown practice in Nigerian society. However, recent experiences have shown that the practice is now gaining ground and becoming quite common among women irrespective of their socio-economic status. The nutritional status of the children in such type of family has been known to be negatively affected.

It was in a quest to find out how such women fare that Tijani, Afolayan, Adeniran and Sanusi (2015) conducted a study on the practice. The study was conducted to survey the magnitude of single parenthood and how it affects the living standards of the practitioners. The study was conducted among single mothers in two contrasting settings in Ibadan – Beere and Challenge areas where there were people of low and high socio-economic status respectively. A self-developed questionnaire was administered to single mothers selected through purposive sampling. The psychometric property of the questionnaire using Chronbatch's coefficient of alpha showed 0.85.

A total of 220 questionnaires were administered and 85 and 95 recovered from Beere and Challenge respectively. The questionnaire was interpreted verbally to some illiterate respondents from Beere area and they were also assisted to complete the questionnaire. All respondents in Challenge area were literate and could read their questionnaire without any assistance. Data analysis was by descriptive statistics making use of tables, percentages, means and standard deviation. The results of the study revealed that respondents in Beere area were

mainly petty traders, apprentice tailors, barbers and hairdressers while in Challenge, they were mainly clerical officers (36%), bankers (27%), teachers (16%) and sales girls (10%). The monthly income of the respondents varied; it ranged from N5,000 to 40,000 with a mean N15,000 ± N2,458.87. In challenge, the income ranged from N80,000 to N350,000 with a mean N190,000 ± N36,019.56. The respondents were discovered to have conceived the pregnancy of their babies through various ways. In Beere, 45% got unwanted pregnancies that resulted in the birth of their babies while in secondary school. In Challenge, 17% confessed they conceived through rape and 56% were abandoned by the men that impregnated them. The results also showed that the respondents adopted the single parenthood lifestyle as a result of previous frustrations they had experienced in relationships with men. In Beere, it was due to husbands' desertion (44%), inability of the husband to take good care of them (52%) and monopoly of husband by new wives (46%); while in Challenge, it was because of the need for freedom from men to develop a career (41%), detest for men's authority (45%) and undue lateness in getting desired suitors at marriageable age (14%).

In both settings, it was however generally agreed that training of children was difficult without the assistance of the father. The nutritional status of children born to majority (79%) of single mothers from Beere area was poor, and 57% of the mothers attributed the poor nutrition in their entire family to absence of fathers to lend a helping hand in household expenses. It was concluded that health education to young girls be tailored towards different causes of single parenthood among married couples. This is with a view to preventing occurrence of such problem in their future families.

My Contribution to the Literary World

My Vice Chancellor Sir, within the 20 years I have been in teaching service, and 15 of which is in the university, apart from over 50 scientific research articles published in local and international journals, I have also written a number of books. I contributed a chapter to the book: *Women Issues in Nigeria,* edited by Professors H. O. Nwagwu, O. A. Moronkola and D.O. Akintunde. The book is being used for teaching undergraduate and graduate students of health promotion and public health disciplines. I have also written a number of textbooks in my discipline – Public Health Nursing. These are:

- *Environmental Health for Undergraduates of Health Related Disciplines*
- *Nutrition and Dietetics for Nursing Students*
- *Curriculum Development and Teaching Methodology for Teaching Practicum in Undergraduate Nursing Students*
- *Entrepreneurship in Nursing and Occupational Health Nursing*.
- *Nigerian Nursing at the Crossroads* – 169 paged book published in 2003.
- *The Mighty World* – 159 paged book published in 2007.

Conclusion

In conclusion, in my over twenty years as a practising nurse and as an academic, I have been able to contribute my quota to the body of knowledge in the field of public health nutrition through the perspective of a nurse. I have been able to impart positively in the nutritional status of many of the patients and clients I have come in contact with both in private and public practice. In my conduct of researches all these years, I have always remembered the saying of one my old professors – Prof. Omotoye Olorode who thought me Botany (BOT 101) in my 100 level at the Obafemi Awolowo University, Ile Ife in 1988:

> Science has advanced to a stage that if we represent the entire scientific discovery in the world with something as large in size as 100 times the size of a football, whatever anyone could discover and refer to as scientific breakthrough could not be bigger than a grain of fine sand. Let's even say the size of the body of knowledge is a size of football, what is then the significance of a grain of sand added to the ball's size? Therefore, no matter how relevant the scientific discovery you might want to add to the existing body of knowledge in future, let that infinitesimally small contribution of yours be the truthfully discovered; and please try to adapt it to the world as truthful as possible. It is only then that your name would continue to ring a bell hundreds of years after you have left this our temporary place called Earth.

Mr. Vice Chancellor sir, that piece of advice has been my guiding principle not only in carrying out the scientific studies I just presented here today, I have also been adapting it in my day-to-day interaction with fellow men.

ACKNOWLEDGEMENTS

I thank my former teachers for the unconscious reformatory role they played in my life. The way Mr Ayilara of the then United Methodist High School, Iwo taught me his subject - Physics, hooked me to pursue the sciences as a career. Also, worthy of remembering is Mr Areo who taught me Geography in the same school. Mr Areo instilled disciplined in us in the way he taught us Geography in Form Three and left some of us in a dilemma on which course of study to really pursue later in the university. In the university, the teacher that I took after unconsciously is Prof. Bolu Kunle Fajemilehin. I was so much in love with his way of life and manner of teaching. You knew where you stood with him at any time. He is very straight-forward and would not dwell on your mistakes or refer to it again once he has disciplined you for it. Then, he would go to any length to ensure we succeeded in our endeavour as his students. That I am in academic till date, is actually his handiwork. I can never forget how he ensured I got admission to the University of Agriculture Abeokuta for my PhD. Another benefactor is the person I can call the "chairperson" of my mentors (if I am permitted to use that term) is Prof. Mrs Oluremi Olufunke Keshinro. I first got to know her when she was to supervise my MSc thesis at the University of Ibadan in 1998. She took me as a son and our relationship remains mother/son one till date. She made sure I did a thorough job and was always available for consultation throughout my training.

However, when I started MPhil/PhD programme and I was about to gather data, something terrible happened in the department. There was an unhealthy rivalry among senior academics. I was negatively affected and it seemed as if my continued stay in the University of Ibadan would cause serious quarrel between my supervisor and her successor Head of Department. I therefore abandoned my programme when the professor who took over from her started to victimize us (her students). The man ensured he avenged whatever wrong he felt my supervisor did to him on us by introducing policies that made us have no choice than to abandon our respective programmes.

I became downcast and was seriously discouraged, until my bosom friend, Pharmacist Oluyedun advised me to try another PhD admission at the University of Agriculture, Abekuta (UNAAB). I thought UNAAB, being a

University of Agriculture would not offer the aspect of Human Nutrition (Public Health Nutrition) relating to my field of study as a nurse.
On getting to UNAAB, the department declined to admit me owing to inavailablility of a supervisor that year. Prof. Fajemilehin promptly intervened to ensure the only available supervisor, Prof. Tunde Oguntona took me on. At UNAAB too, Prof. Tunde Oguntona, his wife - Prof. Clara Oguntona and the then Head of Department - Dr, now Prof. I. O. Olayiwola – my supervisory team, treated me like their son and younger brother respectively. They made the work easy by guiding me appropriately, which enabled me to finish the programme within the stipulated three sessions. Once my major supervisor – Prof Tunde Oguntona saw the element of hard work and seriousness in me, he availed me the opportunity of learning in his personal library. I was free to see him at his home and in the various offices he occupied at that time. Despite his tight schedule, I had a personal privilege of seeing him as Dean of Faculty, the Director of Centre and the President of Nutrition Society of Nigeria (NSN), (the post that particularly made him busy with nutrition work at Abuja in the office of the then President of Nigeria – President Olusegun Obasanjo). During that time, the NSN he was presiding over was developing a nutrition policy for Nigeria. As busy as he was at that time, he never declined to see me once. For this, and many other kind gestures I got from him, I remain eternally grateful.

Also, I was privileged to have my mama – Prof Oluremi Keshinro as a visiting professor at UNAAB when I was there. She contributed immensely to the supervision of my PhD work in UNAAB – the work that my absconding from UI prevented her from doing. Since that time to date, I have gone back to my Mama. I pray the trio of Professors Tunde Oguntona, Clara Oguntona and Keshinro live long to enjoy their retirement. May they continue to eat the fruits of their labour for long, not only on their respective biological, but also on we – their professional children. Professors Olayiwola and Fajemilehin will continue to see the hand of God in their respective works. The biological children of all these professors, who have contributed to make me what I am today, will continue to flourish like the palm tree and become relevant within the shores of this nation and beyond. They will surely reap one millionth fold, all the good deeds their parents have implanted in other people's children.

Prof Ariyo, the former Deputy Vice Chancellor (Development) was the Dean of Postgraduate School that gave me admission to UNAAB. I could recall his gentle statement then when Prof Fajemilehin presented my case to him. He said:

> *Are you sure that if given the admission, you will work hard to finish within the stipulated time because Prof. Tunde Oguntona – the only available supervisor is retiring in three years' time and you know the implication of re-assigning a PhD student to another supervisor? We don't want that here any longer – a student who will turn studentship to a career by pursuing PhD for life. Many of them are in their 10, 12 and even 15 years without anything to show for the long years. Some of them don't even have topics.*

I quickly promised to be very serious and he asked me to come for my admission letter the following week. I want to say that Prof. Ariyo's children will continue to see the hand of God in their work. Thank you Daddy for believing my *I-promise-to-work-hard* statement.

Truly, I worked hard and God crowned my effort for I actually spent three sessions for the programme. I was particularly elated that I finished to time because, the PhD made me rise to my due rank of Senior Lecturer at that material time in LAUTECH. In fact, some of my PhD student-colleagues back in the University of Ibadan, who seemed to be enjoying the favour of the professor that chased me away, actually finished four years after I had bagged my PhD. I therefore express my gratitude to Pharmacist Oluyedun who mooted the idea of looking for PhD admission in UNAAB. His own PhD pursuit will be made easy for him by God's grace. He will continue to grow from strength to strength, and became more relevant in his field. By the special grace of Almighty Allah, he will live long and rise to the pinnacle of the traditional chieftaincy by becoming the Olubadan of Ibadanland one day in the presence of us all – his friends, having been made a Mogaji, (Amen).

I cannot forget the contributions of some of my lecturers at UI in moulding me to what I am today. Their teaching style and general disposition to postgraduate students have a lasting effect on us - their students. Prof. A.S Jegede of Sociology Department, who is also the current Dean of Faculty of Social

Science is a real mentor. He impacted positively in me a lot. Likewise, Prof. O. A Moronkola of the Department of Health Promotion who is also the former Dean of the Faculty of Education impacted in me positively too. I first knew him when I audited a course KHE 909: Critical Health Concern of Contemporary Time in his department. As the course coordinator upon our first meeting, he said:

> *You are a lecturer too,* (though I was teaching in the school of nursing then) *go and prepare something on poliomyelitis and its eradication in Nigeria. Try to lay emphasis on how religious leaders could be co-opted into polio administration to Under-5, especially in northern Nigeria.*

When I was through, he sat me down and accessed the article in my presence. After about two hours of reading and correcting, he said:

> *Your work is fair, but you have not mastered how to write a paper for academic discuss. This paper, though contain the facts, however, it looks as if you are writing for publication in the 'The Sun' newspaper".*

He then corrected me as appropriate and gave me a course to teach in 400 Level and he observed my teaching. I was both highly elated as I was teaching in a university for the first time. I then prayed secretly that day that God should let me be a confirmed university lecturer; and true to this prayer, God really answered as I got LAUTECH appointment just a month after that day. I therefore thank Prof Moronkola who first introduced me to teaching in the university. May you continue to grow from strength to strength sir.

At this point, I want to acknowledge my father in the profession, Alhaji (Nurse) Bashiru Akande. He laid a good foundation for junior ones like me to follow, without which, perhaps I couldn't have reached this level in my career. Dr W.A.W Akanji - the Medical Director, Heritage Hospital also taught me the rudiments of entrepreneurship as I learnt unconsciously from him how to stay afloat in business. This helped me greatly in my private health facility at the early period of the business.

At this juncture, I express my gratitude to my friends who have stood by me all these years. I have had occasions to share my successes and disappointments with them during the course of my career, more especially during the turbulent period of my PhD study, and they have offered useful pieces of advice. They are: Mr Sunday Oyewole – The Osun State Director, National Revenue Mobilization, Allocation and Fiscal Commission (RMAFC); Mr Olumide Aremu of Lagos State Internal Revenue Service; Mr Ademola Olabiyi - a veteran journalist, Adamo Aremu, Bar. Eguntola Gbenga; Bar. S T. A Raji; Mr Seyi Odebiyi; Pastor Michael Oladeji – my close pal in LAUTECH; Nurse (Bar.) Adeniyi Makinde (a veteran nurse, who later obtained LLB, BL, LLM – the Principal, School of Nursing UCH, Ibadan; Dr Abidemi Ogunola of the Osun State Hospitals Management Board, and Dr Najim Azeez - veterinary doctor with the Katsina State Government. Others are Dr Gbenga Omole – my classmate at BNSc class who later went to study MBBS at OAU again and is now a lecturer in Physiology Dept of the same university; Dr Goke Oyeniran of Lanark Hospital Ibadan, Dr Azeez of Amazing Grace Hospital, Ibadan. Equally, I appreciate the contributions of Dr Saleh Ngaski Garba – the Head, Dept of Nursing, ABU; Dr J.A Afolayan, a Reader and the Head, Dept. of Nursing, Unilorin; Dr Shola Ogunfowokan, the immediate past Head, Dept. of Nursing, OAU Ife; Dr. Femi Ayandiran (current HOD), and my classmate Mrs. Nike Faremi of OAU Nursing Dept. Prof. Bisi Adejumo – the Head, Dept of Nursing, University of Ibadan; Dr Nike Onibokun, Dr Abimbola Oluwatosin and Dr F. A. Okanlawon (all of the University of Ibadan) and Dr Elkanah Ndie – a Reader and former Head, Dept of Nursing, Ebonyi State University.

Also, not forgotten are Dr Kemi. Kolade and Mrs Dorcas Adeniran. Others are my colleagues and friends at LAUTECH Department of Nursing. They are: Dr Ganiyat. A. Adeniran, Mrs P. O. Amoo, Mrs O. Y. Makinde, Mrs G. O. G. Oyadiran (affectionately called 'Precious Gift' by her husband), Prince J. A. Okunlade and Mrs O. P. Adisa. I cannot forget the useful pieces of advice offered at one time or the other by my senior colleagues - my great *egbon* - Prof. Bayo Lawal Ajibade and Prof. Mrs. Florence Adeyemo. Notable among my friends in the Basic Medical Sciences of LAUTECH deserving my acknowledgement are Prof. Seyi Adeyeba (my great mentor), Dr Shola Adeeyo (double doctor), Dr Adewale Adetutu (Adecold), Mr O. K. Wakeel (my big *egbon*), Prof. Kunle Olowe, Prof Ojurongbe, Dr Bolaji and Dr Opaleye and my

friend, Dr Egunrati (the former C-MAC of LAUTECH Teaching Hospital, Osogbo). I thank you all.

My great *egbon,* Mr Aderemi Y. Bello and his wife occupy a special place in my heart. Egbon Remmy assisted me a lot. He was the first to introduce me to the United States and the United Kingdom by hosting me during my holidays before I ever ventured into going oversea for conference attendance and delivering academic papers. Whenever I am in the US, he would take me on guided tours of most interesting places in America. Right now, I know most places of interest in America than even some American residents! I cannot forget Pastor (Dr) Solomon Anjuwon Laleye (SALT), Dr Olabode Ayodele of Indiana State University, Terre-Haute, USA (all Mr Remi's friends) who made my stay in the US worthwhile whenever I go there. Equally important is their pastor, Pastor Anthony Fasore of the RCCG Covenant Parish, Laffayette Indianapolis, Indiana State. The pastor would pray for me specially whenever I was in the US. He would pray God to elevate me, make me shine and to reach the top in my chosen career. With my promotion as a professor, I know God has started to answer that prayer. May Pastor Fasoore and family continue to blossom in the work God has called them to do.

In the same vein, Mr Remi's friend in the U.K also do wonders whenever I go there. They are *Egbon* Ademiju Safara Adeposi of Birmigham, *Egbon* Kunle Adigun and his wife (of Manchester) and *Egbon* Dele Alawode of East London, my bosom friend, Engr Abiola of Central London and Mr Williams R. Oguntade of Middlesex, London. I just eat and do merrymaking like a termite at their expense. I appreciated them more when I had occasion to buy food with my money once. That was the day I went to do something in Lancaster University, somewhere around Manchester. I bought just a normal meal for £55 and by my calculation that time, it amounted to N33,000.00! I nearly fainted when I discovered I spent such a huge sum of money on ordinary lunch for just a day!. Since that day, I avoided entering any restaurant in the UK like plaque. Whenever I had occasion to go out for long periods, my host's wife would pack extra food for me. Really, I appreciate your kind gestures. May the good Lord continue to bless you all.

I also want to acknowledge the contributions of my former students in LAUTECH whom I have called upon to assist in one way or the other during

the time I was undergoing research works for my postgraduate studies. Specifically, I thank my mentee - Rahmat Adejumoke Sanusi for the role she played in most of my research projects. On several occasions, I would send her out for data collection, analysis or publication of my work. At no time did she feel reluctant. Rather, she would carry out the work enthusiastically. I am happy she is making use of the experiences gathered in her own MSc research project which is a huge success at the moment. I pray she finishes the MSc and the subsequent PhD in record time, and become a professor like me at the appropriate time.

Other students of mine who have done one thing or the other in my academic works are: Funke Aleshinloye, Tosin Okunade, Ronke Oluwole, Adeyeye Semiu, Wasiu Raji Omolara, Afonja Juliet, Ugodo Chinyere, Omikunle Boyin, Chukwu Obiageri, and others I cannot remember now. I also appreciate the support of my colleagues in my department here in BUK, without which we would not have achieved so much within the limited time I got here. Ahmad Rufai Abubakar especially is doing great work in assisting me to pilot the affairs of the department. I pray you all qualify to deliver this kind of lecture in no distant time.

At this juncture, I want to appreciate my spiritual fathers who at one time or the other stood by me with prayers. They are Alhaji Morohunranti of Odo-oba area, Ibadan and Alhaji Adio Oloye - the son of a former Chief Imam of Iwoland (His father was the first Iwo indigene to perform the holy pilgrimage to Mecca on foot in 1922!). Others are Pastors Shola Ayansina, Bayo Oyekan and John Ayediran.

Definitely, a day like this would not have come if not for the dogged determination of my parents - Alhaja Sikirat Ayoni Tijani and Alhaji Salawu Akanmu Tijani - to send me to school in the first instance. Had my father been shortsighted, he would have probably sent me to learn our family trade – blacksmithery *(agbede)*. But no, he chose to send me to school instead. My mother particularly tried a lot by giving all the necessary support, at times, financial, to her husband to ensure that her first born acquired Western education to the greatest height possible. This became necessary in view of the difficulty my father faced in training all of us – a mere primary school teacher with eleven children! As the fourth born in the family and the first for my

mother, I vividly remember her resolute determination to train me to whatever level in those days. I therefore use this opportunity to say a big 'thank you' to both of them. They are both alive; my father an octogenarian, while my mother is a septuagenarian, both living in their country home in Iwo, Osun State Nigeria. They would have graced this occasion but for the distance. My father was particularly insistent but I declined his coming for fear of subjecting an old man to the untold hardship of such a long journey! My brothers and half-brothers are also appreciated; they are Musiliu Adegbenro, Sodiq Adelekan, Basaru Adewale, Kabiru Adesoji and my other siblings.

Mr. Vice Chancellor Sir, also deserving my very big appreciation are members of my immediate family. My wife - Asiata Olabisi deserves all accolades I can think of, for her solid support for the development of my career. She has been my backbone in all my adventure so far in life. When I started a private nursing home, she was there to ensure everything went well. Also, when I decided to leave the School of Nursing job for lectureship appointment in LAUTECH Ogbomoso, a university situated about 120km away from our home in Ibadan, she gladly accepted me as a weekend husband. Throughout my period of going round working at the Universities of Lagos, Ilorin, and my temporary work in BUK here, no one heard her complain of being abandoned for a quest in career advancement! I pray you will reap the fruits of your labour on me and on our children.

I will also like to acknowledge the sacrifices of our children: Adekemi, Aderonke, Adedayo and Adeleye. They have gotten used to being without Daddy for long periods. It is my prayer that as nothing is useless in a palm tree, from its root through the trunk to the foliage, none of these children will be useless in life. As I am a professor today, they will achieve much greater heights in all areas of life (Amen).

I must not forget to thank the authority of Bayero University for finding me worthy of being given an appointment and for saddling me with the responsibility of being the Head of Department at the critical stage of seeking for the NUC and NMCN accreditation. I specifically thank the Vice Chancellor for giving me quality attention each time I approach him on matters pertaining to my department.

Last but definitely not the least is the Omniscient, the owner of the world and hereafter, God Almighty that sent me to this world in the first instance. I give Him glory for the gift of life, for all the opportunities bestowed on me so far, and for giving me the little wisdom that has taken me to this height – a Professor of Public Health Nursing. I quite appreciate Him a lot for the little I have been able to achieve so far in life. May He continue to give me more opportunities to achieve much more before I depart the surface of the Earth (Amen). And to you my audience, I say a big 'thank you' for your kind attention.

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