

THE CHALLENGE OF HEALTH PROMOTION IN NIGERIA

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INTRODUCTION

The need to improve the poor state of health of the teeming population of Nigeria has been a major problem facing successive governments, governmental and non-governmental organizations and individuals in the country. In one of the series of inaugural lectures delivered in this great citadel of learning and culture, poverty was described as the greatest problem facing African countries (Afonja, 1997). I will like to add "poor health" as an equally great problem. Our poverty is intricately linked with our poor state of health and, therefore, it cannot be significantly alleviated unless we improve the health status of our population.

I therefore intend, in this first inaugural lecture from the Department of Nursing, to examine the phenomenon of underdevelopment of health of Nigerians, discuss health promotion strategies for addressing some of our pressing health problems, highlight my modest contributions and suggest the ways forward.

WHAT IS HEALTH PROMOTION?

Before discussing the priority areas requiring health promotion efforts in Nigeria, we need to be clear about what the concept of health promotion is all about.

The concept of *health promotion* has been in existence for a long time. It was initially used, and continue to be used, by traditional public health practitioners to describe 'a level of disease prevention'. The classical definition of 'public health' by Winslow (1920) anticipated health promotion as a major part of the public health of the future. The concept is embedded in the World Health Organization classic definition of health of 1946, with emphasis on "a state of complete physical, mental and social well-being...." (WHO, 1946).

In its narrowest sense, the concept has been used synonymously with health education activities associated mainly with posters, pamphlets, mass-media programmes, etc. In its widest sense, it represents a strategy for improving and protecting people's health through socio-economic, behavioural, biological and environmental changes. It therefore includes health education, environmental measures, socio-economic and policy development, regulatory activities, etc.

According to American Public Health Association (APHA, 1978), the concept refers to:

'a wide variety of individual and community efforts to encourage or support health behaviour and environmental improvement where these goals and objectives have been previously determined, usually on the basis of epidemiological data, to be important.... It may involve educational, organizational, economic and environmental interventions targeted towards specific lifestyle, behaviour and environmental conditions that are harmful to health'.

The Ottawa Charter for Health Promotion (WHO, 1987), which was hailed world-wide as a new direction in public health, defined the concept as:

"the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment"

The Charter drew attention to three key health promotion strategies:

- reducing inequalities in health;
- increasing the prevention of disease and;
- enhancing the capacity to cope with chronic disease and disability.

It identified socio-economic, environmental and biomedical determinants of health and recognized that attainment of good health cannot be achieved by health sector alone.

Even before the Ottawa Declaration, health promotion strategies had become a major focus of actions by governmental and non-governmental organizations in some developed countries (Anderson, 1984; Tones, 1985; WHO, 1996). With the release of a paper titled "A New Perspective on the Health of Canadians" in 1974, the Canadian

Government adopted health promotion as a key national health strategy for improving the health of the Canadians. In Europe, Canada and America, many health professional groups have adapted health promotion strategies to their professional activities. Considerable experience has accumulated on its operations and evaluations in various settings. However, only few developing countries have adopted the declaration and enunciated comprehensive health promotion policy and programmes (WHO, 1997).

Concept of Health Education

Since the concepts of 'health promotion' and 'health education' are often used interchangeably because of their interrelatedness, a statement about health education is therefore necessary to avoid being misunderstood. Health education, according to World Health Organization (WHO, 1983), is "any process, formal or informal that conveys information in such a way that personal behaviour is changed. The change should result in a reduction of morbidity or mortality or reduction in disability or discomfort for persons, their families or their community".

Health education includes personal education, and mass media information and education. It aims at empowering people to know and value health and to participate actively in solving health problems relevant to their personal, family and community interest. Health education, according to Alma Ata Conference of 1987 (Alma Ata, 1987), should be undertaken in a comprehensive framework and should be closely linked to health information.

Health education is therefore not synonymous with health promotion. However, it is its major component since it contributes significantly towards "health improvement".

Framework for Health Promotion

Health promotion, as an 'umbrella' concept, covers various programmes of action that are central to the practice of community health, of which community health nursing is an integral part. These include various aspects of disease prevention, protection against specific health risks, and promotion of optimal health.

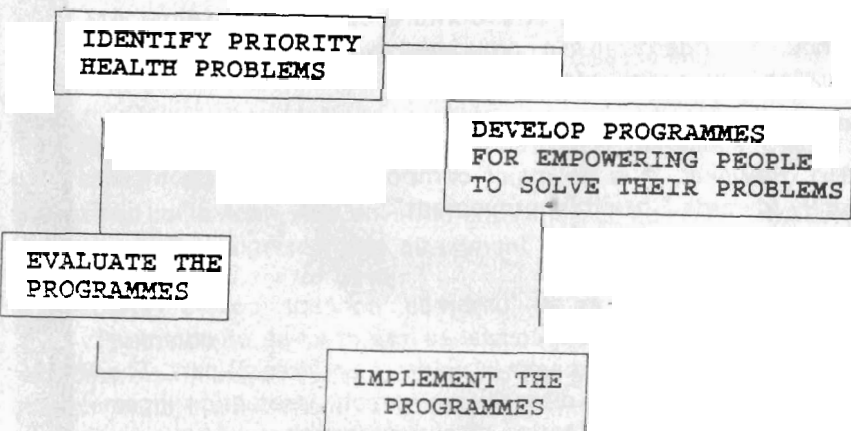
Health promotion, according to WHO (1987), should focus on

the promotion of healthy public policy, create supportive environments, strengthen community participation, develop personal skills and reorient health services. A framework for the development of health promotion programmes in various settings should include:

- i. Identification of priority health problems of the people modifiable and prevalent risk factors among the target population;
- ii. development of well-targeted and effective interventions for empowering people to solve their problems;
- iii. Planning and implementation of the interventions in such a way that its operation and effects can be evaluated.

This framework is shown diagrammatically in figure 1 below:

Fig 1: A FRAMEWORK FOR HEALTH PROMOTION



HEALTH PROBLEMS OF NIGERIA

Historical Perspective: At the beginning of this century, Nigeria was in a state of pestilence, characterised by severe epidemics of infectious diseases and famines. Morbidity and mortality were very high among the population; only few Nigerians survived to old age. It used to take an average of 15 pregnancies for a Nigerian woman to produce 7 normal deliveries and 7 normal deliveries for her to have 3 children surviving to adulthood.

Initially, medical institutions were established strategically by the colonialists to cater mainly for civil servants, service men and their families, rather than the generality of the population (Schram, 1971). Christian missionary organizations also set up some medical services to support their evangelical activities in the country.

Confronted with epidemics of infectious and communicable diseases among the population, the colonial government developed some strategies for the delivery of modest health care to the population. These include the training and utilization of assistant physicians and various cadres of auxiliary health workers to provide some general medical/dispensary and maternity services, the use of special health campaigns for the control of certain diseases (eg, YAWS, PLAGUES and SMALLPOX) and the use of mobile clinics (Daramola, 1984; Lucas, 1991).

After the 1960 independence, the country inherited the colonial medical service system which was designed to provide a modicum of health services for the population. There were uneven geographical distribution of available health resources in the country and lack of access to health care by majority of the population. Preventive and primary care were discontinuous and ineffective. Health planning became disjointed and evaluation was never seriously considered. In the government health services, there were divisions of responsibilities for health care among various categories of health workers, governmental departments and their agencies without integrated direction, coherent policy and coordinated relationship (Jiradu *et al*, 1989).

Infant and under-five mortality rates remained very high and life expectancy at birth was below 43 years. Complications of pregnancy

occurred in about 15% of women and maternal mortality rate was about 25 per 1,000 deliveries. The major killer or crippling childhood diseases in the country were preventable diseases which can only be eradicated by immunization, health education, improvement in environmental sanitation, especially the provision of adequate and potable water supply as well as adequate and safe disposal of refuse and human waste. It was also realised that 85% of the ill-health conditions could be easily prevented and treated outside the hospital system by non-physicians, suitably selected, trained, supervised and motivated (Fendall, 1972; Ransome-Kuti, 1981).

The problem of poor state of health was interlinked and compounded by the overall developmental problems of the country. The country's gross national product per head never rose above US 10 dollars and per capita expenditure on health was less than US 3 cent, the bulk of which went into curative services which were located in urban areas.

GOVERNMENTAL POLICY RESPONSES

The Federal Government of Nigeria embarked on the reorganization of the health system of the country in the early 1970s. Two major policy changes were embarked upon, namely: (i) the introduction of the Health Management Board System (HMBS) and (ii) Primary Health Care (PHC) Programme.

I. Health Management Board System (HMBS).

In 1975, the government embarked on a reorganization of the health service system of the country by adopting a HMBS. The main objectives of HMBS, as an approach to managing the health services of a state, were to facilitate the delivery of effective and efficient health care and also facilitate effective participation of providers as well as consumers of health services in decisions about health.

The basic concept underlying this approach is REGIONALIZATION of health services. This concept has long been proposed as a potential solution to the problems of fragmented health services of most countries, including health needs of rural areas. It has also been described as "offering a unified planning of a functionally differentiated but well coordinated health care delivery system for an entire geographical region, demarcated not just by political boundaries

but according to established pattern of seeking and providing medical care in a manner similar to trading areas" (Oskewe, *et al*, 1982).

The HMBS of Nigeria was essentially an administrative arrangement, within a state, for facilitating effective planning, management and allocation of health care resources and also for decentralizing decision-making. The system aimed at organising resources into peripheral, intermediate and central organization and administration within a defined geographical-cum-political boundary. The HMBS of each state was therefore a three-tier pyramidal structure made up of: (i) a State Health Council at the apex; (ii) Zonal Health Board in charge of each health zone and; (iii) Local Health Committee at the local government level.

II. Primary Health Care Programme. Since the end of the second world war, there were growing concerns for the poor state of health of people in disadvantaged and under-developed areas of the world. The principles of Primary Health Care (PHC), as a strategy for improving their poor state of health, had been sporadically developed, demonstrated and advocated. PHC was therefore seen as an essential care necessary for providing social justice in health for the disadvantaged populations. This realization led to world-wide concern, various international initiatives, the declaration of the seven principles of the PHC by the world Health Assembly in May 1975 and also the famous Alma-Ata declaration of September 1978. Some of the principles of the declaration are as follows:

- (a) PHC must respond to the needs of the population.
- (b) There must be individual or collective participation of the users in the planning, implementation and evaluation of health care.
- (c) All available resources must be investigated so as to make them appropriate, accessible and moderate in cost.

Before then, by the middle of 1970s, a health care programme known as Basic Health Services Scheme (BHSS) was formulated by the Nigerian government. The BHSS aimed at providing comprehensive, preventive, promotive and essential curative services by means of appropriate technology and a change in the pattern of resource allocation to favour the under-served and the rural population. The

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programme was renamed *Primary Health Care (PHC) Programme* in 1983 in order to streamline its approach with that advocated by WHO and UNICEF.

The Federal Government of Nigeria adopted PHC as the cornerstone of its National Health Policy in 1987 and made it the main responsibility of local governments. According to the policy:

"PHC shall provide general health services of preventive, curative, promotive and rehabilitative nature to the population at the entry point of the health care system. The provision of care at this level is largely the responsibility of local governments, with the support of the State Ministry of Health and within the overall National Health Policy". (FMOH, 1987)

The eight components of the PHC programmes which, according to the National Health Policy, are the core areas of activities of the local government, are:

1. *Education concerning prevailing health problems and method of preventing and controlling them;*
2. *Promotion of food supply and proper nutrition;*
3. *An adequate supply of safe water and basic sanitation;*
4. *Maternal and child health care, including family planning;*
5. *Immunization against the major infectious diseases;*
6. *Prevention and control of locally endemic diseases;*
7. *Appropriate treatment of common diseases.*
8. *Provision of essential drugs.*

Community participation was identified as the main strategy for achieving the objectives of the PHC programmes. To ensure peoples' participation, each local government area was divided into health districts and PHC Management Committees were formed in each local government area with the responsibilities for planning, managing, monitoring and evaluating PHC services at the local government level (Ransome-Kuti, *et al*, 1990).

It was also recognized that there were some health services under the local governments before the introduction of PHC approach. These include maternity, dispensary and sanitary services with staff

compliment and other facilities. Some externally-supported PHC programmes were also in existence as vertical programmes, such as expanded programme on immunization (EPI), Oral rehydration therapy (ORT) programme, nutrition and growth monitoring programme, rural water supply and sanitation (WATSAN). The basic challenge was to establish organizational and management strategies for integrating these programmes into a harmonious whole, so that effective and efficient health services could be delivered to the people in their communities.

At the beginning, an average of 5% of the federal government's health budget was allocated to PHC (See table 1 below). Considerable amount of resources were expended on the programme by the international organizations such as WHO, UNICEF, USAID, etc. However, as years rolled by, resources allocated for the programme dwindled, thus indicating declining political commitment to the programme.

Table 1: Federal Budgetary Allocation for PHC, 1987-1989 (In millions of Naira)

Year	Total FMOH Budget for Health	Allocation for PHC	PHC Allocation as % of Total FMOH Budget
1987	236.45	14.30	6.05
1988	443.11	18.50	4.18
1989	452.50	19.90	4.39

Adapted from Egwu, 1996.

Recent information on the health status of the population shows that the programme is yet to achieve its stated objectives. Various health status indicators, including infant mortality rate, child death rate and maternal mortality rate, have not shown any significant reductions. Immunization coverage has dropped to 11%, majority of pregnant women have no access to safe delivery and about 50% of our children are suffering from chronic malnutrition which will undoubtedly affect their physical development and future intellectual functioning (see table 2).

Table 2: Selected Health Indicators for Nigeria in 1994.

Infant Mortality Rate	114/1000
Under-five Mortality Rate	191/1000
Percentage of infants who had received any vaccination	11.0%
Percentage of pregnant women with access to delivery by trained midwives	10.0%
Children under five stunted	50.4%

Although the HMBS and PHC programmes were designed to address the problems of underdevelopment of health in the country, inadequate financing, poor planning, coordination and management of available health resources at the local community level and lack of effective machinery for community involvements/participation in the programmes are the main factors constraining the programmes (Jinadu and Oribabor, 1988; Egwu, 1996).

HEALTH PROMOTION RESEARCH IN IFE - MY CONTRIBUTIONS

"The ideal outcomes of health research is the effective utilization of its findings"
(HSR Training Series, 1991).

Mr Vice Chancellor, sir, when I joined the Department of Community Health of Obafemi Awolowo University as lecturer II in 1979, I was assigned the responsibility of teaching and coordinating occupational health and some primary health care courses and programmes. As at that time, I was the only lecturer in the department with some practical experience of occupational health services. Initially, I was only interested in doing research and using the research findings to improve my teaching. However, as nearly all my research ideas began to emanate from my community health services in occupational health and primary health care facilities, the need to use my research findings to improve the health of my target populations for services became very compelling.

At the beginning, I was working alone. However, with increasing interest in the conduct of research to assist in the formulation of health policy and improve the health of the people, I began to develop collaborative research with colleagues within and outside my Faculty.

My first initiation into the methodology of operations research was when, Professor Ojofeitimi and I successfully developed and implemented an operations research sponsored by Primary Care Operations Research (PRICOR) in 1985. This study aimed at demonstrating a novel supervisory strategy for improving the productivity of PHC workers in the country (Ojofeitimi, *et al*, 1985). Most of what I have learnt since then about health promotion research was through 'learning by doing'. A brief discussion of my adventures into health promotion research before and since then is relevant at this juncture

Promoting the Health of Nigerian Workers

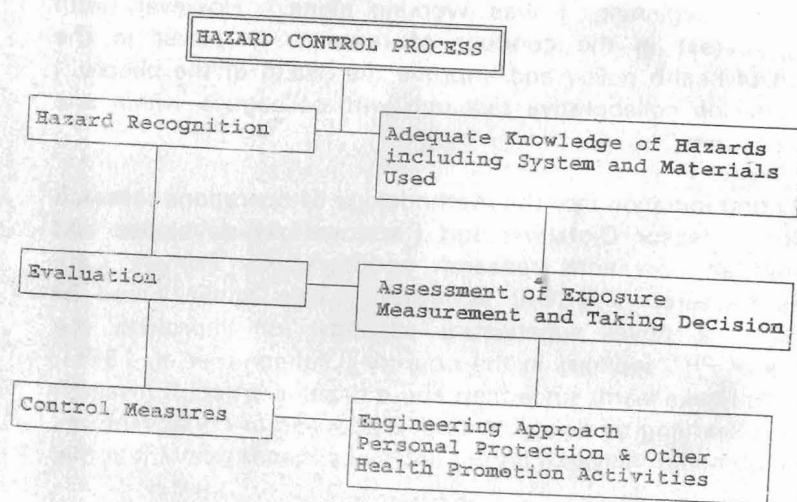
Industries of various kinds have been established in Nigeria

without adequate considerations for their environmental impacts. Very often, the safety and health of the population have been of secondary consideration in their locations and constructions. Exposure of workers to hazardous substances and processes in the industries have resulted in injuries, diseases and death. A staggering number of working days are lost due to industrial accidents and diseases. Despite all these, few industrial enterprises in the country can boast of well organized occupational health service programmes for their workers (Jinadu, 1983).

Occupational health (occupational medicine, industrial health, industrial medicine, etc) is concerned with the health of the workers, including the control of all hazards in their working environment that may affect their health, safety, comfort and productivity (WHO/ILO, 1950; Jinadu, 1979; Jinadu, 1994).

Hazard control programme is central to the objectives of occupational health programmes. The process involved in the control of occupational hazards comprises of three distinctive but inter-related steps as shown in figure II below:

Fig II: A Diagram Showing Hazard Control Process in Occupational Health



The broad field of occupational health provided us with initial opportunities for health promotion research. Working with colleagues within the faculties, our research efforts were initially directed to conducting epidemiological investigations of occupational health problems. These include investigations into health problems of road construction workers in the early days of road construction boom (Jinadu, 1980), motor vehicle mechanics, welders and painters (Jinadu, 1982) and bakery workers (Jinadu and Malomo, 1986), etc. However, as workers began to ask us, "of what use is your research to us?", we decided to apply the results of our findings to improving their health and safety.

Health Promotion Among Wood Workers: Logging and wood-processing are common occupations in south-western Nigeria where timbers are found in abundance. The occupations have long been known to be highly hazardous. Various types of health problems such as cancers of the nasal cavities, dermatological and respiratory disorders, and accidental injuries have been reported among workers in the occupations in industrialized countries (Jinadu, 1983). However, few studies focused on the health problems of workers in the industries in Nigeria.

In 1983, I lead a team of researchers (Jinadu, Hozzain and Owolabi) to conduct investigations into health problems of workers in the largest wood industrial establishment in the country. Our objectives were to:

- (i) identify the prevalence, distribution, severity and determinants of accidental injuries, occupational respiratory disorders and occupational dermatitis and;
- (ii) develop programmes for the promotion of health of workers in the industry.

These series of investigations spanned a period of five years. Our first year of research efforts was financially supported by the University and the rest was through personal sacrifice. Professor Soyinka, of the Department of Dermatology and Venerology, provided us with valuable advise throughout the duration of the project.

Our investigations revealed the followings:

- (a) Majority of workers in the industry suffered from minor injuries during the process of handling woods. Occasionally, when serious and fatal accidents occurred, they were caused by falling and flying objects, usually in the logging section. These accidents resulted into considerable loss of man-hours and productivity (see Tables 3 & 4).
- (b) Impairments of respiratory function, as a result of inhalation of wood dusts and substances were found mainly among wood furniture workers in the industry. While some of the respirable wood dusts were transported to the alveoli and caused restrictive airway problems, others caused bronchi-constriction and, hence, obstructive airway problems (see Table 5).
- (c) Contact with wood and chemicals used for their preservation and preparation often resulted into allergic dermatitis (see Table 6).
- (d) Medical section of the industry was poorly organised. Patients records were not adequately kept and the health personnel were not engaged in any preventive and promotive programmes.

We therefore developed a health promotion programme, focusing not only on workers' education about safety precautions in the wood industry and the use of protective devices, but also on the reduction of specific hazards in the industry. Our intervention programme later brought together medical department of the industry, workers' union and management to formulate policies on health and safety of workers in the industry. Occupational Health and Safety Unit of the Federal Ministry of Health later requested for the results of our findings to aid the unit in setting standards for the control of hazards in the wood industries in the country.

Table 3: Distribution of Wood Industrial Accidents According to Types of Injuries Sustained by the Workers in 1984.

Types of Injuries	Number of Workers	Relative Frequency %	Incident rate per 100 wood-workers
Minor injuries	395	80.6	52.5
Deep lacerations/punctured wounds	28	5.7	3.7
Eye Injuries	27	5.5	3.6
Fractures	10	2.0	1.3
Head Injuries (i)	4	0.8	0.5
Burns and scalds	4	0.8	0.5
Snake bites (ii)	4	0.6	0.5
Scorpion stings	3	0.6	0.4
Others	15	3.1	2.0

- (i) 2 died of head injuries
- (ii) 1 died of snake bites.

Table 4: Incident rates (IR) of wood industrial injuries/accidents in the various production units of the wood industry.

Types of Injuries	Plywood N=156	Sawmill N=119	Furniture N=93	Workshop N=25	Forestry N=98
	IR/100	IR/100	IR/100	IR/100	IR/100
Minor injuries	51.2	52.9	53.7	60.0	52.0
Deep lacerations	3.1	5.2	4.1	8.0	2.0
Eye injuries	1.9	5.8	2.0	16.0	2.0
Fractures	0.4	2.3	0.3	4.0	2.0
Head injuries	0.4	0.6			1.3
Burns and scalds	0.8			8.0	
Snake bites	-	-	-	0	2.7
Scorpion stings	0.4	-	-		2.0
Others	5.4	5.2	4.8		8.1
Total	60.0	69.2	62.8	100.0	66.2

Table 5: Ventilatory capacity of wood furniture workers before and during working hours.

Variables	Before Working	Differences before and during working hours	P
FVC	3.41 \pm 0.32	-0.59	<0.01
FEV ₁	3.04 \pm 0.25	-0.93	<0.01
MET (in sec)	0.63 \pm 0.36	-0.26	<0.01

Table 6: Contact dermatitis among workers in various production sections of the wood industry

Production Sections	No. of Workers Examined	No. with contact Dermatitis	Percentage
Plywood workers	20	15	75.0
Furniture Assembly and Prototype workers	11	6	54.5
Sanding workers	6	3	50.0
Furniture Spraying workers	11	5	45.4
Quality Control workers	6	4	66.7
Total	54	29	54.7

Controlling Noise Hazards in the Wood Industries: Noise, according to International Labour Organisation (ILO, 1977), is all sound which could result in hearing impairment or be harmful to health or otherwise dangerous. Noise is a major health hazard in Nigeria, particularly in small-scale wood industries (sawmills) which provide employment for a sizeable proportion of the working population in south-western Nigeria. Unfortunately, majority of Nigerian workers do not perceive noise as dangerous to health.

As a result of our successful implementation of the wood industrial project, I was invited by ILO, in 1992, to develop a project for the control of noise hazard among small-scale wood industrial workers in the country. This project started with the identification and quantification of the noise hazard and the assessment of knowledge, attitude and practice of noise prevention among wood workers in Osun, Ondo and Ogun states.

Our findings revealed that the two main types of saw used by the saw-millers (circular and band saws) emitted noise that was above the recommended threshold value of 90dB and which could result into hearing impairment of the workers (see Table 7). Workers had poor knowledge of the hazard and were not practising any noise abatement method.

We therefore embarked on health promotion programme that focused on: (i) improving workers' knowledge of the noise hazard; (ii) provision and use of noise limiter (ear protector) and; (iii) noise reduction through regular maintenance of machines.

One of the first set of Ife medical graduates to obtain the Fellowship of the West African Community Medicine, from the Department of Community Health of Obafemi Awolowo University, participated in this project. He wrote his fellowship dissertation on noise among the wood industrial workers, under my supervision, using equipment loaned to us by the ILO.

Table 7: Noise Level in Sawmills in Ondo, Ogun and Osun States of Nigeria

Type of Machine	Circular Saw	Band Saw
Average Sound Level (dB)	96.1 \pm 0.3	95.9 \pm 2
Average Highest Noise detected (dB)	112.2 \pm 1	109.2 \pm 3
Average of Leq (dB)	105.5 \pm 2	103.3 \pm 3
Average Dose % (dB)	120.4 \pm 3	134.1 \pm 2
Average L _{avc} (dB)	103.8 \pm 2	97.3 \pm 2
Average duration of Exposure (hours)	8.5	8.5
Type of Noise	Steady	Steady

Key: Leq = Equivalent continuous sound level.

L_{avc} = Average sound level measured by sound meter to which worker is exposed.

In summary, one of the greatest challenges of Nigeria and other industrializing nations is the need to develop adequate health promotion programmes for workers. Adequate health promotion programmes require establishment of facilities for the identification of hazardous substances in the work environment that may affect the health and well-being of workers, and the development of programmes for their control. This should be a joint responsibility of the government, industrial health department, workers and their managers.

Promoting the Health of Nigerian Child

An average Nigerian child is an unhealthy child. He/she is ravaged by disease and hunger. The very high infant and under-five

mortality rates, as indicated earlier, tell part of the story. The major killer or crippling childhood diseases in the country are infectious/communicable diseases and malnutrition, which have also been described earlier.

Evaluation of Expanded Programme on Immunization (EPI)

"Immunization programme constitutes one of the most economical and effective approaches to the prevention of communicable diseases and can produce dramatic effects in the battle to lower infant and childhood mortality rates in the developing countries if they are well implemented" (Jinadu, 1983)

In 1974, Nigeria embarked on EPI with the objective of immunizing at least 85% of children against six target diseases, namely:

Tuberculosis

Neonatal Tetanus

Diphtheria

Poliomyelitis

Measles

Whooping Cough or Pertussis

The programme started in Oyo State after a pilot study conducted at Ikire in Irewole Local Government area in 1975.

After few years of its implementation, it became obvious that the programme was failing, despite huge resources committed to it by WHO and UNICEF.

In 1982, I conducted an administrative case study of the programme and identified why the programme was not likely to achieve its stated objectives. These include *"inadequate community involvement in the planning and implementation of the programme, poor communication between different government departments and inadequate publicity"* (Jinadu, 1983). This study was later cited by the then Honourable Minister of Health, Professor Olikoye Ransome-Kuti, during the launching of National Primary Health Programme in 1987, as one of the major contributions to the development of Primary Health Care in Nigeria. It was by a stroke of luck that this small piece of research influenced a national health policy. This is the ultimate goal of

policy-oriented health research activities which is often very difficult to realise in one's life-time.

Preventing Childhood Diarrhoeal Diseases: Diarrhoea has long been recognized as a major cause of morbidity and mortality among children in Nigeria (FGN/UNICEF, 1985; FMOH, 1987). Although the disease is generally known to be caused by poor environmental conditions and socio-cultural behaviours of the people, specific environmental and socio-cultural factors that are responsible for the high incidence of the disease in the country remained inadequately investigated. Therefore, one of the priority research needs was to develop anti-diarrhoeal interventions based on specific, behavioural and environmental determinants of the disease (Faechem *et al*, 1983; Faechem, 1984).

As a matter of fact, my interest in child health problems was aroused by some members of the community who told us, during a community-based investigation of goitre in Akoko area of Ondo State in 1984 (a project coordinated by Professor Oke of the Department of Chemistry), that their priority health problem was not 'goitre' but saving the lives of their children from diseases. Further enquiry and observation revealed that diarrhoea was a number one killer of children in the area. I therefore spent the next two years developing a research proposal for the control of childhood diarrhoea in the area, for funding by International Development Research Centre (IDRC).

The investigation commenced in 1987 and was conducted for four years by a multidisciplinary team of investigators (Jinadu, Olusi, Agun and Fabiyi). Our aim was to develop community-based pilot intervention strategy for the prevention of childhood diarrhoea in this rural area of Nigeria.

Our pre-intervention investigation revealed inadequate disposal of children and adult faeces and household refuse, lack of hand-washing with soap and water after going to toilet and before preparing children foods, poor breast-feeding practice and unhygienic feeding utensils as the risk factors for childhood diarrhoea in the area (Jinadu *et al*, 1991).

Health promotion interventions, based on these findings, were formulated and implemented among mothers with children under the

age of five years in the communities. Evaluation of the project, after 12 months of intensive community-based intervention, revealed a significant reduction in the incidence of diarrhoea in the intervention communities, compared with the control communities (see Tables 8 and 9).

Table 8: Six-month post-intervention incidence of diarrhoea among children 0-5 years in intervention communities, compared with control communities, in Akoko Area of Ondo State, Nigeria

Age-group (in yrs)	Intervention*	Control**	RR**** p-Value	
	ID***	ID***		
<1	1.20	3.06	0.39	0.000
1-2	1.15	1.34	0.86	0.000
2-3	1.23	2.31	0.53	0.000
3-4	9.27	16.63	0.56	0.000
4-5	4.72	14.72	0.32	0.000
Total	1.22	2.45	0.50	0.000

* Total number of children observed in the intervention communities = 2285

** Total number of children observed in the control communities = 1900

*** Incidence Density/1000

**** Relative Risk

Table 9: Pre- and Post-Interventions two-week prevalence of diarrhoea among children 0-5 years in Akoko Area of Ondo State, Nigeria

Age-group (in years)	Pre-Intervention (%)	Post-Intervention (%)	% Reduction
<1	15.7	3.7	76.4
1-2	5.5	3.4	38.2
2-3	8.1	3.7	54.3
3-4	4.9	2.7	44.9
4-5	2.3	1.5	34.8

In 1993, following successful implementation of this project, I was invited by Applied Diarrhoeal Disease Research Project (ADDR) of the Harvard Institute for International Development to develop another aspect of applied childhood diarrhoeal disease project. Other investigators in the project were Professor Odebiyi of Department of Sociology and Anthropology and Dr. Fajewonyomi of the Department of Community Health. The project was conducted in Ife South Local Government Area of Osun State, Nigeria. Our research objectives were to determine the prevalence of personal and domestic hygiene behaviour associated with high incidence of childhood diarrhoea and develop community-based health promotion intervention for addressing them.

Our findings revealed different categorizations of diarrhoeal illnesses by members of the community (see Table 10). The mothers' perceptions of the seriousness of the illnesses and the causes were based on these categorizations. These, in turn, were shown to influence the types of home treatments used by the mothers (Jinadu *et al.* 1995). Foods given or not given to children during the disease reflected community's notion of the aetiology of the disease (Jinadu *et al.* 1996).

Like in Akoko area, we found that many households lacked hygienic methods of disposal of children's and adults' faeces. Cleaning of feeding utensils and hand-washing behaviour were also poor. The community lacked potable water for drinking.

Table 10: Local Taxonomy of diarrhoeal illnesses among the Yoruba in Ife South of Nigeria.

Local classification	Explanation
1. Igbe gburu	Frequent watery diarrhoea, usually in large quantity. The term is also used for non-specific type of diarrhoea
2. Igbe jedi-jedi	Any type of stooling with blood in the stool.
3. Igbe Orin	Frequent stooling with mucus
4. Igbe tapa or Arunsu	Frequent stooling with colicky abdominal pain.
5. Susu-bibi, Onigbameji or Kusinu-kusode	Watery stooling and vomiting (Choleric type of diarrhoea)
6. Igbe eyin	Watery stooling associated with teething.
7. Igbe Osese. Igbe tolo or Asule	Frequent stooling usually in small quantity

To address the most critical risk factors for diarrhoea in this community, we proposed and implemented a partnership-driven pilot health promotion intervention that focused on the importance of safe disposal of children faeces, using soap and water for handwashing, adequate cleaning of feeding utensils and protection of community well from contamination. The partnership initiative led to greater collaboration between the researchers, the local government and the community for effective utilization of the research findings.

Hygiene Committee (Egbe Imototo): As an example, a hygiene committee (Egbe imototo) for the purpose of conducting grass-root mobilization and hygiene education, was initiated in one of the intervention communities. Members of the committee consisted of young mothers and some health extension workers.

A song/slogan, in Yoruba, for the prevention of childhood diarrhoea was formulated and adopted by the committee as part of their key educational strategy, as follows:

Imototo lo le se: in igbe gbuuru (twice)
Imototo owo
Imototo ara
Imototo onje
Imototo lle
Imototo lo le segun igbe gbuuru (twice)

Translation:

Cleanliness is the remedy for diarrhoea
Cleanliness of hand
Cleanliness of body
Cleanliness of food
Cleanliness of house
Cleanliness is the remedy for diarrhoea

Water Sanitation Project. During one of the series of meetings held with leaders of one of the intervention community (Bolorunduro community), it became obvious that lack of access to potable water was their main concern. The main sources of water in the community were two wells which, although were raised above the ground and lined with cement, had no cover. Individual bucket and rope were used for drawing water from the well. Members of the community were made to realise that the use of individual rope, bucket and lack of cover were the causes of pollution of water from the wells.

Construction of water-drawers and covers for the two wells was suggested and approved by the community leaders. The drawers and covers were later fabricated by a welder in Ile-Ife and transported to the village. The project fund was used for the construction of the water-drawers while the community was responsible for their

transportation and installation. The community also purchased aluminium buckets and durable ropes for the drawers. The water project was later commissioned by the chairman of the Local Government on 4/4/95, at a ceremony attended by members of the community.

Oral Rehydration Therapy (ORT): Ever since the introduction of Oral Rehydration Therapy (ORT) as a standard treatment of acute diarrhoea, considerable efforts have been made to promote this appropriate technology in developing countries in order to reduce excessively high childhood mortality caused by the disease (Grant, 1985). A unique feature of the ORT is that the mothers should be able to prepare and administer the solution at home whenever their children have diarrhoea. Health workers in primary health centres and hospitals were mainly responsible for the education of the mothers. Their educational activities were to be backed-up with mass media information and community-based action programmes (WHO/UNICEF, 1983; WHO, 1987).

Between 1987 and 1990, we conducted a series of studies to assess and improve knowledge, attitudes and practices of ORT by health workers in our PHC facilities (Jinadu *et al*, 1988) and to evaluate the efficacy of preparation of the oral rehydration solution (ORS) at home by the mothers (Jinadu, *et al*, 1991). Our findings revealed that the mothers were preparing and giving their children hypertonic ORS which contained too much salt and too little sugar. This was due to the use of wrong teaspoon and widespread belief that excessive consumption of sugar cause diarrhoea. We therefore recommended mass production and subsidized distribution of 3ml ORS teaspoon and intensive ORT education and promotion, using community-based and community-involvement strategy.

Combating Childhood Malnutrition

Malnutrition has long been recognized as a major factor adversely affecting the health, well-being and socio-economic development of Nigerians. It is a major cause of childhood morbidity and mortality, very high proportion of low birth weight babies and poor outcomes of pregnancies and maternal death. About 50 percent of Nigerian children under the age of six years are undernourished. Majority are underweight and of short stature. These mean that their physical development is arrested because of inadequate intake of foods.

Inadequate consumption of energy and protein foodstuffs and infections are the major causes of childhood malnutrition in the Country. Poverty, ignorance, neglect and poor environmental circumstances are the underlying causes (Jinadu *et al*, 1980; Ojofeitimi, *et al*, 1984; Jinadu, *et al*, 1986). Programmes for preventing malnutrition should therefore address these problems.

Impact of Agricultural Development Project on Childhood Nutrition: In 1982, an Agricultural Development Project was set up in Oyo North area of Nigeria by the World Bank, the Federal Government of Nigeria and Oyo State Government with the primary objective of increasing food production, farm incomes and nutritional status of the rural inhabitants. The project was designed to increase farmers' food production through better farming practices, provision of improved farm inputs such as fertilizers, agro-chemicals and improved seeds, construction of rural feeder roads, provision of farm service centres and improvement in water supply schemes of the rural areas. Since the establishment of this project there was no comprehensive assessment of its impact on the health and nutritional status of the population.

In 1990, Professor Olusi of Chemical Pathology, Professor Oni of Agricultural Economics, Professor Ajuwon of Cultural Studies and I embarked on an investigation for assessing the impact of this agricultural project on the health and nutritional status of children aged 0-10 years. The project, which was sponsored by IDRC, covers an area of about 12,310 sq km with a total population of 1.5 million people in four Local Government Areas of Ifedapo, Irepo, Oorelope and Kajola, all of which are located in Oyo North Agricultural Development project (ONADEP) area in the Northern part of Oyo State. For comparative purpose, Ogbomosho and Oyo Local Government areas were chosen as control (non-project) area for the study.

The study revealed that the food crop outputs in the ONADEP area were significantly higher than the control area. Although the diets of children in both the control and the ONADEP areas consisted mainly of energy-giving foods, and were below the recommended levels for adequate growth, children from the ONADEP area consumed more of the protein and energy foods than those from the control area. PEM was less common in the ONADEP area than the control (see Tables 11 and 12). Socio-cultural factors constraining food production and

consumption were also identified. We therefore made specific policy recommendations for increasing food production and enhancing household food consumption and preventing childhood malnutrition in the country.

Table 11:
Prevalence of Malnutrition in Children Under 10 Years of Age, by Age-group Distribution in the ONADEP and the Control Areas as indicated by Children below -2 Standard Deviations (SD) of the Median Values of the Nutritional indicators

Age-group (months)	Weight-for-Age (Underweight) % below -2 SD		Height-for-Age (Stunting) % below -2 SD		Weight-for-Height (Wasting) % below -2 SD	
	ONADEP	CONTROL	ONADEP	CONTROL	ONADEP	CONTROL
0-5	7.3	0.0	3.7	0.0	20.0	0.0
6-11	24.2	13.5	9.5	5.4	19.0	13.5
12-23	35.0	22.1	37.2	38.2	25.4	14.7
24-35	26.9	37.5	34.8	44.6	5.2	5.4
36-47	25.8	30.5	36.7	43.9	6.3	8.5
48-59	18.8	33.0	35.4	51.6	8.0	7.7
60-119	18.6	33.0	29.9	40.1	5.4	6.7
0-119	21.3	30.1	30.5	39.0	8.5	7.6

P < 0.05

Table 12:

Prevalence of severe malnutrition in children under 10 years of Age, by age-group distribution in the ONADEP and the control areas, as indicated by children below -3 standard deviation (SD) of the median values of the nutritional indicators.

Age-group	Weight-for-Age (Underweight) % below -3 SD		Height-for-Age (Stunting) % below -3 SD		Weight-for-Height (wasting) % below -3 SD	
	ONADEP (N = 1494)	CONTROL (N = 826)	ONADEP (N = 1486)	CONTROL (N = 824)	ONADEP (N = 1486)	CONTROL (N = 824)
0-5	3.6	0	1.9	0	7.3	0
6-11	9.1	5.4	3.2	0	6.3	2.7
12-23	18.7	7.4	20.7	11.8	7.4	2.9
24-35	8.2	10.7	20.7	17.5	0.0	1.8
36-47	5.7	9.8	19.6	24.4	1.3	0.0
48-59	7.4	11.0	20.0	31.9	0.0	1.1
60-119	3.3	7.6	13.1	20.4	0.6	1.1
0-119	6.0	8.0	15.1	19.5	1.6	1.2

Child Abuse and Neglect

A child is abused when physical injury is inflicted on him/her by a parent or caretaker. The physical injury or assault is usually preceded or accompanied by a harsh and punitive climate of child-rearing and lack of emphatic parenting. A child is regarded as neglected when parents fail to measure up to accepted standard or norm of child care, whether wilfully or un-wilfully, or for reasons beyond their control.

Common Types of Child Abuse and Neglect in Nigeria. Different types of child abuse existed in Nigeria in the past. While some have virtually been eliminated (e.g. infanticides) or diminished considerably, others have actually increased in incidence and severity. The common types of child abuse and neglect which exist in our society today that require urgent interventions include the following:

- Excessive Corporal Punishment and Physical Abuse of children
- Child Labour (Jinadu, 1985)
- Female Genital Mutilation
- Child Marriage
- Sexual Abuse of Children
- Child Abandonment (Jinadu, 1985).

Jinadu (1986), in a critical evaluation of the role of PHC in the prevention of child abuse and neglect suggested that the above situations of Nigerian child can be improved through developmental, social policies and programmes of multi-dimensional nature which recognise the need to:

"(a) provide adequate facilities (health, social, welfare and educational institutions, etc) for the support and care of families and their children.

- (b) create awareness of the extent and consequences of the problems in the mind of the public through appropriate public enlightenment programmes;*
- (c) Change prevailing social and economic structures of the society to favour majority of the population.*
- (d) establishment of genuine community-based and family-focused programmes that aim at alleviating poverty and preventing the problems enumerated above"*

These suggestions are more pertinent in Nigeria of today than before.

Concerned about the situations of African child, a group of African scholars that attended an International Conference on Child Abuse and

Neglect in Montreal in 1984 proposed a "Society for Children in Especially Disadvantaged Circumstances in Africa". This association was launched under my chairmanship in Nairobi in 1985. The association, which was later affiliated to International Society for the Prevention of Child Abuse and Neglect, has spread to nearly all African countries and has become a leading association for the promotion of the rights and welfare of children in Africa.

Community Mobilization for Guinea Worm Eradication

In February 1989, Professor Edungbola of University of Ilorin and I were invited by Global 2000 (Jimmy Carter Foundation) to serve as evaluators of guinea worm eradication programme in 12 southern States of Nigeria. Our findings revealed the gaps between the existing and planned organizational structures and resources for the eradication of the disease in the 12 states. Our recommendations centred on strategies for bridging the gaps and were incorporated into subsequent guinea worm eradication programmes for the country.

Dracunculiasis, or guinea worm disease, is a parasitic infection caused by a threadlike, cylindrical worm called *Dracunculus medinenses*. The parasite, which is transmitted through drinking water, travels through the body and later emerges through the skin or mucus membrane after about twelve months, causing skin ulcers.

The disease has long been recognized as a major health problem in Nigeria, affecting children as well as adults (Onabamiro, 1951). It is a disease of rural communities, where about 80% of the population lives, and where portable drinking water is lacking. In fact, the main condition for infection in Nigeria occurs where water for drinking is taken from surface pond. A nationwide case-search programme conducted in 1988 revealed that about 2.5 millions people in 5,879 villages were infected (NIGEP, 1989). It has no known cure and no vaccine exists for immunization.

The disease causes untold misery and sufferings to families, especially when the wounds are secondarily infected. Studies have shown that it is a major impediment to agriculture and socio-economic development of rural communities in Nigeria (Nwosu *et al* 1982; Edungbola, 1985; Hopkins, 1984; Edungbola, 1983; Edungbola, 1987).

Using the experience acquired during the nationwide evaluation, I developed a guinea worm-focused action research proposal which won a highly competitive African Research Foundation Fellowship in 1989. The research was conducted in Akoko area, the most endemic guinea worm area of Ondo State, using community participation and grass-root mobilization strategies.

After obtaining baseline information on the prevalence of the disease and socio-cultural factors sustaining it, we embarked on community education and mobilization for the eradication of the disease. Members of the communities were sensitised to the problems of guinea worm and also made aware that the eradication of the disease, through the provision of safe drinking water, should be their individual and collective responsibilities.

Self-Help Projects: In the intervention communities, one community decided to repair its old dam, another community decided to protect communal pond by building a concrete wall round it and two communities decided to construct boreholes. Members of the communities contributed money and material resources for these self-help projects.

In summary, this action research shows that effective mobilization of grass-root socio-cultural organizations in guinea worm eradication programme resulted in a significant reduction in the prevalence of the disease in the intervention communities (see Table 13). Factors influencing effective participation of the organizations include: (a) level of education of their members; (b) interest of such organizations in community development activities.

Table 13: Prevalence of guinea worm in the intervention and the Control Communities in Akoko Area in 1991.

	Intervention Communities	Control Communities
No. of persons observed	28.952	11.883
No. of persons infected	2,214	1,846
Percent prevalence	7.6	15.5

$$\chi^2 = 586.8, P < 0.001$$

Improving Reproductive Health of Nigerian Women

Nigeria is the most populous country in Africa and, with a growth rate of 3.1 and a total fertility rate of 6.3, it is also one of the fastest growing population in the continent. Despite about three decades of efforts to promote the use of modern contraceptives in Nigeria, there has been no appreciable impact of this programme on fertility and reproductive health. Demographic and health surveys conducted in the past decade have consistently shown low prevalence of modern contraceptives and very high fertility rates (Federal Office of Statistics, 1992). Rapid population growth continues.

Unintended pregnancies and complications from childbirth are the main hazards of reproduction faced by Nigerian women. Reducing the number of times a woman is exposed to unwanted pregnancies through family planning will therefore promote her reproductive health.

Various attempts that have been made to provide family planning services in the country were through clinic and community prescription/distribution of contraceptives, using strategies that were borrowed from other countries. It is now very clear to policy makers and programme managers that these strategies have not worked. The

basic challenge, therefore, is to develop alternative strategies that are culturally relevant and meet the needs of the community for services.

One of such authentic strategies is the market-based distribution of contraceptives, using market vendors, developed by Professor Ladipo and co-workers at Ibadan in 1985 (Ladipo, *et al*, 1990). Although this market vendor initiative later spread to various parts of the country, there was a serious concern about its sustainability by donor agencies.

A review of experience and achievements of the initiative in the country was therefore undertaken by Jinadu, Phillips, and Kane in 1993 (Jinadu, *et al*, 1993). This project was sponsored by African Operations Research and Technical Assistance Project Population Council, Nairobi. Our findings highlighted the weakness and strengths of the various strategies used by the numerous agencies involved with the initiative. Our recommendations include the need for further operations research to assess its impact on the prevalence of contraceptives in the country.

Investigating Traditional Fertility Regulation Among the Yoruba:

Although the existence of various types of traditional contraceptives (TC) have been known in Nigeria for a long time, the types commonly used and their effectiveness have never been investigated. Olusi, Ajuwon and I conducted investigations, sponsored by IDRC, that aimed at (i) identifying the prevalence and practice of TC among Yoruba women of child-bearing age, (ii) describing methods of their preparation and administration by traditional medical practitioners and, (iii) determining their use-effectiveness. The study was conducted in Ife area between 1989 and 1992.

Our findings revealed the existence of four main varieties of TC: *Oruka*, *Aseje*, *Igbere* and *Igbadi* among the population. Their prevalence was 7.1 percent and the use was significantly more common among the uneducated women and women aged 20 to 29 years old. Findings also revealed varieties of herbal and animal products used for the preparations of the TC, methods of administration and taboos against usage. Our case-control study of use-effectiveness shows that a significant proportion of the non-users of the TC (34.5%) became pregnant compared with the users (5.6%), thus demonstrating

apparent effectiveness of the TC methods. We therefore concluded that 'there may be value in incorporating the promotion of TC into national family planning programmes in the country' (Jinadu *et al*, 1997(a); Jinadu *et al*, 1997(b)).

Environment and Health

One of the greatest threat to human health are the environmental factors which range from atmospheric pollution to food contamination. Air pollution within the household environment, caused primarily by the use of biomass fuel, is one such factor (Ellegard, 1991). There is a growing evidence linking indoor air pollution (IAP) with high incidence of respiratory diseases, particularly among children and women, in developing countries (Achimadi, (1991).

Behavioural and socio-cultural factors are generally known to be associated with the problems. Therefore, one of the priority research areas was the need to develop action programme for modifying behavioural practices related to IAP due to the use of biomass fuel.

Control of Indoor Air Pollution: Recently, my colleagues (Dr. B.A. Fajewonyomi, Dr. A. A. Ojo) and I started a project for the control of IAP through community-based, participatory, educational intervention that aims at modifying existing practices related to the use of biomass fuel. This study was sponsored by NEST/Ford Foundation and was conducted in Ifetedo in Ife South Local Government Area of Osun State. Our preliminary findings revealed that the prevalence of cough and catarrh among under 5 children in the community was very high - 26.6% and 25.8% respectively. A factor identified as significantly associated with the high prevalence was inadequate ventilation of cooking areas in the households.

We have developed and conducted pilot intervention which focused on how to modify the environmentally harmful practices and behaviours related to inadequate ventilation of the cooking areas, particularly the use of fuelwood/kerosine for cooking within the households. Our process evaluation of the pilot intervention revealed that community leaders and PHC workers were carrying the messages to the grassroots. Even though the pilot project lasted for three months, we intend to conduct further interventions for modifying the environmentally harmful practices and evaluate their impacts.

The Challenge of Old and New Health Threats

Many infectious and communicable diseases, such as malaria, tuberculosis, leprosy, cerebrospinal meningitis etc, continue to cause considerable death and suffering in Nigeria. Chronic diseases such as hypertension, heart diseases, cancer, circulatory diseases, mental disorders etc, now pose a greater threat to our health than before because of our changing lifestyle. Alcohol, cigarette smoking, drug addiction, sedentary life and socio-economic pressures are some of the areas which require urgent health promotion actions.

The fact that AIDS/HIV poses a serious threat to the health and well-being of sexually active population in Nigeria is now well known. Between 1.5 to 2.5 millions Nigerians are infected with the virus. Research on sexual behaviour and HIV transmission in Nigeria has focused primarily on identification and modification of sexual behaviour of high risk groups such as commercial sex workers, long distance truck drivers and adolescents (Jinadu *et al*, 1993). However, recent trends of the infection show that the general population are equally at risk. Modification of our sexual behaviours by being faithful to our wives and husbands, girl friends or boy friends, (and appropriate use of condom if you cannot keep to this simple rule), is the only means of ensuring that one is not infected through sexual intercourse and die a premature and painful death.

Aging and Health: As life expectancy increases in the country, majority of those over 65 years will increase and the needs for the society to care for the elderly population will also increase. Within our traditional extended family network and the community, elderly members of the family have been adequately respected and catered for. However, with increasing western education and rural-urban migration of young people, the country is experiencing the dissolution of the extended families with its devastating consequences on the health and welfare of the elderly. Starvation, loneliness, chronic disabling conditions, psychiatric illnesses, infections and extreme poverty are now some of the common afflictions of the elderly in our society. Policy oriented researches are needed for the development of health promotion programmes for addressing the health and welfare needs of the elderly in the country.

Partnering for Health Promotion Research.

The fact that health research rarely influence health policy formulation and health promotion in Nigeria is partly responsible for the slow pace of health development in the country. Although this sad situation has always been bemoaned by researchers and policy makers alike, few efforts have been made to correct it (ADDR, 1995).

In recent years, however, attempts have been made to make health research conducted in universities relevant to the health needs of the communities. As a part of the overall strategies for conducting essential health research, building capacity, dissemination and utilization of research findings, partnerships can be entered into between the researchers/research institutions, the health service organizations and the target community for services. The Federal Ministry of Health, through a grant from British Overseas Development Administration, is currently supporting partnership programmes in PHC education, essential health research and services between local governments and medical schools in the country (NPHCDA, 1992).

At the Obafemi Awolowo University College of Health Sciences, we have successfully utilized such partnership-driven programme for community-based health promotion activities (Jinadu *et al*, 1997). Our experience of the planning and implementation of these partnership projects have shown that:

- i. For health professionals and ordinary members of the community to work effectively for a common purpose they should share a common vision of health. Unfortunately, health professionals, more often than not, will discover that members of the communities do not share their priorities or notions of disease causation and prevention.

Establishment of effective communication strategies with the partners, i.e. the researchers/research institutions, the local governments and the communities is a *sine qua non* for successful partnering.

Also, a recent review of experience of the initiatives highlights the importance of community mobilization, community participation and community empowerment during the planning,

implementation and evaluation of health research for community development (Jinadu, *et al*, 1997).

Training of Health Professionals for Relevance - Ife Experience

Mr. Vice Chancellor, sir, there is a growing danger that the training of health professionals, particularly at the university level in this country, may lose its social vision, i.e. become disconnected from the societal end and becomes an end in itself. Health professional education should be a means to an end, and the end should be improvement in the quality of life of the majority of the population. That appropriately trained health professionals can exert positive influence on the health of the nation is not in doubt. However, a situation where we continue to produce health professionals who are not adequately sensitised to the needs of the majority of the population for health care, does not augur well for the future of the country and the professions.

It was this realization that led the Faculty of Health Sciences of the Obafemi Awolowo University in 1972 to start with a commitment to train health professionals to meet priority health needs of its target community for services. It therefore initiated innovative community-oriented educational programme for its medical and other health science students (nursing, environmental health and medical rehabilitation). Although the programme was based in the Division of Community Care, the forerunner of the Department of Community Health and Nutrition, there was Faculty-based planning and coordination of the programme. Transportation, accommodation and other resources for the implementation of the programme were provided by the University.

Professor Grillo, a renown anatomist and foundation Dean, provided strong and charismatic leadership for the programme.

Students' educational objectives of the programme include:

"assessing the health status of the community, defining its major health problems, allocating priorities and formulating plans for dealing with them; working in or leading a health team; undertaking community health education; and tailoring his/her activities in respect of the health needs of the community so that they can reflect the social, economic,

psychological and ecological factors of the area" (University of Ife, 1976).

This programme was unique in the sense that it was the first of its kind in the country. It became a model for some new medical schools and an envy of the traditional ones. It was planned and coordinated by academic staff not only from the Faculty of Health Sciences but other faculties in the University. Community Health Committee was formed for the planning and allocation of resources for the programme.

After few years of the establishment of Ife medical education programme, new departments were created from the Division of Community Care and new staff, who were never orientated towards the original philosophy and objectives of the programme, were recruited into leadership positions. The centralised approach to planning and allocation of resources for the programme was abandoned. The programme became the responsibility of the new Department of Community Health and Nutrition which never had human and material resources for its implementation. The programme was therefore abandoned.

Rural Community-Based (RUCO) Health Programme

Despite the above, some members of the Faculty who believed in the philosophy of the community-oriented programme began to clamour for its revival. In 1987, the Faculty was persuaded to re-examine the PHC aspect of its curriculum in view of the fact that PHC had become a major focus of health service for the nation and, also, that the programme which Ife started and abandoned had not only spread to other universities in the country, but had earned Ilorin Medical School "a WHO collaborative Centre for Health Manpower Development". In addition, internal as well as external pressures to continue the membership of International Network of Community-Oriented Medical Institutions forced us to re-examine our programme. Another rural community-based health programme (RUCO) was therefore established by the Faculty.

Two rural communities - Imesi-Ile and Isoya - were selected for the programme. The programme was to be coordinated from the office of the Dean and all members of the Faculty were to be involved in its

planning, implementation and evaluation. However, the programme was soon abandoned because there was no adequate organizational structure for its implementation.

Our case descriptions of these life programmes illustrated various efforts to keep the innovative PHC educational programmes alive and the forces within and outside the medical schools militating against it (Jinadu and Davies-Adetugbo, 1992; Jinadu, 1992).

University-Community Partnership Initiative (UCPI) for PHC Education, Research and Service: In 1992, all medical schools in the country were invited by the National Primary Health Care Developing Agency (NPHCDA) of the Federal Ministry of Health and Social Services to develop PHC education and service with local governments of their choices. I was asked by the foundation provost of our College of Health Sciences (Professor Adetugbo) to develop a proposal for this initiative and, later, to coordinate it. Another community-based PHC education service and research programme was developed. Ife South Government Area (ISLGA) was chosen for the programme.

The main objective of the UCPI with the ISLG was to establish and strengthen LGA/community/university collaboration in PHC education, research and service.

Strategies for the planning and implementation of the UCPI include community mobilization/participation and capacity building. Facilities were established for community-based PHC education and service, including the setting up of PHC Laboratory for simple microbiological examination of urine, faeces and blood. This PHC laboratory, set up at a modest cost of about 250,000 naira, under the supervision of Dr Durosinmi of the Department of Haematology, has now become a model for other local government PHC programmes in the country.

Although the PHC education of medical students under this partnership initiative was planned to take place at various levels of their medical education, this has not been possible because of the inability of the College to review its medical curriculum to accommodate this programme and lack of adequate organizational structure for sustaining planning, implementation and evaluation. Unless our College rises up

to the challenge of reviewing medical and other health professional curricula to incorporate this programme, and set up adequate structure for its implementation, sustainable community-based PHC education will continue to remain a mirage at Ife.

of Innovative Approach to Medical Undergraduate Education in Nigeria. Recently, in a project sponsored by "The Association of African Universities", we (Jinadu, Ojofeitimi and Oribabor), evaluated this innovative approach to community-based PHC medical education in Nigeria. Our investigation revealed two critical factors responsible for the successful operations of the programme in some medical schools in the country. These were: (i) the establishment of separate organizational structures, approved and financially supported by the University for the planning, programming and implementation of the programmes; (ii) the central location and coordination of the programme within the medical schools. This allowed for some degrees of participation not only by all members of the medical schools and the university communities, but also members of larger the community. Other important factors in the success of the programmes were the quality of leadership provided for them, and promotional activities of al organizations (e.g. WHO, International Network of Community-Oriented Health Institutions).

Nursing Profession and Health Promotion

"Nursing can make the difference between life and death. Nurses and midwives help individuals, their families and communities to become well and healthy. They care for those who are ill or whose health is threatened. They help people to cope with effects of illness and disability" (WHO, 1996).

Mr. Vice Chancellor, sir, nurses provide, and will continue to provide a large part of health care in Nigeria, and other parts of the world. Therefore, their training and role in health promotion need to be re-examined and expanded. To do so, emphasis in their training must shift to acquiring knowledge and skills most relevant to the health care needs of the community and this must be accompanied by a corresponding change in professional attitudes (WHO, 1985).

Traditionally, basic nursing education in Nigeria focuses mainly on strategies for caring for individual patients, particularly in hospital settings, with little attention given to health care needs of people in their communities. There are currently about 65 schools of nursing and 66 schools of midwifery in the country, attached to hospitals for this purpose, and producing approximately 3,500 nurses and 1,700 midwives annually. Recently, PHC programmes have been introduced into the nursing curriculum with a view to expanding the scopes of practice of nurses in the country.

The challenge to the Nursing and Midwifery Council of Nigeria is to radically review nursing and midwifery curricula and restructure these mushroom schools of nursing and midwifery into a collegiate system, with a view to improving the standard of nursing practice in the country. I am aware of, and proud to be associated with, the current efforts being made in this direction by the Council. I hope the Council will have the determination and political backing to sustain and carry through this reform.

In Community Health Nursing (CHN), the principles of health promotion should be integrated at all levels of care. The community health nurses are expected to employ the following three processes in the delivery of services either to individuals, the family or the community:

Assessment of needs for care, including social, environmental and personal factors influencing the health status of the target community;

Planning and implementing health care needs of the target community;

Evaluation of the effectiveness of the care provided.

Other responsibilities of CHN should include:

encouraging the community to participate actively in the development and implementation of health services and in health education programme.

In order to produce nurses that can meet the challenge of health promotion, either at individual, family or community level, there is a need for more emphasis on community-oriented model in basic nursing education curriculum in Nigeria and adequate development of community health nursing as a post-basic and post-graduate educational programme.

The training of community health nurses (CHNs) in Nigeria takes place in only 10 educational institutions under the auspices of the West African Health Examination Board (WAHEB). This body determines the curriculum and conducts the professional examination for the CHNs while the N&MCN licence them to practice.

West African College of Nursing (WACN): The WACN, as a part of the professional agencies of the West African Health Community, has as its main objectives the promotion of excellence in nursing education at the basic and post-basic levels and the maintenance of standards of nursing practice within the community (WACN, 1980). The Nigeria Chapter of the College, which was inaugurated on May 21, 1981, has the following five constituent Faculties:

Medical-Surgical nursing
Community Health Nursing
Maternal and Child Health Nursing
Mental Health and Psychiatric Nursing
Nursing Administration, Management and Education

One of the statutory responsibilities of the *Faculty of Community Health Nursing* is "to establish standards and educational training programmes for post-basic and post-graduate community health nursing education in Nigeria". The challenge facing the College is to assume this responsibility.

The Challenge of University Education for Nurses: The development of nursing education at the university level in this country started at the University of Ibadan in 1965 with a post-basic degree programme in nursing. Obafemi Awolowo University, Ile-Ife started generic nursing degree programme in 1973. The Ife degree programme has now become a model for other universities in the country and it is the only nursing degree programme that is given full accreditation by the

National University Commission. University of Ibadan has just started converting to generic nursing degree programme. These two institutions **now run** post-graduate programmes in specialised areas of nursing. University of Nigeria at Nsukka and University of Calabar have joined **the list of universities awarding nursing degrees in the country** and Ahmadu Bello University is about to start a nursing degree programme. However, factors constraining adequate development of the programme in Nigerian universities are inadequate manpower and chronic under-funding.

There is a need to put more emphasis on University-based education for nurses so that they can effectively meet the needs of our society for services. It has been adequately demonstrated that **well-educated nurses** provide better care to the patients, the family and the community. Patients are usually more satisfied with care received from well-educated nurses. University education for nurses is therefore not a luxury - it is necessary for meeting the challenge of nursing care and health promotion today and in the near future.

CONCLUSION AND RECOMMENDATIONS

Mr Vice-Chancellor, sir, ladies and gentlemen, in this brief presentation, I have tried to examine the concept of health promotion as a new direction in public health and its application to priority health needs of our country. There are other areas of opportunity for health promotion in Nigeria, e.g, the schools and the hospitals. **In fact, hospital has been described as an institution that provide opportunities for PHC and, hence, health promotion.** Recently, some hospitals in the country embarked on breast-feeding promotion for the prevention of malnutrition and infection. A leader in this UNICEF initiative is the teaching hospital of this University. The zeal and energy with which our former Chief Medical Director, Professor Roger Mekanjuola, executed the programme deserves national and international commendations.

There are countless opportunities for hospitals to be involved in health promotion activities. Our hospitals should rise up to this challenge and function in an integrated way with existing health facilities in their localities.

Recommendations:

1. I call for an urgent review of our national health policy to **include adequate health promotion strategies.** Such **strategies should reflect** the population health and welfare needs, including the needs of the elderly, and be integrated into the existing health care delivery systems of the nation.
2. I call for a well articulated and strong **political commitment** to health promotion, as a supporting strategy for achieving health for all Nigerians, by all levels of government in Nigeria.
3. Health system/operations research should form the bedrock of health promotion programmes which the country may develop. The government should establish, and adequately fund, such national programmes of health system/operations research to **support** the health promotion programmes.
4. There is an urgent need for a restructuring of basic nursing education programme in the country into a collegiate system which **will provide cost-effective and better system of nursing education for the nation.** More universities in **the country** should start degree programmes in nursing. Students' enrolment into the programmes should be increased, available educational facilities should be improved and facilities should be provided for practising nurses who aspire to acquire university education in nursing.
5. The **Federal** Ministry of Health should re-examine its policy on the training of Community Health Nurses vis-a-vis the **functions** of the West African College of Nursing. The role of the College in the training of community health nurses in the country should be clearly defined.
6. There is a need for adequate funding of health services in the country. Programmes that have immense impact on health e.g. food production and nutrition, adequate supply of safe water, sanitation, control of communicable diseases, maternal and child health, population/family planning and environmental health, should be given priority.

7. Inter-sectoral approach which recognises and integrate the contributions of education, agriculture, information, economics, etc, to health should be pursued by the government
8. The structures and functions of community health committees under the present PHC programme should be re-examined. Flexible and more effective system should be tried, using our traditional system of collective responsibility and community participation.
9. A coordinating centre for community-based health sciences educational programme, for all health professionals, should be established by the University.

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- Association of African Universities, Accra.
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To everybody present here tonight, I say, "Assalam Alaikum Waramatu-lahi Wabarakatuhu" i.e., may the peace and blessing of Allah be on you all.

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