Health Education is the cornerstone to Primary Health Care but it is given low priority in National Health Development. In this book, the author explores strategies for promoting Health Education in National Health Education Development. He opines that Health Education should be given adequate support from the Ministry of Health in the areas of resource allocation; health management and training of Health Education Officers. Dr. Kei observes that for effective management of health education services in Kenya, attention should be given to: reorganization of the Division of Health Education; review of training curricula for health workers to include health education; introducing incentives and a scheme of service for Health Education Officers; and setting performance standards. He recommends research into: Health Education concepts, training models, educational materials and program evaluation. In conclusion, the author recommends that the Division of Health Education should be renamed THE DIVISION OF HEALTH PROMOTION - in charge of Health Promotion Officers and activities. This book is resourceful for lecturers, students and staff of the Ministry of Health.

Robert Mburugu Kei

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Health Education Strategy for Kenya

A Situation Analysis

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DEDICATION

This book is dedicated to Martha Kathambi, Karambu, Nkatha, Mutuma, Gaceri and Maingi.

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CBHC	Community Based Health Care
CBS	Central Bureau of Statistics
DHE	Division of Health Education
DHMT	District Health Management Team
EPI	Expanded Programme on Immunizations
GTZ	German Foundation for International Development
HIS	Health Information System
KANU	Kenya African National Union
KEPI	Kenya Expanded Programme on Immunizations
KG	Kenya Government
KMTC	Kenya Medical Training College
LHC	Locational Health Committee
MCH/FP	Maternal Child Health and Family Planning
MoH	Ministry of Health
NGO	Non-Governmental Organisation
PHC	Primary Health Care
PHMT	Provincial Health Management Team
SPHC	Selective Primary Health Care
UNICEF	United Nations International Children Education Fund
USAID	United States Aid for International Development
VHC	Village Health Committee
WHO	World Health Organisation

CHAPTER ONE

PREAMBLE

Introduction

The purpose of this chapter is to highlight the main problems affecting health education in general, with a view to raising research questions and to outlining the procedures used.

It is generally known that the development of any country depends on the contributions of its healthy people. The level of health and participation in all spheres of socio-economic development depends on how well the people are informed and educated on matters pertaining to their health (Cohen & Uphoff, 1980). In other words, citizens should be in a certain state of preparedness; cognitively, attitude wise and behaviourally to take healthy action. Generally, this state of preparedness is not present automatically in communities. It may involve a process of consistent and persistent community organisation, with appropriate attitude changes which enable community action. In most cases, community action would be facilitated by health education which implies that healthcare is for everyone through self-reliance (UNICEF/WHO, 1978). This approach may need the creation of opportunities for the public to become increasingly interested in health through their own efforts and actions.

At this juncture, it would suffice to highlight on what is primary healthcare. The UNICEF/WHO conference held at Alma-Ata in 1978 discovered that the present healthcare system is inadequate in meeting the needs of the majority of the population. Therefore, the conference resolved that a primary healthcare approach should be introduced whereby there would be a shift in emphasis from curative to

preventive/promotive health services. This would be done through increasing community participation, intersectoral collaboration and equity in healthcare.

Community participation would be possible if the local people are involved in identifying their health problems, as well as planning solutions based on the locally available resources and technology. The role of village health committees and community health workers were found to be central to increasing community participation. However, the work of Cohen and Uphoff (1980) shows that participation decreases when it is started from above, coerced, disorganized, intermittent, indirect, narrow in scope, and disempowering.

Intersectoral collaboration was also seen to be important for primary healthcare because the root cause of many local health problems are usually interlinked with the activities of other sectors, like water, agriculture and education, among others. WHO (1991) reports that intersectoral col1aboration may be affected by problems of bureaucracy, policy decisions, inadequate funds, inadequate training/reorientation, poor planning and communication barriers between sectoral staff.

In addition, the need for equity in the distribution, access and equality of healthcare was considered crucial to the success of primary healthcare activities. Whitehead (1991, p 217) observes that:

> Equity in health implies that everyone has been given a fair opportunity to attain their full health potential and no one should be disadvantaged from achieving this potential if it can be avoided.

Attainment of equity in healthcare may be affected by problems like poor services, politics, cultural beliefs, racism, class preference, language barriers, long distances and the uneven distribution of health facilities. This commentator sees that improving the situation may need the creation of policies which enhance equity.

Such policies would involve improving living and working conditions of people, increasing community participation, intersectoral collaboration, mutual concern at the international level, research, monitoring evaluation, adequate information and education systems.

In order to achieve all these, education for health was found central to primary healthcare activities (WHO, 1983). Therefore, the question arising from the aforesaid is how health education can contribute to primary health development. .

In the same context, WHO/ Expert Committee on New Approaches to health Education for Primary Health Care recommended that governments should undertake to support reorientation and training for all levels of health personnel (WHO, 1983). Sharing the same opinion, WHO (1991) contends that:

> The education and training of health personnel in the principles and practice of community involvement in health at all levels of the health system are vital. The fact that little has been done in this respect poses an urgent problem for health service management. How can health personnel meet the challenge of community involvement in health if they have not been educated to work with the people? (p. 48).

Elaborating on the same need, Carlaw and Ward (1988, p. 4) perceive that primary healthcare requires a reorientation of all those involved, both professionals and lay public, towards a shared responsibility for improved health and well-being. Other commentators, Ewles and Simnett (1985, p. 11), for example, observe that without health education for health knowledge and understanding, there can be no informed decisions and actions to promote health. Therefore, health education is a tool which enables people to take more control over their own health. In other words, health education is not the process by which knowledge is obtained, but it is also the process by which values and attitudes are explored, decisions made and action taken. It is also said that health education can help people to become self-

empowered thus help themselves and others towards a healthier life (Downie *et a1*., 1990). It therefore seems that without appropriate training in health education, health professionals may find themselves in a dilemma.

Arising from the above, it appears that there is a need to train professional health education officers if health education is to be undertaken systematically and also to achieve its objectives. However, it is generally known that few health professionals and managers acknowledge health education as a specialised activity since all health workers engage in some kind of health education. Therefore, some health professionals feel particularly threatened by a claim to special expertise in health education on the part of others. Some health education officers have sought to solve these problems by concentrating on mass media technology (Watt, 1986).

In view of the above, it seems that there is a need to investigate the main problems affecting the training of health education officers, with a view to finding appropriate solutions.

Since the development of any profession is not without problems, Sutherland (1979, p. 99) shows that an important hindrance to the development of health education services is the generally low priority it is accorded during resources allocation. This commentator argues that the work of health education officers has not been seen to have measurable impact because of its being judged in terms of medical outcome. He proposes that success or failure of health education should be judged by whether or not it succeeds in achieving some educational or behavioural objectives, such as an increase in knowledge or a change in lifestyle (ibid, p. 245). Although this observation seems logical, others think it looks like treating symptoms of the disease.

Rodnell and Watt (1986) notice that the major impediment to the development of the health educator's role lies in his relatively subordinate placement within the management hierarchy. However, Smith (1979, p. 107) suggests that this is a vicious cycle because it seems that health education officers are subordinate because they are not professionalized and are not professionalized because they are subordinate.

At this juncture, a brief description of the main concepts used in this work is given.

Main Concepts used in the Book

The key concepts used in this work are: primary healthcare, health education/health promotion and human communication theory.

Primary healthcare has been defined by many people in many ways; however, the definition given at the Alma-Ata Conference on primary healthcare (UNICEF/WHO, 1978) is that:

> Primary healthcare is essential healthcare, based on practical scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community, through their full participation and at cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

In other words, communities would be motivated to realize that they have within and around themselves the means to improve their health. This would be possible through participation in planning, implementation, evaluation and also in the benefits of their activities at the grass-roots level. Again, participation for health action involves the creation of village health committees and selection of community health workers who would steer the activities through intersectoral collaboration. The spirit of community involvement in health empowers the people

to be responsible for their health as opposed to being dependent on solutions from health workers.

In recent years, the term health education has been given many definitions. However, Sutherland (1979, p. 93) suggests that we all receive "health education" of various sorts as we simply go through the business of living:

> In the widest sense, health education may be defined as the sum total of all the influences that collectively determine the knowledge, beliefs and behaviour related to promotion, maintenance and restoration of health in individuals and communities. These influences comprise formal and informal education in the family, in the school and in society at large as well as in the special context of health service activities.

Perhaps a deeper understanding of this term may be achieved by looking at what Green *et al*. (1983, p. 4) say:

> Health Education is a process which bridges the gap between health information and health practices. Health Education motivates the person to take the information and do something with it - to keep himself healthier by avoiding actions that are harmful and by forming habits that are beneficial.

It is also important to distinguish between health promotion and health education. According to Moran (1986, p. 123) health promotion is simply defined thus:

> Health promotion is a combination of activities which include education, legislation, economic and fiscal measures, mass media, marketing, professional intervention and community development which bring about changes in health.

Therefore, health promotion focuses on major determinants of ill-health as mainly rooted in the wider social economic relationships. In another explanation, Watt (1986, p. 156) demonstrates that:

> Health promotion involves the population as a whole in the context of their everyday life rather than focusing on specific diseases. It enables people to take control over and responsibility for their health as an

> important component of everyday life both as spontaneous and as organized action for health.

In contrast, health education seeks to empower by providing necessary information and helping people to develop skills and a healthy levels of esteem so that they come to feel that significant control resides within themselves rather than feeling buffeted about by external forces outside their sphere of influence.

For the purpose of this work, the term 'health education' is used to mean health promotion because in many countries of the world, including Kenya, what is now being called health promotion in Europe has been the practice of many health education officers for many years without using the term health promotion.

The other term used in this work is the 'Human Communication Theory' which involves the process of communicating ideas (messages) from the source (sender) through the channel (transmitter) to the receiver (audience) so as to cause the desired effect. Lin (1973, p. 4), when referring to Luswell, defines communication simply as "Who says what in what channel to whom with what effect?" Human communication has also been defined as a purposeful process of symbolic behaviour that occurs between two or more participating individuals (Ruffner & Burgoon, 1981, p. 2).

Justification of the Study

The aims and objectives of the Division of Health Education in the Ministry of Health, Kenya, stipulates that effective strategies for delivering health education to the majority of the population should be utilised and that appropriate solutions to problems at every level of the programme should be found (K.G., 1989, p. 238; DHE, 1986; Maneno & Mwanzia, 1991). Therefore, the findings of this work will go a long way to improving the Kenyan situation.

In addition, apart from contributing to knowledge in the area of health education, the findings of this work would give the author, who is a professional health education officer in the Government of Kenya, some enlightenment and satisfaction.

Limitations of the Study

This work is limited to the available data and information from the University of Bristol libraries and documents from the Ministry of Health, Kenya. Where the data is incomplete and lacking, this has been reflected in the findings, summaries and recommendations. This work is not exhaustive in its treatment of the problems of health education. Moreover, it selects documented experiences from other countries or programmes that make relevant salient points on current findings and presents them as they pertain to possible use in health education, especially in Kenya.

Feuerstein (1986, p. 20) observes that the decision to start a study and the objectives and expectations of the study need to be clearly agreed on. This work focuses on health education problems affecting health education training and implementation of community health education activities in the rural areas where the majority of the people live. It is assumed that health education officers are the key professionals for the implementation of health education activities and, therefore, problems affecting non-professional health educators are only discussed in passing.

Again, issues affecting health education officers in the cities are not highlighted because of their complexities, which may need an independent research study.

Procedures and Methods Used

The information required in this study was collected through library searches using liberta circulatory system and on-line catalogue at the University of Bristol. Again, a review of relevant documents from the Ministry of Health in Kenya was made. The importance of reviewing official documents as the need arises is emphasised by Barker and Hall (1991, p. 94) and Bennett (1979, p. 10). Furthermore, the importance of using criteria like cost, the accessibility to data, feasibility and manageability to access the research proposal is recommended by Johnson and Rifkin (1987, p. 115), together with Howard and Sharp (1983, p. 33). Therefore, the method of library search was found useful because research materials were easily found in the University libraries. The design of the study did not require research assistants or a funding agency because it was manageable, using the resources available. No problems were encountered during the research study because due consideration was given to the timing of activities. Woodford (1968, p. 170) shares the same perceptions:

> A major pitfall in the literature search is the failure to allow enough time to obtain the papers selected.

The conceptual framework found appropriate for this work was that of primary healthcare, health education/health promotion and Human Communication Theory.

Data and information collected were analysed using historical methods of data analysis to assess the problems and their appropriate solutions. It was hypothesized that by identifying the relevant experiences from other countries, useful information would be tapped for improving similar programmes in Kenya and other countries of the world.

Berry (1986, p. 57) recommends that conclusions of research studies should emanate from the data collected and analysed. In the same way, this study had its conclusions drawn from the evidence adduced.

Vaughan and Marrow (1989, p. 10) observe that the information needed for managing activities may be collected through asking some key questions. Under normal circumstances, researchable ideas would emanate from a literature review, advisors or intuition (Stock, 1985, p. 5). Sharing the same opinion, Bennett (1979, p. 9) shows that researchable ideas would also come from the community itself or the people involved in providing services. In this work, the study problem was conceived through a literature review and from the researcher's own experience as provincial health education officer in the Eastern Province of the Republic of Kenya, for more than ten years.

The next chapter examines in more detail the conceptual framework, whilst answering the following research questions:

1) How can health education contribute to primary healthcare development especially in rural areas where the majority of the population live?
2) How can the training for health education be improved in order to strengthen the performance of health educators?

CHAPTER TWO

AN OVERVIEW OF HEALTH EDUCATION ISSUES

Introduction

This chapter deals with the analysis of health education issues which may generate answers to the research questions generated in Chapter One. It begins with a review of health education concepts, Human Communication Theory, training for health education and a discussion of some strategies for health education. The thrust of the chapter is a discussion of the relevant health education experiences from other researchers.

Health Education Concepts

We start by trying to understand what “health" means. According to WHO (1946), health is a "state of complete, physical, mental and social well-being and not merely the absence of disease and infirmity". This much quoted statement has subsequently been criticized because it implies a static position of complete well-being which may not be easy to achieve. The idea that health means having the ability to adapt continually to constantly changing demands, expectations and stimuli is more preferable (Ewles & Simnett, 1985, p. 5).

It appears that health is generally accorded low value when compared to the considerable importance accorded to ill-health. The definition of “health” tends to be tied to an “absence of ill-health". As yet, health cannot be quantified scientifically in the same way as the signs and symptoms of ill-health. Furthermore, it seems that an individual's interpretation of health may be broadly or narrowly related to age, human potential or is merely a reflection of that person's state of well-being at any given moment in their life.

The absence of a clear concept of health, which would include variations according to a multiplicity of factors, is again hampered by the historical fact that healthcare, including health education, is based on a medical model which concerns itself with systematic diagnosis and treatment, and rarely takes the whole person, his/her environment or total needs, into account. Strehlow (1983) observes that education has suffered from similar difficulties as described of health because many people associate the word with unpleasant experiences of childhood and adolescence. In other words, the "good days" of school life appear to be a myth for the majority of the people and, therefore, they are reluctant to expose themselves to any proposal which might repeat unsatisfactory experiences.

In addition, Green *et al*. (1980) sees that health education is a field without a clear articulation of its boundaries, methods and procedures, although its philosophy and intellectual roots are sufficiently understood. Moreover, the same commentator perceives that the training of health educators has been relatively devoid of uniformity or consistent standards.

In the same context, Strehlow (1983) complains that the textbooks for health education are not easy to read or put into practice. However, she sees that the scope of health education is limitless despite being regarded with scepticism by some of its recipients. Rodmell and Watt (1986) argue that although health education is practiced at different levels in different places by different people, it may be regarded as a discipline of its own right.

The focus of health education is mainly outside the curative system of healthcare because it is generally concerned with preventive and promotive health services. This task has generally been conventionally performed by health educators from within an individualistic behavioural framework which manifests itself through a

focus on habits, attitudes and values (lifestyles) which affect health. In this way, it is assumed that when individuals are given appropriate health knowledge, they will use it to make informed choices about their health and that of their families. Therefore, it may be stated that health education strives to help people to make these choices easy choices about health.

In the same way, Macdonald (1988) observes that the concept of individual lifestyles tend to blame the victim when sometimes the cause of the problem is outside the individual. For instance, the socio-economic problems of poverty, although they affect individuals, have their causes emanating from the political system and the community in general.

Tones (1991, p. 2) argues that the major influences on health are lifestyle, human biology, health services and environment. The most important of these (arguably) is environment. The role of health education in all this is to achieve the goal of health promotion and "Health for All" by the year 2000. Tones (1991) concludes that health education would also include consciousness raising about social issues, empowerment of individuals and communities, the appropriate utilization of health services and modifying perceptions about health promotion services.

Going back to what we said earlier, that people need to make informed choices about their health, then appropriate approaches and methods to assist them need to be found. In this way, Strehlow (1983, p. 35) proposes five approaches which may be considered. First, the medical approach would involve the promotion of medical intervention to prevent or ameliorate ill-health. Secondly, the behavioural-change approach would concern attitude and behavioural change to encourage the adoption of "healthier" lifestyles. Thirdly, the educational approach would deal with information about causes of ill-health, exploration of values, attitudes and the

development of skills required for healthy living. Fourthly, the client-directed approach would involve working with clients' identified health issues, choices and actions. Lastly, the social-change approach embraces political-social action to change the physical-social environment.

In view of the above, it appears that there is no "right" approach to health education and in some situations a combination of approaches may be preferable. In the same way, Green *et al*. (1980, p. 86) describe twelve health education methods which may be selected singly or in combinations depending on situations. These include lecture, discussions, role-play, mass media, demonstration, community organizing, field trips, modelling, behaviour conditioning, community development, social action and organisational development.

In this context, Naidoo (1986, p. 35) maintains that there is no ideal method for all situations, but recommends that health education needs to be client-centred without being victim-blaming and should focus on the real causes of ill-health. Furthermore, she cautions that the dominant ideology of individualism ignores health as a social construct, assumes existence of free choice and is ineffective without concentrating on social and environmental determinants of health.

Because of its use by many health education programmes, a discussion of the Health Belief Model would shed more light on the factors influencing behavioural change. In recent times, this model has been analysed by several commentators in order to determine its usefulness (Rosenstock *et al*., 1988; Bunton *et al*., 1991; Ben-Sira, 1991; Macdonald, 1992). It is based on the hypothesis that behaviour depends on the value which an individual places on a particular goal and the individual's estimation of the likelihood that a given action will achieve that goal. In this way, the individual's perception of the severity and his own susceptibility to

a particular disease would influence his response to health education, as will his perception of the benefits to be gained by changing behaviour and the obstacles that would need to be overcome for them to adopt this behaviour change. Some emphasis is put on cues to action, that is, the presence or absence of stimuli to change. In addition to these factors, demographic and psychological variables have also been found to influence behaviour change. In other words, being in a place where the problem is endemic reinforces the perceived susceptibility. The need for motivation (incentives) and self-efficacy were also found useful

It is worth noting that the same observations are reinforced by the Social Learning Theory (Social Cognitive Theory) which stipulates that learning results from events (reinforcements) that reduce physiological drives that activate behaviour (ibid, p. 117).

Therefore, in planning programmes, health educators may find it useful to assess educational needs partly in terms of beliefs described in the Health Belief Model and Social Learning Theory. In other words, they may seek to ascertain how many members of the target population are interested in the matters, feel susceptible to serious health problems, and believe that the threat could be reduced by some action at an acceptable cost. In addition, consideration may be taken on the extent to which patients or clients feel competent to carry out the prescribed actions immediately or over a long time with or without incentives.

Another model often referred to is the Precede model proposed by Green *et al*. (1980) to draw attention to the necessity of asking what behaviour contributes to each health benefit and what factors influence each health behaviour manifestation that must be considered in a health education plan. In some ways, the Precede

Model may be seen as complementary to the Health Belief Model since it deals with factors which influence values and judgments.

It may be useful to point out that other researchers have proposed the incorporation of "significant others" in any health education strategy (Zimmerman *et al*., 1989) as a perspective that would be consistent with the primary healthcare approach to health education. All this suggests a move towards life-context health education because at the moment, there is considerable emphasis on health education upon lifestyles rather than 1ife-context.

Bunton *et al*. (1991, p. 226) observe that focusing on an individual's health per se may not be the end in itself to be attained by health protective behaviour. Equally, it may be important to consider other life areas, such as family or wider social relations (such as one's job) which may be more salient and may motivate health protection behaviour. In the same way, Kok *et al*. (1991) argue that convincing people about the utility of expected behaviour is necessary but it is perhaps more important to teach people the skills (for removing the barriers) that are needed to change their behaviour and to maintain the behaviour change by improving self-efficacy.

In this context, Peterson and Stunkard (1989) show that personal control has a positive correlation with one's health because belief in one's competence is closely tied to physical well-being, while a belief that one is helpless may be associated with sentiments concerning morbidity and mortality. In the same way, RUHBC (1989) perceive that changes in behaviour would be difficult to maintain unless and until new behaviour becomes relegated to the routine level as well. It was concluded that change may take place through the community development

approach by involving local people in health issues and by encouraging participation.

Furthermore, Selvaggio (1990, p. 17) sees that behavioural change may occur when the messages have roots in community ideology, values, religion, myth, involving opinion leaders and when problem-so1ving training is done at the village level. Other researchers, like Curie *et al*. (1991, p. 452) observe that behaviours change singly, although sometimes multiple changes do occur in particular sets of behaviours. Thus, to exhort people to embrace a consistently healthy lifestyle in one grand effort may be an unacceptable and unrealistic challenge, especially if the individual is unsupported by favourable personal, environmental and socio-structural resources.

The European Public Health Committee (1980) concludes that any deeply rooted behaviour may not be changed by a belief campaign, but by a programme sustained over many years.

For all the above reasons, it is clear that the crucial factor in health education is the process of communication, hence the need to elaborate on.

Human Communication Theory

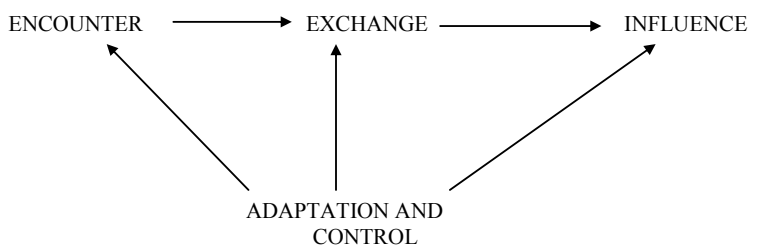
The definition of human communication is the process of sending decidable signals through a channel to the receiver to bring about the desired effect. However, Lin attempts to classify human communication into three parts, as discussed below.

Firstly, communication could be intrapersonal, interpersonal or mass. The process of communication occurring within an individual is considered the smallest unit. Intrapersonal communication is linked with perception, learning, recognition and other psychological processes. It is the essential bridge between an individual's

behaviour and his environment. Interpersonal communication represents the reciprocal interaction between two or more persons and may be didactic, triadic or small group. Mass communication concerns situations involving a large number of people.

Secondly, syntactical, semantical and pragmatical communication aspects have been extensively used in linguistics. The syntactical aspect of communication involves the structure of the communication (relationship among symbols), the semantical involve the meanings of communication and the pragmatical aspect involves the influence or consequence of communication.

Thirdly, the notions of source, message, channel, receiver and feedback, are also commonly used, as described in Chapter One. A deeper clarity of the communication process may be attained by looking at what Lin (1973, p. 15) presents as his conceptual framework involving the four phases of human communication process.



Source*:* Adapted from Lin, N. (1973). *The Study of Human Communications*. Indianapolis: Bobbs-Merill Co Ltd.

Encounter is therefore, the first phase of human communication in which the final linkage between the piece of information and the receiver(s) is established through a certain medium. It involves the information system and delivery system.

The Exchange is the flow of shared meaning, representing the effort on the part of communication participants to maintain shared meaning through a set of symbols (language). Exchange is a matter of talking, listening and understanding, but in this case, the major concern is the message or the meaning contained in the symbols.

Influence is the discrepancy between a person's behavioural patterns or attitude towards an object or situation before his/her participation in an encounter and behavioural or attitudinal patterns after such an encounter. Influence thus represents the impact, either psychological or behavioural of communication.

Adaptation and control is the organisational phase of human communication. The effectiveness, over time, of encounter, exchange or influence, depends to a large extent on control, the process by which the fidelity of information flows, the efficiency of message flows and the induced changes that are achieved or maintained. This control may be achieved through feedback mechanisms or a dissemination process. Therefore, negative feedback would provide information about those aspects in the system which has not performed effectively relative to the source's expectations. The dissemination with the feedback, improves the probability of the system's success by correcting the defective aspects of the system.

In the same context, Strain and Hysong (1978, p. 44) argue that communication is personal and therefore meanings are in people and not in words. In this way, it may not be easy to separate self from the communication process because all our experiences, attitudes and emotions are involved and would affect the way we send and interpret messages. Scott (1983, p. 1) also cautions that we should be aware of double messages, that is, the contradictions between body language and verbal language. In so doing, effective communication would be improved if the two

languages are synchronized to give one message to the chosen receiver. In this context, it is generally observed that when people communicate they make predictions about the effects or outcomes of the communication behaviour. Therefore, people in most times deliberately select communication strategies that maximise the probability of being successful in their daily communication. Again, they plan communication interaction, taking into account cultural, social and psychological level data. Since each audience is unique in terms of age, sex, personality, intelligence, skills, race and experience, it may be useful to gather background information about them so that we may be able to tune the message appropriately. In this way, and especially when we understand what motivates others, we would be comforting, persuasive, and informative; hence fulfil the communication desire.

It may be useful to note what Hastings (1991, p. 145), while analyzing the social marketing principles of communication, says, that:

> To communicate successfully, we have to understand our audience's point of view, we have to climb into their skins and walk around in them.

This means that showing empathy to others would be beneficial to our communication process. Although man's basic psychological composite resists change, cognitive theorists have observed that people strive for consistency, balance and congruity in so far as new ideas and practices are in conflict with their basic beliefs and values. Sharing the same thoughts, Lin (1973, p. 117) perceives that man is selective in his perceptions and interpretation of messages, even if distortion or misinterpretation has to be employed. In this way, the selective exposure, selective retention, and selective perception or interpretation, all form a three-layer fence which protects him from potential intrusions of messages that are incompatible with his psychological and social make up.

Lin (1973) sees that changes are accepted more readily by younger persons, persons of higher social status, those in better financial situations, by persons who have some expertise in the topic, those who have access to more information sources, by persons closer to the original sources or disseminators and by persons who are less bound by the existing social norms (ibid, p. 180). Lastly, this commentator maintains that opinion leaders hold key positions in the interpersonal communication networks of the social system and, therefore, their sharing of opinions with others would facilitate behavioural change.

In the same context, Halloran (1967, p. 61) perceives that attitude change depends not only on knowledge but also on many other factors, including:

> The person who is presenting the knowledge, how this person is perceived, the form in which the knowledge is given, the circumstances of delivery, the manner of presentation, the conditions and applications of those receiving the knowledge and the function that knowledge might perform in serving the needs of the recipients.

Therefore, all these factors need to be seriously considered if we wish to obtain effective communication for attitude change. This applies to the fields of health education.

On the other hand, communication barriers may be encountered due to what Maxquail (1975) describes as misunderstandings in language, unshared cultural backgrounds, deviation of message from the felt needs of the people and manipulative intentions. Experience has shown that other barriers may be geographical, racial, psychological, age, educational level, gender, economic, political, and social distances among others.

In this context, the Division of Health Education (1971, p. 19) argues that:

> Only after all barriers have been removed, proper media has been chosen, good presentation has been made and two-way communication

established, that we can say that the sender has established commonness with the audience.

It may also be concluded that important ideas have no use unless communicated and skills in communication have no useful purpose without important ideas (ibid, p. 22).

Having seen the importance of communication skills to the success of health education activities, it is now clear that all health education officers need be properly trained in such skills.

Training for Health Education

It is generally known that the training of personnel is central to effective management of programmes. In this context, Giovanni and Brownlee (1982) observe that bridging the gap between theory and practice, training of health personnel, includes the selection of appropriate training staff, development of competency-based curricula, and the use of experiential training techniques in the classroom and in the field.

These commentators continue to argue that training should be related to the knowledge and skills which trainees would actually need in the field, through the use of a competence-based curriculum. This may be achieved through analyzing what the work entails in the field, what other typical workers do, what skills and training techniques are required. In this way, they say, training should be "experiential" in character; giving trainees guided experience in real life or simulated work settings. Such training techniques would include practice interviews, role-play, critica1-incident study, case study, operation of audio-visual aids, and practicum in the community.

Sharing the same views, Macdonald (1988) suggests that there is a need to increasingly use methodology workshops, seminars, scholarships and the development of educational materials in support of health education officers, who are comparatively few in the world today. Also, Mullen and Reynolds (1973) recommend that in training institutions, the grounded theory approach, which utilizes comparison as an analytical tool to generate concepts and hypothesis on observations, should be utilised in order to give inductive skills to trainees. In the same way, WHO (1979) says that potential teachers of primary healthcare need to be well grounded in the knowledge of health sciences, pedagogy, social and behavioural sciences, as well as show interest in teaching.

In view of the above, Wallren (1974, p. 17) maintains that in the training of health professionals, curriculum development should be continuous and dynamic if it is to serve best the needs of individual students, educational institutions and society. In other words, the curriculum needs to be revised regularly in order to reflect changing needs.

Apart from that, WHO (1983, p. 34) proposes that while changing curricula for other health personnel to incorporate health education, the intended change should be "change from within", involving students and teachers who are most open to the proposed change. In so doing, resistance may be reduced. Moreover, WHO shows that one way of accelerating changes in training programmes is to make the students realize that there is a public demand for information and education for health. Again, the basic training of health professionals should be expanded in order to develop in the students the capacity to act as facilitators of action by the people, promote two-way transfer of technologies and recognize the contribution that professionals in other sectors would make to the promotion of health.

Since the training curricula of most basic trainings are already crowded, Ewles and Simnett (1985, p. 53) see the need to start post-basic training for health education certificates of other health workers. Sharing the same opinion, WHO (1983) recommends that the training of health professionals should be supplemented by mu1ti-discip1inary and multi-sectoral training so that all health and health related professionals would learn to appreciate each other's responsibilities. In the same way, Geizary (1990) underscores the need to health-educate school teachers and include health education in all school curricula.

On the same line of thought, WHO (1991) recommends continuing education programmes for health education specialists and others in the field related to health promotion, in order to strengthen their performance as planners and advocators, negotiators, alliance builders, as well as managers. In the same context, Foley (1974) recommends the teaching of health educators be improved through micro-teaching, peer teaching role-playing and simulated experiences. These methods would make trainees conscious of their behaviour and make adjustments as feedback is given by the supervisor or peers. Supporting the same observations, Strombeck (1991) argues that study circles (group discussions) are more useful as a teaching method because it enables creative thinking, sharing of ideas, feedback, as well as promoting teamwork. It was also seen that programmed self-training materials may be used in continuing education and in teacher training programmes.

Lastly, Earp and Ennett (1991) regret that the training of health educators is generally hampered by the lack of appropriate training models in addition to the existing agent-host-environment or the multi-causal model of PRECEDE (Green *et al*., 1980). For this reason, they recommend that research into suitable training models needs to be done:

> Until professors themselves become more comfortable with the design and use of conceptual models, it is unlikely that their students will think about using, much less struggling to construct, conceptual models, guide their research or shape their programme interventions and strategies (p. 170).

However, in spite of all these difficulties, several strategies have been devised over time towards solving some of the pressing problems.

Some Strategies for Health Education

Experience has shown that individuals and families generally make the most important health decisions on their own. If these millions of daily decisions are to be made wisely, people need to be equipped with the knowledge and skills necessary to exercise individual and community responsibility. In this context, community health education involves activities which may enable decision-making for adaptation of certain types of behaviour and styles of living beneficial to the health of individuals, families and communities.

Sharing the same thoughts, Feurerstein (1982, p. 28) demonstrates that health education attempts to foster activities which lead to a situation where people want to be healthy, know how to achieve good health, do what they can to attain health and know how to seek help when needed.

According to WHO (1988, p. 75) the school system may help to lay the basis for health knowledge and health behaviour in the most formative period of the individual's life which is childhood and adolescence. Moreover, outside the school system, other forums such as adult education programmes, sectoral seminars, non-governmental organisations, religious institutions and the mass media may be useful. Therefore, health has a direct and indirect link with all processes of teaching and learning that are to be found in different parts of society.

It is further suggested by WHO (1988) that health education with individuals and families may be done through counselling because it would be vital for the people to know what they can do through their own efforts to avoid the causes of ill health. In the same way, the use of group health education, as discussed earlier, would provide the support and encouragement needed to promote and maintain healthy practices through the sharing of experiences and resources. Again, health education with informal groups would be beneficial if based on the common interests of the majority of the people. The importance of group discussions was also underscored by Sullivan-Ryan and Kaplun (1981) who found cassette/video-taped discussions and adult education for liberation useful.

It is useful to note that other grass-root participatory projects succeed more when involvement and education for women is encouraged (Bushad, 1986).

As we have seen in our previous discussions that health education may contribute in many ways to primary healthcare development, WHO (1983, p. 21) maintains that health education may be useful in helping people to determine their needs, in creating awareness, community organizing for action, the training of health workers, the production of educational materials, and the supervision and evaluation of programmes.

To successfully discharge all these tasks, the European Public Health Committee (1980) argues that if Health Education Units are set in the Ministry of Health, then there would be more advantages of being accepted and also of having access to vital data, than being autonomous agencies outside the Ministry. In addition, the Committee recommends that health education needs to be included in National Health policies, National Development plans for Health, and be supported through manpower and financial resources. In the same way, it may be useful to note that

the use of political decrees to support health education has been noticed in USSR (WHO, 1963, p. 9) where health education was made the duty of every health professional, part of cultural activity, obligatory in schools and a mandatory four hours a month devoted to mass health education. In this way, significant success was achieved.

Sutherland (1979, p. 236) argues that if health education is to compete for funding, then it needs to demonstrate the value of its activities in economic terms. He recommends that it would be useful for health educators to choose projects with immediate pay-off in reducing the burden on health and social services, or projects which have short-term benefits in reducing mortality and morbidity rates. Nevertheless, some projects may still need long term implementation before significant changes are noticed.

It is also important to shed some light on the usefulness of mass media as an activity of health education. The effects of mass media are not easily quantifiable in economic terms. However, Ewles and Simnett (1985) perceive that mass media may raise health consciousness (agenda setting), increase knowledge, influence attitude and social change. All the same, mass media may encounter some difficulties due to the high cost involved in message design, dissemination, censorship and lack of feedback. Sharing the same opinion, Cernada (1992) observes that mass media need interpersonal communication with credible sources to stimulate behavioural change. He continues to see that regardless of the media chosen, local leaders should be involved and messages pre-tested for language, cultural sensitivity and effectiveness. Lin (1973) notices that mass media messages of an informative nature seem more effective in inducing change than messages based on emotional appeal (negative messages).

It may be useful to learn from the Mass Media and Health Practices Project in Honduras and Gambia (ICR, 1984) which reported that obstacles could be encountered through inadequate planning, training and orientation of health personnel, information and education on programme performance. However, the lessons learnt were that radio gives the biggest coverage supported by reading materials, plus credible health professionals. In addition, it was found that a comprehensive plan which takes into account existing audience practices and beliefs is crucial for the success of the project. In the same way, the American Public Health Association reported the same observations, but they also argue that radio broadcasts would easily succeed in Africa because they represent the continuation of oral tradition (APHA, 1982). In the same context, Meyer (1980) reveals that health education by radio and television could be more effective if the intersectoral approach is used. For instance, the reorientation of journalists on health matters may improve their scripts.

On the other hand, several commentators observe that folk-media may play a significant part in health education (WHO, 1988; Fehrsen *et al*., 1979). In this way, folk-media involves dissemination of health messages through poetry, storytelling, songs, theatre, games, puppet, dance, role play, town criers, shows and art amongst others.

In addition to what we have already said about communication, Porter (1970) recommends that the Audio-Visual Aids Unit of the Division of Health Education needs to be manned by a professional health education officer. He advises that this unit needs to have sections dealing with loans, maintenance, professional training and consultancy, research and development production, cooperation and liaison with outsiders. The same commentator maintains that all health education officers need to be trained in the use of audio-visual aids as a teaching method. Macdonald

(1988) sees that researchers need to be linked to graphic artists in order to contribute to the design of such materials. The importance of locally made audio-visual aids has also been emphasised.

Research and evaluation of programmes play a central role in developing alternatives for solving the problems as they arise. In this context, Roemer and Aquilar (1988) argue that setting performance standards would be useful for quality healthcare and that corrective action for better quality would involve the improvement of basic training, continuing education and supportive supervision. These commentators observe that indicators of quality in health education may concern the measurement of the percentage of people exposed to health education activities, who, according to a simple test, have understood a specified proportion of the contents and found them acceptable.

In many health education projects, a lack of evaluation may be due to inadequate funds but, all the same, continuous evaluation may be useful. Similarly, Engelkes (1990) observes that it may not be easy to evaluate primary healthcare activities because the baseline evaluation of the masses is not easily quantifiable and that other contributory factors may influence the results. It is recommended by the European Public Health Committee (1980) that evaluation at all levels needs to be a "sine qua non" of health education. The same commentator sees the need for monitoring the activities of market forces like advertising, which sometimes promotes the sale of products harmful or potential harmful to health.

Basch (1987) emphasises the value of using focus-group interviews as a qualitative research method for health education studies, planning, formative and summative evaluation. For all these reasons, Earp and Ennett (1991, p. 167) conclude that a

single theory is usually insufficient to incorporate all the variables of interest to the evolving conceptual models of health education.

Having reviewed at length the various issues affecting health education in general, we may now discuss the main problems encountered whilst undertaking health education in Kenya.

CHAPTER THREE

HEALTH EDUCATION STATUS IN KENYA

General Information

This chapter reviews the general situation of Kenya, the responsibilities of the Ministry of Health, problems of health education, the training of health education officers and related problems. In 1963, Kenya became an independent nation within the Commonwealth. The administration of the country is done within a five-tier system of the Provinces, Districts, Divisions, Locations and Sub-locations. All districts are centres of development activities coordinated by District Commissioners. In this way, they support the government policy on District Focus Strategy for Rural Development, which was started in1983 to decentralize decision-making to the grass-roots level and to turn the districts into centres of planning and implementing projects (Kenya Government, 1983).

According to the provisional results of the latest census of 1989, the Republic of Kenya has a population of 21,397 million and a growth rate of 3.3 4%. It appears that this is a significant change compared with 1979 when it was 3.8%. The country has a fertility rate of 6.1% and a contraceptive prevalence rate of 27%, plus a life expectancy of 59 years (Central Bureau of Statistics, 1991).

Sindiga (1985, p. 72) attributes Kenya's high demographic change to improved health care and the falling mortality rates. The seemingly low prevalence rate of contraceptives is attributed to the side-effects of contraceptives and unreceptive attitudes.

The same commentator observes that Kenya's fertility patterns do not clearly fit into the European Demographic Transitional Model which suggests that the

population stabilizes (lowering of births and deaths) as modernisation sets in. He also says that in Kenya, traditional structures of family life and the values attached to children would sustain high fertility even as the effects of modernisation lead to lower mortality. In other words, the benefits of modernisation seem to have improved the health status among the poor but are not yet sufficient to lower the fertility rate. He concludes that modern contraception in Kenya appears to have been adopted by a small number of women mainly as an aid to child spacing rather than limiting family size.

In most developing countries, including Kenya, the deliberate spacing of births is a completely new idea. In many cases, reasons given for desiring more children are: the need to ensure family survival, to attain social status, the fear of losing children, religious fatalistic beliefs and distrust of contraceptives. Currently, the Ministry of Health does not have specific family planning programmes for the youths who form half of the population (MOH/GTZ, 1988).

Kenya is a multi-cultural country with about fifty indigenous groups, as well as different racial groups of mainly Asians and Europeans. This diversity of culture harbours socio-cultural beliefs which have both positive and negative effects on certain development activities, including health (Barkan & Okumu, 1979).

It may be useful to note that the concept of community participation, as reviewed in Chapter One, is not new in Kenya because the Harambee (self-help) movement has been in existence since Independence, raising funds for various projects. On many occasions, these Harambee forums have been used for creating awareness about health and other socioeconomic activities. In Kenya, local leaders organize the communities for self-help meetings (*barazas*) where they discuss exhaustively what projects should be undertaken. When the general consensus has been reached

on various aspects of a project, a project committee is then elected democratically, often with a show of hands. Later, all the community members, plus some invited guests, are called to a Harambee meeting for funds-raising. Those who cannot afford cash may promise materials or labour (Bennett & Maneno, 1986).

According to the current National Development Plan (1989-93, p. 258) Harambee contributions in 1979 were K£9.79 million and increased to K£37.29 million by 1985. However, development through Harambees has not been even because of unequal economic power between tribes (ibid, p. 103).

Responsibilities of the Ministry of Health

The Ministry of Health is charged with the responsibility of improving the health and welfare of the people of Kenya. This is made possible through the activities of the six Specialised Divisions of curative, preventive, promotive, rehabilitative, research and training. In 1965, free medical treatment was introduced in government health facilities in accordance with the Manifesto of the ruling party (KANU). This situation persists even today. Again, the health services are administered in a six-tier system, comprising national, provincial, district, health centre, dispensary and community level management.

According to the reports available in 1989, government health facilities increased to 2,131, with 33,086 beds/cots, compared to the previous year (1988) when they were 2,113 with 32,534 beds/cots. It appears that the number of health facilities have been increasing every year, although not sufficiently to accommodate all the patients and their problems (MOH, 1989). Some of the problems identified are: overcrowding, shortage of drugs and supplies, inadequate transport, insufficient funds, poor maintenance of buildings and equipment, the low morale of staff, inadequate operational research, shortage of skilled staff, insufficient community

participation, and low priority on preventive and promotive health services (Bennett & Maneno, 1986, p. 4). Other constraints were noticed when the government could not cope with the equipping and staffing of all the Harambee facilities as they were being completed and, therefore, the Harambee spirit was adversely affected (Bienen, 1974).

Although seventy percent of the diseases treated at outpatient departments are preventable, Kenyans have a high regard for curative services as encouraged by the Western medical model (MOH, 1989). The limited vision of health encouraged by the medical model puts immense strain on all health programmes. It seems that high medical care is unlikely to be contained through approaches that fail to take into account the larger forces affecting it. Sharing the same opinion, Kleczkowski *et al*. 1984, p. 2) observe that:

> High technology medicine seems to be getting out of hand leading health systems in the wrong direction away from health promotion for the many towards expensive treatment for the few.

Furthermore, and according to the Central Bureau of Statistics (1991), the Ministry of Health Budget takes about six percent of the total government budget, which is three percent of the Gross National Product. Unfortunately, seventy percent of the funds allocated to the Ministry of Health go to Curative Services. This exposes the imbalance created between curative and preventive/promotive health services.

The study also found it useful to expound on the nature of the preventable diseases which affect Kenyans. According to the Ministry of Health (1989), the main health problems and conditions affecting the health of Kenyans are communicable diseases, such as malaria, diarrhoea, acute respiratory infections, including tuberculosis and pneumonia, venereal diseases, eye infections, helminthiasis and

skin diseases. Coupled with these are nutritional diseases, unplanned families and poor environmental sanitation.

It appears that most of the abovementioned problems may be prevented or controlled through health education of the people. Sanders and Carver (1985, p. 20) observe the same situation when describing the diseases prevalent in undeveloped countries as nutritional diseases and communicable diseases which are basically airborne, water related or faecal transmitted. Experience has shown that bridging the gap between curative and preventive health services would need the formulation and implementation of the relevant policies at all levels.

In the Guidelines for the Implementation of Primary Health Care in Kenya, Bennett and Maneno (1986, p. 10) state that:

> The policy of Ministry of Health aims at increasing the number of communities active in their own healthcare, encourage more community participation, changing the attitudes of health personnel towards primary healthcare and strengthening collaboration with the non-governmental organisations in the field of primary healthcare.

It may be noted that the theme of the current National Development Plan supports these guidelines by focusing particularly on "participation for progress through integrated approach."

Again, in the same context, Maneno and Mwanzia (1991, p. 32) observe that the impact of primary healthcare activities may not be feasible because it would be difficult to isolate other contributing factors. Furthermore, experience has shown that since primary healthcare deals with all aspects of socioeconomic development, it would be difficult to quantify the base-line knowledge of the masses.

Problems of Health Education

In this section, I present a few observations from my own experience as a senior programme officer in the Division of Health Education, to shed some light on this discussion.

The Division of Health Education was established in Nairobi in 1957 as an Audio-Visual Aids Centre. It was a place for designing, production and distribution of educational materials to support disease campaigns in the country. This division was manned by a few expatriate health education officers supported by some subordinate staff (Division of Health Education, 1985).

In this way, the Division produced educational materials like booklets, posters, folders, handouts, charts, taped messages, slides, filmstrips, mounted photographs, models and flannel graphs, for free distribution to the target audience. Unfortunately, most materials were produced in English, although in rare circumstances, translation into the common language, Swahili, was done.

Today, the Division has more staff and produces the same materials in a similar manner. Translation into local languages (which are about fifty in number) would be difficult and uneconomical. It is hoped that the materials would be useful if translated into Swahili, the language spoken and read by the majority of the population. Today, the literacy rate in Swahili stands at fifty-four percent (1989, Census). However, the materials have been found useful during school health education programmes. In addition to the problem of translations, the production of locally made materials has not been feasible due to the shortage of funds for field trips and technical production.

Currently, the Division of Health Education is charged with the responsibility of conducting health education to all Kenyans in order to prevent and control the

causes of ill-health and also to promote good health practices. However, when striving to accomplish these tasks, health education officers are mainly hampered by the constraints of inadequate funds, logistics, lack of support from other health workers, inadequate intersectoral collaboration, low morale due to insufficient promotional opportunities, unsuitable audiovisual aids, lack of evaluation and research skills, an absence of performance standards and code of ethics (DHE, 1987; MOH, 1987; MOH, 1989).

The Division has a staffing strength of 900 members, including technicians, subordinate staff, administrators and professional health education officers (DHE, 1985). They are deployed in various specialised departments like printing, photography, design, workshop, electronics, transport, administration, training and community health education. The production of materials is manned by a few technicians and designers in collaboration with the Head Division of Health Education. Unfortunately, there are no technicians to run the Radio and Television Studios.

The organisation of the division is a five-tier system running from the National Head of the Division, Provincial Health Education Officers, District Health Education Officers, Divisional Health Education Officers and Locational (or project) Health Educational Officers.

In recognition of the crucial role played by the Division of Health Education, several National Development Plans reflect the need to support preventive and promotive health services, as was the case with the National Development Plan (1974-79, p. 502) which stated:

> The plan objectives of the Division of Health Education are to get the people to realize that health is a community asset essential to economic growth and social progress, to motivate them to make efforts to

> contribute to improving their own health, and get their cooperation and participation in public health programmes.

During this plan period, a new Division of Health Education was built and the training of health education officers was started. However, no evaluation was done to determine the extent to which the plan objectives were achieved.

The current National Development Plan (1989-93, p. 238) stipulates that:

> Currently, curative services take 70% of public spending on health while preventive medicine accounts for less than 5% expenditure allocations in the Ministry of Health. During the plan period, greater emphasis will be placed on preventive and promotive health services.

In this context, experiences from many countries of the world, including Kenya, have shown that bridging the gap between curative and preventive health services may not be easy because of the unchanged attitudes of policy makers. Perhaps, the world-wide concept of primary healthcare and the necessary sensitization would improve the situation significantly.

It is useful to note that the strategies for health education in Kenya include school health education, patient education, mass media, community health education, production of materials and the training of health education officers (DHE, 1986). My experience has shown that school health education is constrained by overcrowded curricula and lack of reliable transport. In addition, patient health education is done by other health workers during their routine duties in wards and clinics. Sometimes, difficulties arise due to insufficient skills in communication and counselling. Unfortunately, mass media is not regularly done because of the cost involved and lack of skilled production staff. Having commented on the production of education materials, the issue of training of health education officers will be dealt with later. Despite administrative problems, health education officers are normally preoccupied with the activities for changing attitudes towards health

and community organizing for self-help on health through the primary healthcare approach.

To tackle these challenges, the main objectives to guide resources allocation and programme management in the Division are as outlined below:

a) Planning, implementation, supervision, coordination and evaluation of all health education activities in the country.
b) The design, production, storage and distribution of educational materials.
c) The training, deployment and supervision of professional health education officers.
d) Support of other departments in the training for communication skills and the development of appropriate health education packages.
e) Coordination and collaboration with non-governmental organisations dealing with health education activities.
f) Policy development on health education to meet the challenges of uplifting health and welfare of Kenyans.
g) The research for solutions to various health education problems.

In summary, the Division of Health Education is mainly involved in putting relevant policies into practice so that health education strategies may yield the desired benefits in the country. Therefore, to realize most of the above objectives, the appropriate training of health education officers would be required.

The Training of Health Education Officers

According to the Kenya Medical Training College prospectus (1984), the college was started during the First World War to do on-the-job training in pharmacy and the dressing of wounds. Therefore, the training of nurses, plus hospital assistants (1929) and health inspectors (1947) was commenced at certificate level. Today,

there are thirteen faculties offering diplomas and certificates in nursing, laboratory, radiography, clinical medicine, orthopedics, pharmacy, dental, environmental health, physiotherapy, occupational therapy, medical education, medical records and health education.

On 1st August 1975, the Medical Education and Training Committee of the Ministry of Health recommended the training of Health Education Officers, which involved Registered Nurses, Public Health Inspectors and Registered Clinical Officers (Kei, 1985, p. 3).

In this section also, few remarks from my own experience as a lecturer in the Faculty of Health Education (1985) have been explored to clarify some issues. The faculty was opened in 1976, offering one-year diploma courses to selected candidates. Every year, applications are received, shortlisted for interview and the best fifteen candidates are selected for training. Training is conducted by professional health education officers with support from external resource persons as the need arises. Training methods include lectures, small group discussions, role-play, demonstrations and project write-ups.

In this regard, training objectives include acquisition of knowledge, skills and attitudes that may enable trainees to effectively perform health education activities in the field. Therefore, the specific objectives of the course are designed to enable students to effectively design health education interventions for local health problems, to disseminate appropriate health education messages, use audiovisual aids and mass media to undertake community organizing for self-help on health, conduct shows and exhibitions, to organize the continuing education for other health workers, to coordinate and collaborate with other health-related agencies, and do report writing and evaluation (ibid, p. 5).

It appears that to achieve the above objectives, it may well need prepared trainers, syllabuses and an enabling environment. However, trainers experience some difficulties because there are no induction courses to prepare them for the new duties, after working for several years in the field. Perhaps higher training than a diploma would effectively increase their confidence and credibility. Moreover, to meet the above objectives, the syllabus for health education course covers health education theory and practice, audiovisual aids techniques, communication theory and practice, psychology, sociology, socio-psychology, primary health care, research and evaluation. The curriculum was last reviewed in 1985 in order to include Primary Health Care (PHC). Other training problems include lack of teaching aids and reference materials, insufficient logistics, an inadequate scheme of service and lack of incentives for the teaching posts. The course is conducted at the Kenya Medical Training College against strong forces who do not see the logic of training separate cadres called health education officers (ibid, p. 10). At the time of conducting the research for this work, the course had been suspended.

In Kenya, professional health education is done through the holistic approach by more than 100 health education officers deployed in the country at main levels of the administration system. Other health workers who are community-based and may be able to undertake some health education along with their duties are Nutrition Field Workers, Family Health Field Educators, Medical Social Workers and Public Health Technicians.

The role of institution-based health workers in treatment, patient-counselling and outreach is also recognizable. Experience has shown that due to the demands of their professional duties, the health education component may not be given sufficient time and coverage. However, attempts to organize continuing education seminars to improve their skills are in most cases constrained by scarcity of funds

(DHE, 1987). Again, in most cases, efforts to revise the basic curricula meet with resistance.

Having reviewed the general situation of Kenya, responsibilities of the Ministry of Health, problems of health education, the training of health education officers and related problems, we may now proceed to the discussion of the findings of this work in the next chapter.

CHAPTER FOUR

DISCUSSION OF THE FINDINGS

Overview

This chapter discusses the research findings as outlined in Chapter Two, in the light of the constraints of health education in Kenya with a view to making suggestions for improving the Kenyan situation. It starts with a discussion of what health education may contribute to primary healthcare development, followed by a discussion of how training for health education may be strengthened.

The Contribution of Health Education to Primary Health Care Development

Several studies (Smith, 1979; Strehlow, 1983; Rodmell & Watt, 1986) have concluded that health education has not been properly understood and therefore it is accorded low priority in development programmes. In this context, the European Public Health Committee (1980) recommends that to improve the situation, Health Education Units need to be set up in the Ministries of Health, and that health education should be given emphasis in National Development plans and policies. The case of Kenya appears to fit this description because the Division of Health Education is set in the Ministry of Health as a Specialised Department, with its policies reflected in National Development plans, as discussed in Chapter Three. Although this idea seems helpful, necessary support, in terms of resources allocation, is given low priority.

In the same context, it may be useful to note that some studies (such as Donie *et al*., 1990) indicate that for health education to be more effective, it should incorporate health promotion strategies in its approaches. As discussed in Chapter One, this may be a sound argument which would widen the individualistic approach to health education. Although the health promotion approach is utilised

in Kenya, and in many other developing countries, some constraints may be encountered because several health problems are rooted in the socioeconomic development of the country, and tackling such social economic problems is often not easy because it involves working in the political sphere. It appears that intensifying health promotion in Kenya may be an important approach, although it needs intersectoral collaboration and political support for its operations. Perhaps emphasizing intersectoral collaboration in all trainings may strengthen teamwork.

Furthermore, data collected in this work suggest that health educators may find the Health Belief Model useful in planning health education because it provides the main factors which contribute to behavioural change, as described in Chapter Two. Although this Model provides important factors for consideration, some researchers have criticized it for being individualistic, while offering a fixed pattern for behavioural change. It appears that without alternative models for behavioural change, the Health Belief Model may remain valuable for a long time.

In the same context, accumulating evidence (Selvaggio, 1990; Lin, 1973; EPHC, 1980; Zimmerman, 1989; Bunton *et al*., 1991; Kok *et al*., 1991; Peterson & Strunkard, 1989; RUHBC, 1989) suggest that behavioural change for improved health would occur when: messages are rooted in the beliefs and practices of the people, opinion leaders are used, emphasis is put on significant other persons, people are taught the skills of how to remove barriers, there is increase personal control, use of the community development approach, there is focus on receptive target audience, there is organization of long-term health education programmes and focus on benefits to individuals, job, family or social relations. It appears that all the above suggestions may be found useful by health education officers while planning, implementing and evaluating their activities. Apart from that, as mentioned earlier, significant achievement may be realised if health education is

given the necessary support through resource allocation, in terms of adequate funds, equipment and skilled personnel. Currently, the Division of Health Education is operating below expectations due to these constraints.

In the same way, some studies have shown that health education may yield more when appropriate methods and strategies are used. Since there is no single method which would fit all the occasions, a mixture of methods may be a better alternative (Strehlow, 1983).

Sharing the same opinion, Naidoo (1986) maintains that health education needs to be client-centred without apportioning blame and should also aim at tackling the real causes of ill health. Experience from many countries has demonstrated that some causes of ill health may be beyond an individual's control and, therefore, soliciting for government or community involvement would be helpful. The Kenyan situation would benefit from these suggestions, especially in the areas of education for primary healthcare which may need a multi-media approach.

At this juncture, we also note that several researchers have shown that village health committees and community health workers would stimulate health education activities but problems of support, supervision and remuneration may arise. Perhaps enhancing people's participation through involvement in decision-making, implementation, evaluation and the sharing of benefits may be advantageous (Cohen & Uphoff, 1980). As discussed in Chapter Three, the Harambee movement in Kenya is not without problems; nevertheless, its role in development activities, including health, should be recognised. Again, the role of women and women's groups in support of education activities is encouraged because they play a central role in family growth and development (Burshad, 1986). Indeed health education officers would find women's groups indispensable

targets for health education. More findings by this work point to the suggestion that health education may be enhanced through counselling, group discussions, adult education for liberation, cassette and video discussions among others. All these may be profitable strategies, but in some cases, problems may be encountered due to the high cost of cassette/video equipment and the need for technical skills. Availability of this equipment and skilled manpower in the Division of Health Education would go a long way to strengthening health education in Kenya.

Although health education for liberation may be advantageous, it will almost inevitably encounter political resistance because it empowers people to see the contributing factors to their ill health which may include the socia1-po1itical system of their government. Perhaps sensitizing people for self-help on health (Harambee) without blaming the government for health problems would be preferable (O'Su11ivan-Ryan & Kaplun, 1981).

Another recommended strategy is school health education which provides a receptive audience who have attitude formation at childhood and adolescence (WHO, 1988; Geizary, 1990). Although this strategy could be significantly effective and have a multiplier effect, it may be constrained by overcrowded curricula, lack of transport, educational materials and uncooperative teachers. Perhaps the situation may be improved by seeking policy decisions at the ministerial level in order to incorporate health education into the training of teachers and the school curricula. Although problems of school health education seem to persist in Kenya, health education officers may, as resources permit, organize seminars for teachers, distribute educational materials and give health talks to selected schools as the need arises.

On production of educational materials, the available data suggest that emphasis needs to be put on locally produced materials, adequately pre-tested, and translated into the relevant languages (Porter, 1970; Macdonald, 1988). For this purpose, the training of health education officers should then adequately prepare them for this responsibility, which may include the management of an Audio-Visual Aids Unit at Headquarters. This proposal would greatly benefit the Kenyan situation when resources are improved; otherwise, translation of the existing materials into Swahili, which is widely read, would be worthwhile.

At this juncture, it is important to discuss the effectiveness of mass media (radio and television) as a tool for health education. Several researchers have suggested that mass media may be useful in increasing coverage, setting the agenda for public discussion, increasing knowledge and influencing attitudes. There are also disadvantages because it may be costly, censured and lacking feedback (Ewles & Simnett, 1985). In the same way, other studies have shown that mass media would be more effective if it uses a credible source, supported by reading materials, opinion leaders, involving intersectoral collaboration and using pre-tested messages, especially of an informative nature (Cernada, 1992; Lin, 1973; ICR, 1974; Meyer, 1980). Although the mass media strategy is inadequately utilised in Kenya, for the reasons already given in Chapter Three, special programmes may be made according to demand and the availability of resources.

It is sometimes argued that where the local culture is strong, folk media may be useful. In so doing, it may involve incorporating health messages into the local poetry, storytelling, songs, role-play, theatre, games, puppetry, art, dance, town cries and shows among others (WHO, 1988). Experience in Kenya has shown that dances, songs and role-play would be useful, although these take a long time to organize. Depending on how they are organized, some activities have been found

to be more entertaining than educational. Therefore, it requires considerable skill on the part of the health educator to incorporate some entertainment into a programme without losing the essential message. Hopefully, folk media would be a good alternative in some parts of Kenya where cultural activities are strong.

At this point, it is useful to note that the contribution of health education to quality healthcare would be increased if health education officers discharge their duties effectively according to the set performance standards (Roemer & Aquilar, 1988). Although this suggestion appears helpful, the task of setting up a Performance Standards Committee to oversee compliance through supervision, training and continuing education may be a difficult task because of the changing contexts and cost outlay. Perhaps the incorporation of these standards into the basic and post-basic training of health education officers in Kenya would be beneficial.

Accumulating evidence indicates that the role of research and evaluation for health education programmes need to be intensified (Macdonald, 1988; EPHC, 1980; Basch, 1987). In this way, Sutherland (1979, p. 245) proposes that:

> Success or failure of health education should be judged by whether or not it succeeds in achieving some educational or behavioural objectives such as increase in knowledge or change in lifestyle and not by medical outcomes.

As discussed in Chapter One, the same commentator argues that health education has not been seen to have impact because of being judged in terms of measurable improvements in health status. It may be further contended that the increase in knowledge or changes in lifestyle should be able to contribute significantly to preventive measures which would resultantly lower morbidity and mortality rates. Perhaps, judging health education in all parameters of educational, behavioural and medical outcomes would be more useful.

The study by Basch (1987) demonstrates the appropriateness of focus-group interviews as a qualitative research method for health education research, planning, formative and summative evaluation. Although this method would be found handy by health education officers in Kenya, the results may be invalid for generalization into large projects. In the same context, the European Public Health Committee (1980) recommends that health education may be better evaluated through continuous evaluation and preferably be a 'sine qua non' of health education. This may be an important observation which could indeed widen the sphere of health education. However, constraints may be noticed when technical skills and funds are lacking. In the same way, it may be advantageous to argue that evaluation result, which are not threatening to the system, may be more likely to be put into practical use.

Strengthening Training for Health Education

Training for health education has been recognised by many authorities, including WHO (1983, 1988) which urges all governments to support basic and post-basic training for health education. Therefore, some significant support has been noticed, especially in the areas of drawing policy guidelines on education for primary healthcare in Kenya. Perhaps constant lobbying for more support, particularly in the areas of reviving the training for health education officers and resource allocation, would be beneficial.

According to the data available, the training curriculum for health education needs to be competence-based, continuous and dynamic in order to meet the challenges of the day. The case of Kenya shows that the curriculum was last revised in 1985 to include primary healthcare concepts and there is probably a need to constantly review it in order to reflect the changing demands and the actual tasks in the field. The problem of HIV/AIDS is a big challenge for us to look again at the training

curricula for health education. It may be important to note that AIDS gives a chance to argue for more mainstream funding of health education activities. However, in Kenya, the tendency to concentrate HIV/AIDS activities at the National AIDS Secretariat denies the Division of Health Education its rightful duty and responsibility to educate Kenyans.

The importance of selecting appropriate training staff, and especially those with an Interest to teach, was emphasised by several researchers, including Giovanni and Brownlee (1982) and WHO (1979). As discussed in Chapter Three, the case of Kenya may be difficult to handle without improving incentives for the teaching posts. In the same way, the need for preparing teachers for the training posts is recognised by Macdonald (1988) who argues that such reorientations may be done through seminars, workshops and scholarships. It appears that such training would be beneficial if and when funds are available through the continuing education programme or donors. However, on-the-job training would be a partial alternative.

Review of other studies has revealed that the training methods for health education may be reinforced through experiential-training techniques which involve micro-teaching, peer teaching, simulations, grounded theory, practical interviews, critical-incident study, case study, audio-visual aids laboratory and field practice (Mullen & Reynolds, 1973; Porter, 1970; Foley, 1974; Strombeck, 1991; Giovanni & Brownlee, 1982). The case in Kenya may benefit from these suggestions, particularly when the trainers have been appropriately trained and the funding for practical experiences is secured. Incorporating some of the above suggestions into the existing curricula for health education officers in Kenya would be advantageous.

The importance of training other health workers (including officers from other sectors) in health education is recognised by other authors who see the need for including health education in their basic curricula or to introduce the post-basic certificates in health education (Ewles & Simnett, 1 985; Carlaw, 1988; WHO, 1983). With this in mind, it was again proposed that continuing education programmes would be suitable for training in communication skills and counselling. The use of self-learning materials for continuing education and teacher training was also found helpful (Strombeck, 1991). The Kenyan situation would benefit from these proposals, although there may be constraints due to lack of funds for organizing seminars, producing self-learning materials and negative support from trainers. In spite of this, it appears that the continued support for the training of health education officers and conducting continuing education seminars for all health workers, plus officers from other sectors, would be a worthwhile alternative.

It may be generalised from all the studies so reviewed that health education suffers from inadequate research into the guiding theories and training models. Therefore, there is an increasing need to finance for more research into these areas in order to supplement the existing concepts (Green *et al*., 1980).

Having discussed the findings of this research study, the next chapter makes some conclusions and recommendations.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Overview

This work has dealt with appropriate ways of strengthening community health education and the training for health education in order to improve on the effectiveness of the National Health Education Programme in Kenya. For this purpose, relevant experiences were drawn from the work of various researchers and discussed in the light of health education problems in Kenya, in order to draw suitable recommendations for improving the Kenyan situation.

Therefore, Chapter One dealt with background information which illuminated the main problems of health education and the need for more information on certain aspects which may enhance effective implementation of health education programmes. It also discussed the importance of education for primary healthcare and the need for training for health education at all levels. Justification for the study and its limitations were also drawn. In the same way, it was found necessary to highlight the meaning of the main concepts used in this work and the research procedures employed in gathering the relevant data and information. Finally, this chapter specifically raised research questions on how the training for health education might be improved and how health education would contribute to primary healthcare development for the benefit of the majority of the population.

Chapter Two sought to provide theoretical analyses of health education concepts and examined in greater detail the solutions to sundry problems, in order to generate answers to the research questions set out in Chapter One. It began with a review of the relevant health education concepts which might guide the planning of effective health education strategies and activities. In this way, literature on Health

Education Theory, Health Belief Model, Social Learning Theory and Precede Model, was reviewed among others. At the same time, various health education constraints were discussed in light of the experiences drawn from the literature review. It was also found essential to describe the process of human communication because of its crucial importance to health education effectiveness. In addition, this chapter discussed the training for health education which involves trainers, trainees, curricula and continuing education among others. Some strategies for health education were also discussed in greater detail in order to determine their usefulness in various situations. In summary, this chapter exposed the salient experiences which may be utilised in order to improve health education programmes in other countries, including Kenya.

The major value of Chapter Three is the way it discussed the general situation in Kenya, responsibilities of the Ministry of Health, problems of health education, training of health education officers and related problems. In this way, the main problems of health education in Kenya were identified and the need for finding appropriate solutions emphasized.

Of equal importance is Chapter Four, which discussed the research findings of this work, as outlined in Chapter Two, in the light of the problems of health education in Kenya with a view to making suggestions which may partly or wholly help in solving same health education problems especially in Kenya. It commenced with a discussion of how health education may contribute to primary healthcare development, followed by analyses of how the training for health education may be strengthened at both basic and post-basic levels. It was found that although health education encounters several constraints during its implementation, useful experiences can be drawn from other programmes or countries of the world. Some

of these experiences may be taken as a whole or be modified to suit individual situations.

Emanating from the findings of this work, the Health Education Programme in Kenya may therefore benefit from the following recommendations:

a) It is proposed that the involvement of international bodies like WHO, USAID, UNICEF and others in support of the National Health Education Programme may yield significant benefits, especially through supporting community health education activities, training for health education and sponsoring sensitization seminars for policy-makers.
b) That the Ministry of Health should practically support preventive and promotive health services through explicit National Health policies and Development Plans which favour health education as an important tool for National Health Development.
c) There is need to reorganize the Division of Health Education through the introduction of management capabilities which would effectively spearhead the specialised activities of the division for the purpose of achieving National Health Education goals and objectives.

d) Training for health education officers should be revived and strengthened, through the training of trainers, a regular review of the curriculum, training methods, teaching aids and evaluation procedures. In this way, experiential-training techniques, HIV/AIDS education and management skills would be incorporated into the curriculum. Apart from that, the curricula for all health workers, including doctors, nurses, environmental health officers and other paramedical personnel, should be revised in order to include health education as a major subject of study. In addition, intersectoral training through the continuing education programme would be advantageous in

order to enhance teamwork while implementing community health education activities

e) The Ministry of Health should provide incentives and an attractive scheme of service for health education officers in the training department and those doing community health education as a means of boosting morale, performance and retention of personnel in the service.

f) That the Ministry of Health should strengthen the Division of Health Education through adequate resource allocation in order to effectively implement the main health education strategies of training, school health education, mass media, patient health education, production of educational materials, community education and administration of the Division of Health Education.

g) In their normal duties, Health Education Officers need to consider the usefulness of Health Belief Model, principles of health promotion, local beliefs and practices opinion leaders, community health committees/workers, women's groups, informal discussions, personal control, focusing on benefits to the people, receptive target audiences, community development approach, multi-media approach, intersectoral collaboration, production of local educational materials, translation of existing materials into Swahili, use of folk media, preference for both short-term and long-term health education projects.

h) That the National Health Education Programme would be effective if adequate support is given to research and evaluation needs through allocation of funds and skilled manpower. In this way, research into the guiding health education theories, training models and appropriate Audio-Visual aids would be necessary. Again, preference for continuous evaluation

as a 'sine qua non' of health education plus the use of focus-group interviews would be beneficial to the programme.

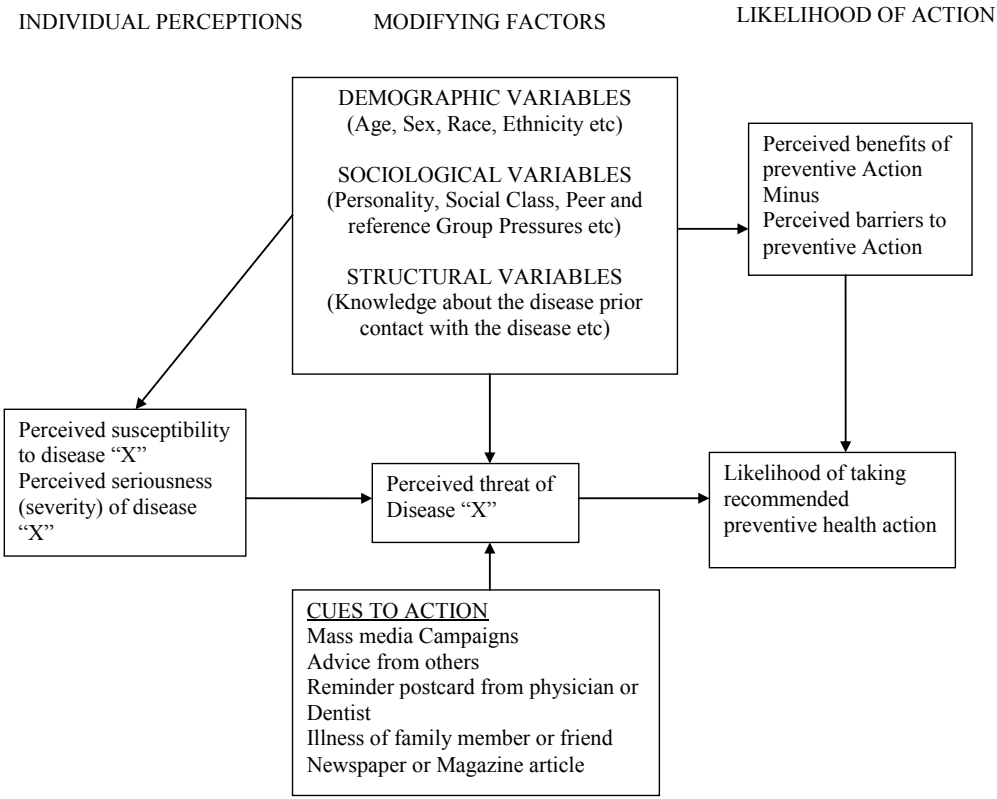
i) Although it may be helpful to judge health education's effectiveness through achievement of educational, behavioural and medical outcomes, consideration should be made for setting a standards committee at Headquarters to monitor the performance standards for quality health education services.

j) To enhance the image of the Division of Health Education, a new name is proposed to match with the current mainstream of the concept of health promotion. In this way, the Division should be rightly called the Division of Health Promotion in charge of health promotion activities and Health Promotion Officers.

It is the conviction of the author that if the recommendations are implemented, or modified to suit individual situations, then health education would be in a better position to contribute meaningfully to National Health Development. Then and there, it would be concluded that this work has achieved its objectives of seeking ways and means of moving towards appropriate health education model in Kenya.

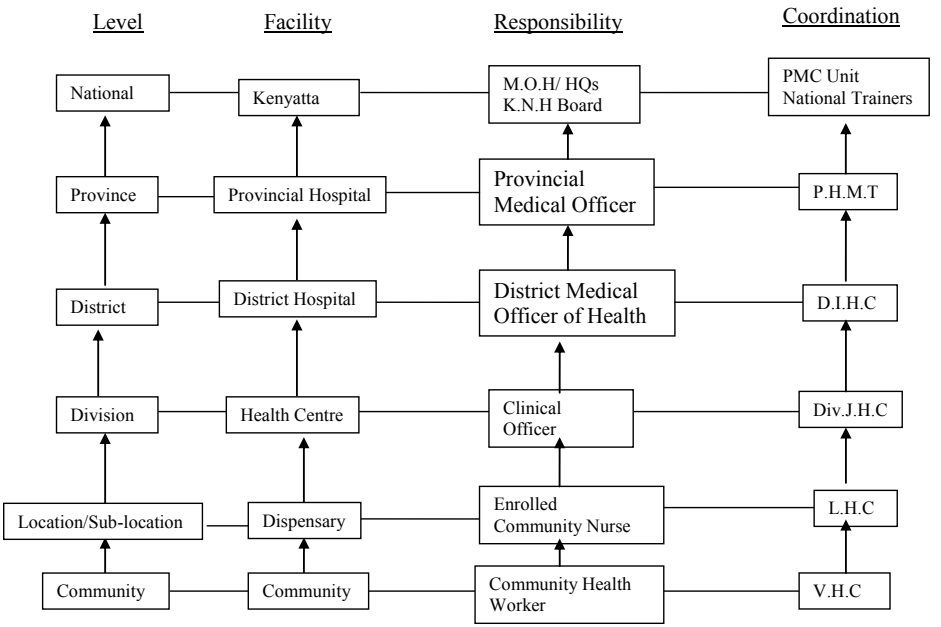
USEFUL FIGURES AND DIAGRAMS

THE HEALTH BELIEF MODEL



Source: The Health belief model and personal health behaviour, ed. Marshall II. Becker. SOPHIE Health Education Monograph, vol.2, No. 4, winter 1974, p.334.After Becker. M.H., Kirshent, J.P. (1974).A new approach to explaining sick role behaviour in low- income populations. American Journal of Public Health 64: pp.205-216

HEALTH SERVICE ORGANOGRAM IN KENYA



KEY
PHC-Primary HealthCare
PHMT-Provincial Health Management Team
DHMT- District Health Management Team
DIHC- District Intersectoral Health Committee
Div. IHC- Divisional Intersectoral Health Committee
LHC- Locational Health Committee
VHC- Village Health Committee

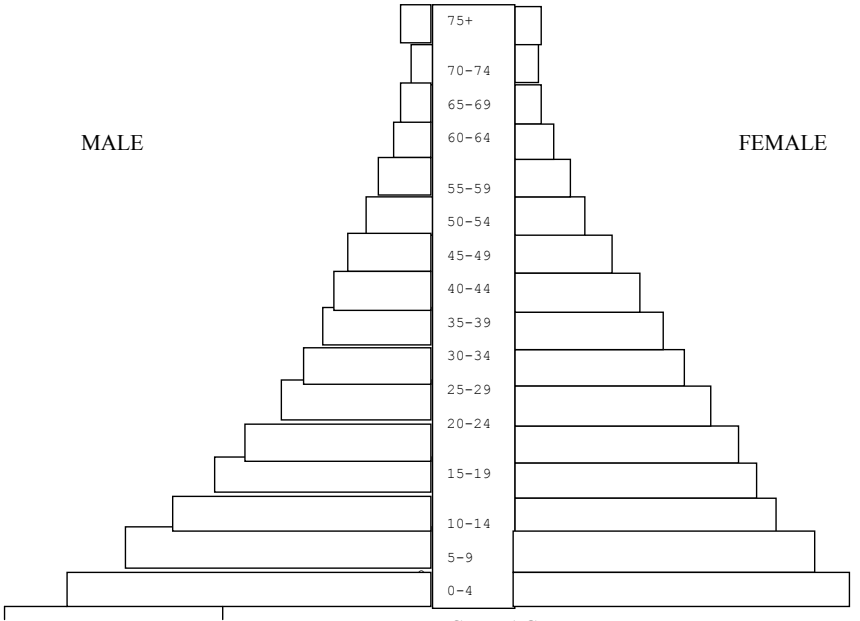
SOURCE: HIS- MINISTRY OF HEALTH

1989 POPULATION CENSUS PROVISIONAL RESULTS

Province/District	Population 1979 (000's)	Provisional Population 1989 (000's)	Intercensal Growth Rate	Province/District	Population 1979 (000's)	Provisional Population 1989 (000's)	Intercensal Growth Rate
Nairobi	828	1,346	4.86%				
Central							
Kiambu	666	914	2.87%	Kirinyaga	291	388	2.88%
Murang'a	648	846	2.67%	Nyandarua	233	349	4.04%
Nyeri	486	613	2.325	Total	2,344	3,110	2.83%
Coast							
Kilifi	431	611	3.49%	Kwale	288	384	2.88%
Lamu	42	57	3.055	Mombasa	341	467	3.14%
Taita Taveta	148	202	3.11%	Tana River	92	129	3.38%
				Total	1,342	1,850	3.21%
Eastern							
Embu	263	358	3.08%	Isiolo	43	70	4.87%
Kitui	464	640	3.22%	Machakos	1,023	1,373	3.09%
Marsabit	96	125	2.64%	Meru	830	1,138	3.16%
				Total	2,719	3,724	3.15%
North- Eastern							
Garissa	129	124	-0.40%	Mandera	106	123	1.49%
Wajir	139	125	-1.06%	Total	374	372	-0.05%
Nyanza							
Kisii	870	1,146	2.76%	Kisumu	482	674	3.35%
Siaya	475	643	3.03%	South Nyanza	818	1,095	2.92%
				Total	2,645	3,558	2.97%
Rift Valley							
Kajiado	149	262	5.64%	Kericho	633	859	3.05%
Laikipia	135	213	4.56%	Nakuru	523	862	5.00%
Nandi	299	440	3.86%	Narok	210	402	6.49%
Baringo	204	286	3.38%	E.Marakwet	149	212	3.53%
Samburu	77	114	3.92%	Trans-Nzioa	260	394	4.16%
Turkana	143	179	2.25%	Uasin Gishu	301	440	3.80%
West Pokot	159	231	3.74%	Total	3,242	4,894	4.12%
Western							
Bungoma	504	731	3.72%	Busia	298	423	3.50%
Kakamega	1,031	1,389	2.98%	Total	1,833	2,543	3.27%
				National Totals	15,327	21,397	3.34%

SOURCE: KENYA ECONOMIC SURVEY 1991

AGE-SEX PYRAMID, KENYA, 1979



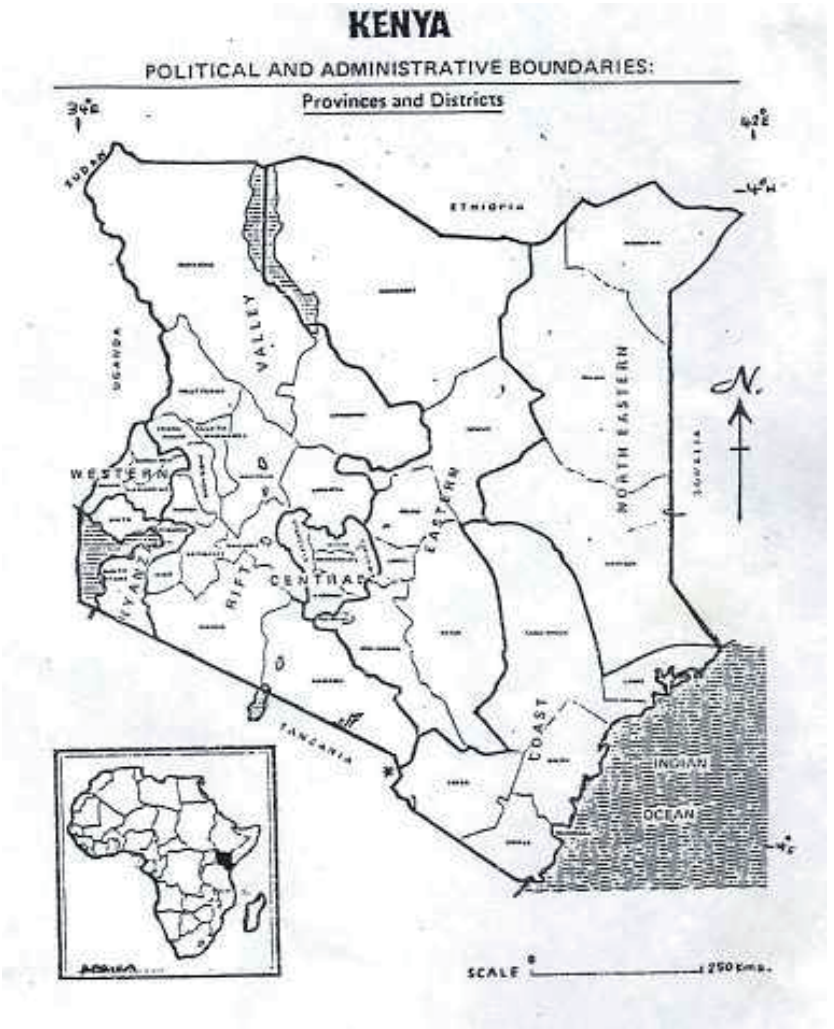
SOURCE: Kenya National Population Census, 1979

KENYA OUTPATIENT MORBIDITY STATISTICS BY PROVINCE, 1988

PROVINCE	Central	Coast	Eastern	N/Eastern	Nyanza	R/Valley	Western	Total	%
Number of institutions	297	251	364	39	261	653	117	1,982	
Reporting Institutions	195	169	172	24	58	212	27	857	
Response Rate	65.5%	67.4%	47.3%	61.5%	22.0%	32.5%	23.2%	43.2%	
DISEASE									
Diarrhoea	148,807	121,499	162,844	17,508	83,247	194,560	94,631	823,096	4.69%
Tuberculosis	892	1,015	475	521	365	5,834	35	9,187	0.05%
Leprosy	77	161	32	56	231	110	34	751	.00%
Whopping cough	889	2,520	1,393	18	1,980	2,755	646	10,201	0.06%
Meningitis	171	112	56	20	96	409	45	909	0.01%
Tetanus	325	153	102	14	44	347	156	1,141	0.01%
Poliomyelitis	662	139	153	13	89	557	55	1,668	0.01%
Chicken pox	21.975	2,976	7,267	175	556	6,059	3,419	42,427	0.24%
Meseals	15,378	6,372	8,573	429	10,317	22,906	6,225	70,200	0.40%
Infectious Hepatitis (Jaundice)	14,077	1,533	2,709	91	195	3,270	439	23,034	0.13%
Humps	68,232	17,356	8,280	495	2,138	62,260	2,364	161,625	0.92%
Malaria	493,967	877,230	892,653	135,105	531,265	812,157	356,761	4,099,138	23.33%
Gonorrhoea	79,382	41,860	46,339	5,119	36,182	59,509	17,485	285,376	1.63%
Urinary tract infections	39,120	44,580	78,072	9,663	37,375	71,352	5,098	235,760	1.63%
Bilharzia (Schistomiasis)	30,507	34,366	8,655	2,839	5,019	11,172	606	93,164	0.53%
Intestinal worms	226,304	101,306	157,239	10,135	74,996	174,177	44,303	783,455	4.49%
Malnutrition	26,349	9,154	10,190	2,139	14,040	17,008	6,538	85,418	0.49%
Anaemia	32.270	49,715	17,748	8,187	24,852	31,401	13,067	177,240	1.01%
Eye Infections	109,684	58,109	88,022	88,022	42,974	115,483	24,287	449,123	2.54%
Cataract	23,942	1,893	2,425	515	652	9,319	169	38,915	0.22%
Ear infections	81,837	51,696	55,033	9,831	32,903	64,320	19,546	315,166	1.79%
Dis. Of circulatory system	223,618	18,612	11,672	55	3,800	48,531	1.111	301,399	1.72%
Dis. Of the respiratory system	1,067,521	506,024	644,771	106,411	204,341	713,774	175,277	3,418,119	19.46%
Pneumonia	169,783	26,087	54,229	3,747	19,700	54,447	9,950	337,943	1.92%
Abortion	11,352	2,965	3,715	231	2,576	7,073	1,083	29,495	0.17%
Dis. Of Puerperium & child birth	3,332	2,712	5,080	194	2,273	3,666	1,001	18,267	0.10%
Neoplasm	992	148	595	2	209	883	169	3,003	0.02%
Dis. Of blood	2,777	386	972	17	1,023	1,023	245	6,464	0.04%
Mental Disorders	14,842	1,553	4,913	694	1,297	6,702	6,684	36,690	0.21%
Dental	71,240	17,659	27,549	3,482	15,197	53,429	3,279	191,353	1.09%

disorders									
Dis. Of the Skin(incl. ulcers)	336,798	225,516	252,201	20,692	109,025	267,0322	76,918	1,289,130	7.34%
Rheumatism, Joint Pains etc	115,333	166,941	72,113	5,374	27,770	73,991	11,253	473,275	2.69%
Congenital anomalies	12,522	505	690	16	307	3,554	25	17,919	0.10%
Pyrexia of unknown Origin (PUO)	30,683	11,564	17,058	337	11,125	21,616	15,274	107,657	0.61%
Poisoning	29,426	2,251	651	616	460	7,075	151	40,630	0.23%
Accidents	149,801	46,163	80,743	5,339	18,132	35,282	14,282	399,742	2.23%
All other diseases	1,340,104	418,756	533,670	51,758	148,424	465,860	175,565	3,134,137	17.34%
Total New Cases	4,996,271	2,383,096	3,258,937	412,400	1,465,395	3,478,869	1,088,281	17,568,249	100.00 %
RE-ATTENDANCES	1,412,796	669,508	1,175,086	244,107	350,456	755,250	244,722	4,851,925	
REFERRALS	401,729	88,739	90,503	35,635	27,031	109,997	32,323	786,007	
No. of First Attendances	1,743,617	74,226	2,104,108	110,366	282,366	468,641	2,681	5,436,005	
AVERAGE ATTENDANCE	3	4	2	3	5	7	406	3	
POPULATION	3,414,741	1,756,620	4,025,065	583,507	4,030,543	4,910,486	2,632,084	22,710,091	

SOURCE: Health Information System (M.O.H.)



SOURCE: Health Information System…MOH.

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