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ORAL HEALTH EDUCATION IN WESTERN SAMOA

1974

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INTRODUCTION

Oral and dental health status depends largely on regular personal and group behaviours, applied regularly throughout life, therefore effective utilization of the educational approach is central to any widespread improvement in oral and dental health. Prevalence data on oral disease from all parts of the world substantiate the almost Universal need for more effective dental health education programme. Even in countries that provide adequately staffed free dental services of high quality, individuals fail to avail themselves of needed dental care.

The aims of the thesis are to examine in brief the trends in dental health education shown in the past literature and to discuss dental health education in Western Samoa.

Western Samoa is situated in Mid Pacific, 14 degrees South of the equator and close to the International Date Line. The Country's four main islands are of volcanic origin and are fringed with coral reefs, and it has a tropical climate. The total area is 1133 square miles with a density of 689 persons per mile of Coastline in Upolu island and 278 persons per mile in Savaii island (1971 census).

The total population (1971 census) is 146,461, 90% being of pure Samoan ancestry.

Over two-thirds of the Country's population live in the island of Upolu with most of the remainder in the nearby island of Savaii. The 5-14 years age group (primary schools and Forms 1 & 2) numbers 35639, the 15-19 years age group (secondary forms 3 to 4) numbers 3514 the pre-school age group is 27186. Of the total population 0.5 percent speak English and only 51.6 per cent speak both English and Samoan. 47.8 per cent speak Samoan only.

The rural villages are strung out along the coast line so that most Western Samoans live within sight of the sea. Although Apia the attractive capital, has a population of almost 30,000, it is in reality a cluster of villages and so far lacks many of the features of an urbanised society.

The village agriculture ensures the supply of coconuts, bananas, breadfruit and taro which are staple foods, together with cocoa, vegetables and fruit, while local production of meat and fish is supplemented by imports. With the exemption of some locally produced soft drinks, ice-cream and few sweets, the majority of confectioneries,

sugar, white flour and other refined carbohydrates are imported.

Many of the Western ideas introduced by the white men have been fitted into the Samoan way of life. The traditional system based on the kinship groups has survived unchanged. Extended family is a strong feature. The chief (Matai) is the head of the family and this title is conferred by the common consent.

The dental service in Western Samoa has been built up gradually and there are now thirteen dental officers responsible for clinical duties and dental health education. A feature of the systems is the complete absence of private practitioners in both medical and dental spheres. Most branches of conservative and prosthetic dentistry and limited orthodontic procedures are undertaken, together with such oral surgery as is required.

1. REVIEW OF TRENDS IN DENTAL HEALTH EDUCATION.

In recent years, in both the developed and developing countries throughout the world, there has been an increased interest and emphasis on the importance of the educational approach in the prevention and control of health problems. One of the principal reasons for this increased interest is the recognition that many of the factors related to causation and continuation of disease and to maintenance of health status are matters of personal and group behaviour rather than of environmental exposure. Since oral and dental health status depends largely on individual and group behaviours, applied regularly throughout the life span, effective utilization of the educational approach is pivotal to any widespread improvement in oral and dental health. (Social Sciences and Dentistry. P.241.)

Health Education may be simply defined as the provision of health information to people in such a way that they apply it in everyday living-(Young and Striffler, P.296). Health Education is thus focused on people and on action. In general its aims are to persuade people to adopt and sustain healthful life practices, to use judiciously and wisely the

health services available to them, and to take their own decisions, both individually and collectively to improve their health status and environment[43].

Dental Health Education as an intergral part of general health education, requires the application of principles and processes which are effective in achieving desired goals and healthful practices in other aspects of health education.[43] The degree to which dental health education goals can be achieved is determined by a series of inter-related factors which include:-

(i) The accessibility of dental services and of advice in which individuals have confidence.

(ii) The economic feasibility of putting into practice the dental health measures advocated.

(iii) Acceptability of the proposed dental health practices in terms of customs, traditions and beliefs both individuals and groups.

(iv) The extent of learning experience of people to enable them to understand or to desire the benefits which arise from new and modified dental health behaviour, such behaviour may often require a considerable personal sacrifice of a financial, social or

psychological nature.

It is imperative therefore, that all health workers and others involved in dental health education recognise that attainment of the desired changes in dental health behaviour are conditioned by social, psychological and economic realities and by the quality amount and availability of dental health services.

At the same time, it is essential for those involved in dental health services to recognise that the degree to which health policies and plans become meaningful and health programmes fulfil their purpose is largely determined by the actions of the people for whose benefit and welfare they are intended.[41]

Health Education implies not only the education of the recipients but also the education of the personnel involve in carrying out the educational tasks.

It is obvious that opportunities for patient education by the dentist are not being fully exploited for a variety of understandable reasons. Perhaps one of the main reasons is that dentists have been educated to think chiefly in terms

of therapy, repair and restoration with little emphasis on education and prevention.

The Dentist as a head of the dental team must be motivated and oriented towards the philosophy of Prevention and it's educational implications in all aspects of dentistry.

Health Education is far more than a process of transmitting information from a teacher to a learner. It is a complex process of inter actions set in motion by the educator by means of which he hopes to influence first the attitudes and then the behaviour of the learner - (Dunning P.339).

In order to provide health information in a way that will motivate individuals to apply it in everyday living, it is necessary to understand something about factors which influence human behaviour. What a person will learn and the actions that he will take toward the maintenance of health or the treatment of disease are determined by his attitudes and his motivation. It should be noted that just as a teacher cannot make the student learn, members of the dental health team cannot directly motivate the patient or the Community - (Young and Striffler, p.297). For Dental health education to be effective, primary attention must be

given to the factors involved in actualizing human behaviour rather than to the mere dissemination of scientifically accurate information.

Moen and Goulding analyzed the dental health attitudes of 1,862 U.S. adults in relation to knowledge, attitudinal and behavioural deficiencies relevant to planning dental health education programmes. They concluded that the knowledge people have of how to care for their teeth is of somewhat higher level than their dental attitudes or behaviour. They mentioned the need for heavier emphasis on emotional appeals that will remove the attitudinal barriers to proper dental behaviour - (Social Sciences and Dentistry p.243).

The ultimate goal of planned dental health education programmes is behavioured in nature, the reinforcement and maintenance of health behaviour where this is satisfactory, or a change to new behaviour that will promote and improve individual, group, or community health. Planning for dental health education should therefore take into account not only the forces within the individual that affect behaviour (e.g. beliefs, attitudes, interest, values, needs,motives, expectations, perceptions and biological factors) but also

the external forces that interact with these internal ones and have impact on a person's behaviour (e.g. family, kinship, and friendship groups; health and medical facilities and services). Since all these forces are in a constant state of dynamic interaction, the processes of dental health education should be flexible and should be continually tailored to take account of changing personal and situational factors.

One of the chief weakness in many dental health education programmes has been the failure to make adequate educational diagnosis before prescribing programme activities. Without considerable information about the individual, his family background, social and cultural values, beliefs, perceptions and aspirations, it is not possible to develop appropriate and meaningful dental health education activities and programmes. Even when individuals with similar dental health problems are grouped together for educational purposes, it is necessary to take into account the differences between individuals and to provide a variety of educational experiences.

The major components of the educational proces are:-

(i) The Educator, i.e. anyone who attempts to influence

the learner, such as dentists, teachers or mother.

(ii) The learner, i.e. the individual or groups to be influenced.

(iii) The behavioural goals towards which the process is attempting to direct the learner.

The educator in dental health in his attempts to influence the learner may apply any of the available individual, group, or mass methods either singly or in combination. The selection and application of specific methods will depend on the outcome of the educational diagnosis. The ineffective programmes is due to the tendency of health workers to predetermine the goals themselves and to plan educational activities directed towards achieving the goals that are important to them without attempting to involve the learner actively in the educational process.

Many internal and external factors and forces affect the outcomes of the educational process and must be recognised in planning dental health education programmes, for example:-

(a) The learners own (usually implicit) dental health goals, which will be conditioned by a number of psychosocial and cultural factors.

(b) Other goals that are of higher priority to the individual than dental health goals, e.g. desire for improved social status, relationships with the opposite sex, and increased earning capacity.

(c) The learner's attitude towards the educator, which may be a desire to turn him off or shut him out.

(d) Influences other than the planned educational activities, that may impinge on the learner at any time, e.g. misleading health advertising and social pressures.

(e) Barriers that must be reduced, removed, or penetrated by the educator before the learner can make any movement towards the desired goal, e.g. Communication difficulties, interests of the learner, motivations, perceptions, and past experiences.

All these forces and many others interact in complicated ways and tend to diminish, dilute, and distort the intended impact on the educator's efforts. Consequently, the greater the dental educator's awareness and understanding of these factors and forces, the more realistic and effective will be his educational plan.

The ultimate objectives of oral health education is directed towards the primary prevention of oral and dental diseases

by motivating the people to voluntarily adopt such measures which will prevent oral and dental diseases and promote and maintain good oral health -(Young and Striffler p.298-299). In order to take a voluntary preventive health action, the individual or the group must have a readiness and willingness to act. Readiness should imply the physical social and emotional capability to act. In addition to readiness to act, the concept of reinforcement and continuity are crucial. In the education process whether in the private clinic or in the community setting, these concepts simply mean that the dental health educator needs to understand what the patient or the public already know about dental health, and build from there, and as the dental health educator builds, he or she reinforces the Communication stimulus in different ways and different times. The educational factors of readiness, continuity and reinforcement are all inter-related.

In recent years, dental health education has gained more and more importance and is now recognised as playing a major role in dental public health and particularly in the field of preventive dentistry as it is obvious that no improvement in the field of dental health can be expected if the application of preventive measures is not encourage.[9]

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Prevention, public health and oral education are all areas which dentists have in the past, either neglected or failed to utilize fully. The nature of the condition which dentists faced as many peopole believed is not a disease but a fact of life, namely dental decay, treatment is time consuming and exacting, generate an attitude within the profession that if a dentist is talking, he is not working. This has inhibited proper dental health education of the patient. The situation has been further complicated by the fact that until recently, we have had few good preventive measures to talk about.

One other important aspect of dental health education is to promote the development and proper use of existing dental services, fluoridation, the most effective community measure for prevention and control of dental caries cannot be made a part of a community's service unless the authorities have the knowledge and motivation to accept and implement this procedure. On the other hand the public must be made aware of both existing and newly developed services and motivate them to make use of such services. It is no point in developing advance and sophisticated dental services if the public won't make use of them. R. Martin[27] wrote that "In modern society, technology changes take place at so rapid

a rate that public attitudes and opinion tend to lag behind, with the consequences that there is often a serious gulf between what is technically possible and what is socially acceptable. It is becoming increasingly clear that this time lag presents a very serious problem in many of the professions, and that unless some steps are taken to arrest it, the value of technological advances is seriously restricted. It is for example of little practical value to develop technical competence and skills in dentistry unless the climate of public opinion is such that these skills and practices are accepted by the community".

Long-range educational efforts may be more successful in modifying public attitudes than short-term efforts. Today and probably for many years to come, most dental health problems can be prevented and controlled only by daily, continuous effort by the individual. Prevention of periodontal diseases, for example, depends on a modification of patterns of daily living.[6] This objective of course, entails a more profound change in attitudes than is needed to benefit from single, infrequently repeated actions such as immunization. Short term educational approaches which urge people to do a specific thing now are useful in attacking some problems, but are inadequate to change dietary patterns,

tooth brushing habits, and patterns of visiting the dentist.

In general, patterns of living cannot be taught. Instead they must develop out of the life experience of the individuals. One suggestion is to focus long-term educational goals not on the adults of today, but on the adults of subsequent generations to try to develop in children patterns of life in accord with sound health practices. This approach includes improved dietary practices, periodic visits to the dentist, and learning effective personal hygiene habits. It include also learning about dental diseases, the impact they have on the person and on the family, and the kind of preventive and remidial actions that are available.

Haefner has stated (Young and Striffler p.310-311) that if one is willing to settle for long-range gains rather than a short-term approach, the sc hool setting offers a great potential for effective dental health education. It provides excellent opportunity for communication with virtually all persons within the entire school-age group and in an explicitly educational context where learning is emphasized and rewarded. Having an entire population as a captive audience in this type of setting is a rare and wonderful

occurence that deserves to be capitalized upon fully. Furthermore, continuing educational influence can be exerted on the target audience over a considerable time period. The process can begin at an early age, when habits patterns are still in the process of being formed rather than having been firmly established and resistant to change, as is true of adults. The school setting also offers the advantage that the dental health educator can use both mass communication and face to face communication approaches on the same audience and derived maximum benefit from each.

Rosenstock contends that health teaching cannot be merely didactic. It must be embeded into socialization process so that rewards for successful learning occur at all levels of society. This objective of course, means that parents of children must cooperate, it also means that school systems must participate actively instead of relegating dental health efforts to intermittent dental inspections or occasional and sporadic lectures.

Although the school setting is ideal for oral health educations for various reasons previously mentioned, parents and adult education is as totally important. What a child learn at school is as important as what he learns at home,

from the parents. Correct oral health behaviours a child learn at school will be easily reinforced if such behaviours predominate at home. Muhler[34] showed that before dental health education could be made meaningful to the child, the parents had to be taught the practical importance of dental health.

Obviously, much more research is needed on methods of educating parents effectively with regard not only to the importance of caring for their own teeth, but also to the need for early, consistent periodic dental care for their children. Included in both the former and the latter is the continuing application of approved oral hygiene measures throughout the life span.

Despite recognition and acceptance by school authorities, educators and parents of the school's role in dental health education, and the almost universal occurrence of school dental health education, we have yet to find more efficient and effective ways to inculcate good dental practices - to change a temporary action into a habit. Fixing these apparently simple dental health behaviours as habits seems complex to an extraordinary degree. Educators, dentists and social scientists have identified 'barriers' to good

dental health habits but multidischiplinary efforts have failed to knock the barriers down. We are aware of how the actual practices of parents influence children, yet we consistently ignore these powerful sources of motivation. Parents, in general are considered a lost cause. But these 'lost causes' may be our most potent sources of behaviour change in children. This is not a new idea. It is a basic premise, an axiom, in the education of mentally or behaviourally disturbed children. Few workers in this latter field attempt to change the behaviour of children without attempting change in the behaviour of parents or guardians of the children. Why should not the same principle be observed in attempting to improve the dental health behaviour of children?

Dental health workers most often are dealing with problems related to the inability of children to identify with significant others. Our problems is more manageable. Children who are not ill identify with parents and significant others and more with their parents than with their teachers. Behaviour precipitate behaviour. Children do as the mother does and not as she says - (Social Sciences and Dentistry p.298).

In the light of this, we need to ask ourselves whether the

effect of assigning the greater responsibility for dental health education to the school interferes in any way with the children's ability to change temporary behaviour to one of habit. If a child, because of his identification with a parent who may not practise good oral hygiene, views dental health education as a criticism of his family, we would expect likely habit formation. It follows that if the school is seriously concerned with changing children's behaviours, it must acknowledge in a practical way the role of identification and the influence of dental health practices of mothers on the behaviour of their children. The school must make an effort to change mothers practices.

2. ORAL HEALTH EDUCATION BACKGROUND IN WESTERN SAMOA.

When dentistry was established in Western Samoa, oral health education was given very little attention., any form of educational effort was confined to chairside post-operative care advice. Even today the utilization of the educational approach is very limited despite advice and recommendations from the World Health Organisation. Perhaps one of the main reasons behind this is the fact that dentists were mainly trained to carry out curative procedures.

Baume[4] wrote in his report on "Health Planning in Western Samoa 1968, that there was too much emphasis on giving treatment and not nearly enough on preventive measures. With the limited resources available the shift of emphasis to prevention is of utter importance.

Western Samoa has the lowest dental diseases prevalence in the South Pacific region.[28] The mean df teeth for the 5-6 age group is about 1.0. For the adults aged 45-54 years the DMFT is 4.0.

Periodontal disease prevalence though still the lowest in

the South Pacific region was found to be contrasted with the pattern of Dental Caries. C. Sundram[39] reported in 1973 that even school-age groups suffered from intense gingivitis, which persisted and became more prevalent during young adulthood. Both Wong (1969)[44] and Camrass (1972)[7] reported, however, that destructive periodontal disease was the major cause of tooth loss in older Samoans. Despite the low dental caries and periodontal diseases prevalence, Wong[44] in 1969 reported some remarkable features of signs of increase in dental caries prevalence within the town area. He reported that:-

(i) The percentage of persons with one or more df teeth in the primary dentition was highest in Apia, the Capital town, with 82% or twice the 1967 average. Savaii had the lower percentage of the two islands.

(ii) The percentage of persons with one or more DMFT in the permanent dentition was also highest in Apia, 54% in the 11-12 years and 60% in 15-19 years, or about 10% to 65% higher than the 1967 average.

The above observations were consistent with the findings of Professor Baume, that primary teeth showed a higher caries

attack rate than the permanent teeth and there are alarming signs of an outbreak of rampant decay in Apia.[4]

The fact that the size of the dental problems are minimal compared with other South Pacific countries and Western Countries, and that there is a rapid increase in Dental Caries prevalence justified the strong need for the utilization of the Preventive approach. In a developing country with such minimal dental problems every available resources and preventive measures should be utilized to arrest or to keep the problems at its minimal occurrence.

The rapid increase in dental caries prevalence in younger age group in the town area is no doubt due to the increase in the introduction and consumption of refined carbohydrates. This indicates the need for oral health education and counselling on dietary patterns. Likewise the periodontal problems may be minimized through oral home care advice and toothbrushing programmes in schools.

The ultimate aims of any health education programme is to modity or change people's behaviour through motivation for attitude changes. Any behavioural changes therefore may only be achieved by any change in the attitudes.

2.1. Public Attitudes.

In common with many developing countries, dentistry in Western Samoa has a low priority in the total health field.[7] This is somewhat in line with people's knowledges and attitudes towards oral health. This is not surprising in a newly emerging country where attention is expected to be directed to economic development and other top priority needs. The educational background of the majority of the population is low compared with that of developed countries.

The school is usually the place where the majority of children will get their first advice on how to clean or care for their teeth. The majority of adult Samoans did not have this opportunity and as a result oral health care is poor and neglected. The majority of these people do not brush their teeth. They usually visit the dentist only when in crisis. A lot believed that loss of teeth is associated with aging, so as people become older they tend to loose their teeth.

Fear of pain is the commonest and the most widely prevalent attitude among the people. Most of the people associate

dentistry with pain. This tends to inhibit positive attitudes to dental treatment and create a lot of unpleasant feelings towards dentistry and the dental proffession.

Fear of Death - A lot of people through misunderstanding believe that a lot of deaths were being associated with dental treatment.

Fear of the Dentist is experienced by a lot of people as one of the reasons for not visiting the dental clinics.

Many people are embarassed to have their teeth and the oral cavity exposed to someone else as they feel it is and intimate part of the body.

Nowadays anterior gold inlay is becoming a fashion in teenagers and young adults as an asthetic feature.
From experience in 1971 and early 1972 the majority of young adults visited the clinic because they wanted a gold inlay. The people believe that a nice shine anterior gold inlay is a sign of beauty. Many of these people with sound beautiful teeth were persuaded against such belief. Despite intensive persuasion a lot came back insisting on having their teeth drilled and gold inlay placed.

A lot of people believed that toothbrushing is necessary for good oral health, but only very few people carry this out. Children, young females and young adults in the town area constitute the majority of the population who brush their teeth once or twice daily. The majority of these people associated tooth brushing and good mouth odours. When asked why they brush their teeth, they said they wanted to prevent bad teeth, some brush their teeth for aesthetic reasons. Only a few people directly associated tooth brushing and dental diseases, and among these people are those who have been abroad, school teachers, nurses and all those in better occupation and with better educational backgrounds. Only a minute percentage of the village adult population brush their teeth. Many old village adults when asked about toothbrushing would say that they had never brush their teeth. A lot agree that they would rather spend their money on other things than on toothbrushes and tooth pastes. Because of the low value the majority of people place on their teeth, many are ignorant about oral health and dental treatment.

Their attitudes towards the dental profession and the dental personnel are very unfavourable and denigrating. People with low and limited educational backgrounds made up the

greater portion of this group. They believe that dentists are just tooth fillers and tooth pullers, they are pain inflicting people and do not have any sympathy or human feelings for their patients. They have no knowledge about health in general and they are just mechanics. These people will never be seen in the clinic unless they are forced to, because of agonising tooth-ache, and will always insist on extraction of teeth.

The attitudes of the public to dental personnel vary and there is a marked distinction made towards the older and locally trained dentists and the young overseas graduate dentists. The majority of people tend to favour the younger overseas graduate dentists and are inclined to respect and carry out their advice. This is quite the opposite of the public attitude towards the older locally trained dentists.

2.2. Socio - Economic Influences.

A large number of studies have shown a relationship between the utilization of dental care services and socio-economic status.

Suchman and Rothman -(Social Sciences and Dentistry p.254)

found that the most pronounced of all demographic characteristics affecting utilization of dental services was socio-economic status, those on the highest level were twice as likely to have seen a dentist than those in the lowest level. Their analysis showed that all three customary measures of socio-economic status (income, occupation, and education) act independently of one another. These differences remain even when the data are controlled for age and sex. They concluded that to achieve the goal of optimum utilization of dental care services, will require a combination of changing the dental attitudes and habits of low income groups and of finding new methods of organizing and paying for dental care.

The principles reported in this study and other similar studies by O'Shea and Gray[29] and Freeman and Lambert[20] can be related to Western Samoa, despite the fact that no study of such nature has been carried out.

The three customary measures of socio-economic status (income, occupation and education) have a lot of bearing on the people in Samoa in terms of their attitudes, knowledge and the degree of dental care utilization.

People with better income, good occupation and better

educational background are the ones with high regards for their oral health. A lot are health conscious people and they believe in the efficacy of dental visits, and tooth brushing, and would likely to engage in preventive dental behaviour. These represent only a very low percentage of the total population.

2.3. Cultures, Beliefs and Values.

Cultures, beliefs and values have a great influence on oral health education. What is acceptable and applicable in another community may be completely rejected in another community because of beliefs, values and cultures. The acceptability of the proposed dental health practices in terms of customs, traditions and beliefs is of importance if any oral health education programme is to be successful. In many developing countries cultural beliefs and traditions are in conflict with desired oral practices. For example, in Fiji a missing anterior in a young female is a traditional sign of beauty. In many other developing countries ceremonial removal of teeth is highly regarded as a traditional honour.

Fortunately Western Samoa unlike the majority of other developing countries has little or no cultural barriers or

practices that may be contrary to good oral health.

A remarkable feature of the Samoan cultural is the respect the people have for their chiefs, and the decisions they make. The chief is usually the channel and the prime contact in any intended health programme. The role of the chiefs as organizers, and influential leaders in any village programme is important and must be fully utilized in oral health educational programmes.

Women's committees are another distinguishing feature of a Samoan community. They are usually responsible for health matters, (for example hygiene and child health) in the villages. Camrass 1971[7] stress the importance of these features when periodontal programme was carried out in rural Samoa.

2.4. Oral Health Education Used.

When dental services were first established in Samoa in 1938, the five locally trained dentists (by a Dentist from New Zealand) were mainly educated to deal with basic curative measures, as a result oral health education was not recognised.[39] Any oral health education measure during this

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period was limited to post-operative care advice.

Nowadays, with increase overseas graduates in Dentistry, attempts are now being made to emphasize patient education, an important phase of dentistry which has long been disregarded.

Chairside demonstration and advice on tooth brushing techniques are now being encouraged as is chairside counselling of parents on consumption of refine carbohydrates by children and home care for infants and pre-school children. In 1971 pamphlets in Samoan language on oral health were distributed to district nurses to help parents and pre-natal mothers to understand the importance of home care and their role in promoting good oral health.[39]

In 1964, toothbrushing programmes in primary schools were inaugurated. This was promoted by the Dental Officers in charge of schools. Wong 1969[44] reported that - it was delightful to see the initiation of the toothbrushing programme in progress. Most of the schools visited had screened cabinets in every classroom neatly hung with rows of toothbrushes.

The difficulty found in this campaign was the availability

of toothbrushes of the correct size. Many were of adult size not suitable for children. There was a shortage of toothbrushes, and possibly because of the campaign, the price rose from five to ten cents each.[44]

Lack of proper statistical evaluation contributed largely to the inability to measure any success of the programme.

In 1970[39] radio talks on toothbrushing in schools and lectures to school inspectors on the toothbrushing programme were carried out by the chief of Dental Health Services.

In 1971 the Chief Inspector of Schools was proviced with literatures to incorporate in the primary school curiculum. This was the first dental health education text translated into Samoan to be used by teachers. The text was to be taught by teachers in conjunction with other health subjects. It consists of basic oral health care materials such as the importance of teeth-chewing of food and facilitation of speech, hazards of sweets and cabohydrates to teeth and simple correct methods of brushing teeth.

Student nurses in the hospital, beginning in 1971, received lectures on oral health, and this is now becoming an integral part of their curiculum.

In 1972 oral health lectures were given to teachers from Tokelau Island. This small atoll, a New Zealand Colony, is close to Western Samoa. The island has no dentist, dental emergency cases are attended by Medical Officer. In 1972 the overseas wives club was given a talk by the chief of dental health services on oral health and this was the first talk given outside of schools.

3. THE FUTURE NEED FOR ORAL HEALTH EDUCATION.

Despite the low prevalence of dental caries in Western Samoa, the 1969[44] Epidemiological data revealed signs of rapidly increasing caries incidence in the 6-12 years old children in the Apia area. Camrass 1972[39] found the prevalence pattern of periodontal diseases contrasted with caries prevalence. He wrote that - Even school age groups suffered from intense gingivitis which persisted and became more prevalent during young adulthood and that destructive periodontal disease was the major cause of tooth loss in older Samoans.

In a country like Samoa where dental disease prevalence is not as immense as in other countries within the South Pacific Region and the majority of developing countries all over the world, every effort must be centred around a prevention approach if the dental problems are to be kept at a minimal. The maximum utilization of the educational approach is therefore of vital consideration.

3.1. Present Concepts and Aims.

Whilst teaching of dentistry placed emphasis on the philosophy and techniques of the treatment and prevention of dental caries in past years, the same emphasis was not, until recently, placed on managing and preventing periodontal disease. Patients who are not preoccupied as they formerly were, with a protracted and often only partly successful battle to keep ahead of their cumulative caries indidence, are becoming aware of other dental problems. Functional damage and consequent loss of teeth from chronic destructive periodontal disease, or the unaesthetic effects of gingival recession will no longer be accepted as normal and unavoidable such patients.

Surveys in Western Samoa (Wong & Camrass) show that the prevalence of gingivitis is already high (compared with caries prevalence) in school-age children and increase to become universal in young adults. These findings are closely related to poor oral hygiene and the presence of calculus.

As pathology of the investing and supporting structures of the teeth, comprising gingiva, periodontal ligament, cementum and alveolar process, is so common in the adult population, and the nature of its progress so insidious, and so

lacking in painful symptoms, it seems to have become accepted as a fact of life by a large proportion of the public. Unfortunately, this attitude is shared by a lot of dentists who regard the progressive breakdown of the periodontium as being determined by heredity or the aging process, and beyond their control. Terms such as "soft gums", Pyorrhoea" or gum recession are still used to describe a variety of distinct periodontal conditions. Significant bone loss or eventual loss of teeth due to periodontal disease is not inevitable in the normal life span, provided clinical and home care is adequate.

Negative attitudes expressed by patients regarding the long-term value of dental treatment may affect dentists attitudes, resulting in reluctance on their part of attempt motivation and education of patients in the home care procedures which is such a vital part of preventing the initiation or progression of periodontal disease. Conversely, time spent in sympathetic reassurance of apparently negative, apathetic or nervous patients, can influence a significant proportion of these people to setting higher goals for their oral health, by accepting the attitudes of a dentist whom they trust and whose judgement they respect.

The significance of dental plaque [1,6,11] as the precursor of periodontal disease and its role in progression of such condition has been well documented. Dental plaque is described as an invisible, continously forming sticky film which is composed of bacteria in an adhesive organic matrix, which forms on tooth surfaces and restorations exposed to the oral cavity. Initially, the exposed surfaces are quickly covered by a thin, bacteria free film know as pellicle. This is protein in nature and is detectable 15-13 minutes after a thorough prophylexix. Pellicle may provide a protective function against bacterial action and need not be removed by routine oral hygiene measures.[1,6.]

Plaque control is basic to the practice of dentistry, without it oral health can be neither attained nor preserved. Preventive periodonties therefore revolves to a very large degree around the education and motivation of the patient to accept and perform the oral hygiene procedures required to remove plaque on a continual, daily basis. Tooth brushing is a most important patient-administered preventive and adjunctive therapeutic procedure.[1] Most patients think that the toothbrush is only for cleansing the teeth,[6] its importance in the prevention of disease of the periodontium must be emphasised and thoroughly explained.

In motivating dental patients to change their patterns of oral hygiene, several elements are involved if the patients are to accept such changes. The changes must be seen to be logically sound. This requires an explanation of the relationship of plaque to the dental disease in that person's mouth. As dental plaque is invisible, use of disclosing solutions, a mirror and periodontal probe will enable demonstration of areas of plaque retention. Visualisation of plaque is one of the keys to patient motivation and its disclosure in situ is important in educating the patient in effective oral hygiene procedures, as well as assisting evaluation of personal progress between recall visits.[1] Demonstration of subsurface decalcification of cervical enamel covered by plaque, free, healthy gingivae and the inflammatory changes, including ulceration and pocketing, that occur when plaque remains in contact with the gingivae, will be graphic illustrations of the need for changes. When the patient has an understanding of the significance of these changes, acceptance of the need for adequate plaque removal can then occur.

The changes must be seen to be possible. The patient must be shown that he or she can perform adequate plaque removal. Actual demonstration of techniques for plaque removal in the

patient's mouth, showing it is physically possible, and the supervised development of expertise by the patient, are required for this step. Emphasis should be placed on the areas in the individual's mouth that require particular attention due to the morphology of the tissues. Whilst progress is initially rapid, the patient may take some considerable time to develop a routine of thorough plaque removal. More praise that criticism is initially helpful.

The change must be seen to be rewarding but not appearing to be of such a great nature that they are beyond the patient's capacity. For many patients, it may be advisable to hasten slowly as knowledge of new ideas does not automatically mean acceptance of them.

Persuasion may be required for the changed habit to become accepted. Some patinets may not wish to change established concepts regarding their oral care.

Should the patient exhibit a poor self image with regard to his or her teeth, then reassurance that the teeth are in fact basically sound, and are capable of serving the patient for an indefinite period, will aid acceptance of oral hygiene measures.

For persuasion, a logically sound argument is the main

element used. The reasons for the use of a certain cleaning aid, or the particular method of its use must be explained to the patient in a clear manner.

Whilst mild anxiety induces an attitude favourable to behaviour change[11] undue fear aroused is not an effective persuasive device. A defence against possible counts arguments by the patient e.g. "I have always had trouble with my teeth, they are going to have to come out, aren't they?" Can have a very powerful persuasive effect, and inoculates those who do change their habits against reverting to former practices.

Place the most important part of what you want to say at the beginning or the end, as patients forget the middle portion, most quickly. By explaining that you have and a lot other people have some of the same problems as does the patients, you identify yourself with the patient's problems, thus increasing their interest and your impact, by alleviating feelings of guilt in the patient.

Despite the low prevalence of dental caries in Western Samoa, there are signs already of rapid increase in dental

caries in children especially in town areas. Prevention is therefore important to minimize the incidence of dental caries.

Public water supplies fluoridation, the most economical mean of caries prevention must be encouraged. This issue must be brought to the notice of all health authorities and community leaders. Education on dietary measures, for caries prevention is a worthy consideration. Increase in dental caries incidence is no doubt due to increase consumption of refine carbohydrate. Parental counselling on sweet consumption by children is desirable. This approach can be associated with incidence of other health problems and high sugar consumption.

Professional application of topical fluoride, especially in school children, is another important consideration, and programmes of supervised self-administered fluoride such as brush-ins and mouthrinsing should be instituted. Tooth-brushing with fluoride toothpastes can be encouraged by advising the merchants to restrict the importation of toothpastes to fluoridated ones, (e.g. Floran, a Stanous fluoride toothpaste, and colgate fluoriguard).

Nursing, and expecting mothers must be motivated about home administration of fluoride tablets.
Primary schools distribution of fluoride tablets can be initiated.

3.2. Motivation for Attitude Changes.

It is widely accepted that a well motivated patient is a necessity if good oral health is to be maintained. Motivation in the field of oral health education is not very simple, and there is a great need for further research into factors which can motivate people to carry out and sustain practices which are conductive to good oral health and well being. Greene[11] has stated that perhaps the most important and difficult problem that remains to be solved before much progress can be made in prevention of dental diseases is how to motivate the individual to follow a prescribed effective oral health care program throughout his life.

Rosenstock[37] has suggested three principles of motivation for health behaviour.

(i). Preventive or therapeutic behaviour relative to a

given health problem in the individual is determined both by the extent to which he sees the problem as having both serious consequences and a high probability of occurrence i his case and the extent to which he believes that some course of action open to him will be effective in reducing the threat. The feeling of apathy and unconcern for dental health which seems so prevalent among the population would indicate that one of the major problems of dentistry is to convince the public of the seriousness of dental disease.

Some studies seem to indicate that many adults see artificial dentures as the final solution to their dental problems. It is therefore important to convince people that loss of teeth is not inevitable and that artificial dentures is not the final solution to their dental disease problem.

(ii). Behaviour emerges out of frequent conflict among motives and among courses of action. Where motives themselves conflict and compete for attention, those will actually be aroused which have the highest value or salience for the individual. Health matters, at least in the individual who believes himself heal-

thy, are probably not as potent as are certain other motives such as economic and social ones. Where the conflict is based on the individual's beliefs that no available course of action is believed to create equally or more serious problems of other kinds, the conflict may be resolved in a variety of maladaptive ways. It is suggested in this principle that an individual's scale of values will in part, determine his health behaviour. That is, a person will do those things first and buy those things first which to him have greatest value. In other words, if certain luxury items are higher on a person's scale of values than is dental care, dental health will suffer. The need for education in this instance is then to help bring to a higher level the appreciation for good dental health. One might also conclude from this principle that, if an individual perceives that dental treatment is associated with extreme pain, he would rather suffer the consequences of poor oral health.

(iii). Health related motives may not always give rise to health related behaviour, and conversely health related behaviour may not always be determined by healthy motives.

> This principle suggests that, for motivating good dental health behaviour, it may be effective to use such non-health related motives as appearance, social approval and better speech. It is true, no doubt that many people are concerned about their teeth more because of the cosmetic value then because of health, as such. It is conceivable, too, that a person might be so fond of corn on the cob that this could be his chief reason for maintaining good dental health.

Having perceived the importance of good dental health and having been properly motivated, the individual, we assume, would make the appropriate decision concerning his own health.

Whether or not an individual will act to preserve his health depends on his judgement of its value in contrast to other things that he wishes to do - (Young and Striffler p.298). Health motives present only a very small aspect of the vast and complex motives of man, as often as not, health motives are the weaker ones among such competing motives. Where there is a conflict of interests, for example, the person must decide that seeking dental care to preserve his teeth is more important to him than purchasing shoes for children,

buying a Television Set or spending his free time playing golf. This decision will be conditional by an assessment of the relative importance of the barriers to seeking care, such as cost fear, pas unpleasant dental experiences, or the difficulty in getting an appointment.

One of the basic requirements in motivating a patient is communication between patient and dentist. An informed patient will be motivated more easily than an uninformed patient. But before much learning can occur the patient must be somewhat motivated to learn. Therefore, motivation and learning proceed together. For either of these phenomena to occur, good communication between dentist and patient must be established.

Communication especially depends on the establishment of rapport with the patient. Rapport is an emotional state in which logical, intellectual factors play but a small role.[11] The patient may be reciting his symptoms and concerns but underneath this facade he is assessing your competence and receptiveness. Meanwhile, the dentist should be establishing that emotional bond with the patient. Rapport is distinct from transference because the latter is a unilateral action on the part of the patient and is an obvious block to rapport.

Other obtacles to the formation of rapport include the following -

(a). A patient with no motivation at all.

(b). A dentist who appears to be selling his services for personal gain alone.

(c). Judgemental attitudes regarding past performance of the patient.

(d). Using both the logical intellectual approach and the emotional approach to educate and motivate the patient.

Once you have selected which method to use, do not switch back and forth. Choice of the approach is dependent upon the knowledge of the patients values and needs.

Looking at attitudes which are commonly prevalent within Western Samoa the same principles as stated for motivation are widely applicable. Education of the public to value their oral health is very important if the public are to take actions conducive to good oral health. Stress the important of oral diseases and undesirable consequences which can be prevented by multiple measures available. A carefully planned

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approach, good communication methods and reasons based on the patient or the public's needs within their system of values and beliefs is essential if desireable oral behaviour changes, are to be achieved. The new system of certainities which health education offers can be accepted with good results only when it can be intergrated with the existing values and concepts of the group concerned.

3.3. Methods and Media.

For successful oral health education, methods and media for information dissemination must be carefully selected according to the recipient groups or individuals.

Methods.

The primary distinction in method, in the field of dental health education, is between individual instruction and group instruction. In an ideal program both should exist. Individual instruction is best built around experience in healthful living - (Dunning p.341). In dentistry these opportunities come through school dental inspection, dental prophylaxis or fluoride treatments, visits to the dental

office, and individual dietary instructions. All of these fields because of the specialized knowledge involved, are best handled by professionally trained personnel, for example, the dentist or the dental hygienist.

In handling of groups, special educational esperience becomes necessary, for example dental health education in schools will be best, if carried out by school teachers themselves, rather then by dental personnel unless dental personnel has experience or special training in this field.

To improve and promote oral health education in schools, school teachers themselves must be motivated towards good oral care and prevention of oral problems. This require a basic understanding in elementary dental anatomy, the two main dental diseases (dental caries and periodontal disease) and malocclusion and how to control and prevent them. For the teachers to have such basic understandings about oral health, the introduction of the above subjects during the teachers training is essential.

Oral health education in Western Samoa compared with other subjects in schools is rated very low, this is because oral

health is not an examinable subject. Efforts should therefore be directed in creating new avenues to promote and encourage the teaching of oral health. For example, close liasion with the Education Department, readily available materials (both within the Education system and from the dental profession) necessary for oral health education in schools. Encourage the mothers participation in school oral health programmes, and oral hygiene care at home, availability of Dental personnel for consultation purposes, and dental clinic facilities for school tours.

Instructions of other special groups such as women's committee, overseas wives' association, Apex, Lions Club and other potential groups should not be overlooked. This will be best carried out by the professionally trained Dental personnel, through lectures and discussions. A valuable method when working with groups is that of 'group decisions' (Dunning p.344). Facts are appreciated less and remembered less if they are merely taken on the authority of the individual who is speaking to the group. If people can be induced to decide for themselves that a change in health habits is needed and that there are specific courses of action open to them, an important step has been achieved

towards changing existing health attitudes. This method should be borne in mind in all discussion groups and activity project work. One way of using it is to present the facts and the problem, then ask questions as to what should be done about them. Learner activity, in almost any form, is a help to the individual as well as to the group.

Media.

The term media should theoretically include all vehicles for communication, whether by example or by word. Any such list should begin with the environment, where examples of healthful living around us and the provision of good sanitary facilities influence our health habits without concious education. Next of course, would come the spoken word with all its implications both in person to person counselling and in speaking before groups. Media, however, are more usually understood to be the specific tools used for formal teaching, other than human voice. These tools are best grouped in two categories. The audiovisual aids used in teaching individuals or small groups and the mass media used in reaching the public.

Audio-Visual Aids.

In this category are usually included motion pictures, film strips, slides, models, charts, puppets and the like. In part they bring information of a specialized nature to a selected audience, without asimilation and representation on the part of the teacher. In part, as so often in motion pictures, puppet theatres, they present characters with whom the audience would like to identify themselves and show these characters applying the health habits we wish to instill. In part they bring to our aid the picture which is worth a thousand words. In part audio-visual aids involve techniques which are attractive for audience participation. Thus children can make their own posters, or even film strips, and in an attempt to teach others, teach themselves. A good illustration of this is the film call "Out of the Mouths" which is a dental health educational film made by group of primary school students.

Motion picturs and film strips are adapted to the teaching of almost any age. For elementary teaching, motion pictures are probably more valuable. Simple stories of a child's first visit to the dentist are available in many forms acted out either by children or by cartoons. For oler children and

for adults, the story of dental care, the acting out of the health habits that go to make up preventive dentistry, and the stories of community approaches to health problems such as water fluoridation all lend themselves to motion picture presentation.

In selection motion pictures for distribution to schools it is important to be very careful in accepting recommendations as to their quality, and always to preview them.

Slides are the media of choice for the teacher who has his own story to tell. Slides lend themselves to presentation of detailed fact exposition rather than narrative. The dentist, speaking to oler children or to parent-teacher groups, will do well, to build his task around a few well chosen slides or a film strip.

Posters should convey a simple message, perferably illustrated with figures which the viewer would like to identify himself. There are a number of production techniques known to the advertising man which also go into the make up of a successful poster. They include warm and attractive coloration, as well as the proper relations of space, figure and color. Posters in essence are attractive

temporary reminders rather than original informers. Posters present perhaps the best opportunity for do-it-yourself projects in the school environment. Children in the intermediate grades will most likely have the greatest interest in making posters.

Art teachers should be provided with factual dental material and should be encouraged to have children express ideas on health habits for the benefit of their contemporaries. Poster exchanges or competitions can be arranged among a group of schools.

Charts are primarily conveyors of information, more detailed than slides and designed for long term exhibit.

Initially they require teacher explanation. Charts may be used to show tooth anatomy, methods of toothbrushing, foods of various sorts arranged in categories, or, for older children and adults, the graphs and diagrams may be connected with such complex subjects as dietary control of caries, or the prevalence data on oral diseases.

Mass-Media.

The mass-media in common use today involve pamphlets, newspapers, radio and television. Each is launched widespread

to an audience which though selected to a certain extent, is unseen and must be both attracted and informed all in the same operation. Pamphlets can occasionally be used for high school children, and radio and television programmes of course reach all ages, but mass media are designed primarily to reach adults. This is in part because the techniques usually involve adult comprehension, in part also because adults are not gathered together in school systems where better techniques for education can be used. Mass media can convey simple facts fairly well but because of their impersonal nature, such media do not have much effect in changing basic attitudes and motives. They will best be used to advertise of dental health education programmes.

The quality and variety of pamphlets of dental health have both been greatly improved in recent years. Pamphlets can occasionally be distributed by mail or by placement where people who are interested are likely to congregate, such as the public health clinic, or dental waiting room. Their best use however, is in response to specific inquiry or in continued situations where the way has been paved for them, such as following a talk at a parent-teacher meeting. Pamphlets must be extremely simple and designed for wide-

spread distribution. Much more comprehensive ones which will appeal only to the careful reader should be distributed only to well educated and well motivated audiences.

3.4. Role of Dentist.

In the field of oral-health education the dentist as the head of the dental team must be well motivated towards the importance of oral health education and its implications in the prevention of dental problems. The dentist will be the ultimate authority and adviser as to the quality and type of factual material presented in the Dental health education programme. Chair-side education and promotion of good patient/dentist relationship is another important responsibility of a dentist in Oral Health Education.

Dentists in Western Samoa must be fully aware of the significance of oral health education in promoting better and desirable dental services in the future. As a consultant and professional resource person, he should be reasonably familiar with dental health education methods and definitly familiar with the authentic material available in this field. He must work both with school administrators and with school or community health councils or committes (for example Women's

health communities in villages) to organise an educational programme which will reach all age groups.

He must educate and persuade the health authorities about such preventive measures which can be applied with minimal man power and finance involved in its daily maintenance, yet produce great beneficial effects, for example, fluoridation of public water supplies.

He must encourage and support the utilization of auxiliaries in this field. He should work closely with district medical officers and other health personnel and community opinion leaders to secure most efficient use of such school and community opportunities for oral health education as occur throughout the year.

The dentist will seldom find himself in a direct teaching relation with groups of children, but if he should study the vocabulary of the age group he is addressing and check his techniques against some guide for speakers. The dentist, unless he has taken educational training and has teaching experience, will do best to remain in the role of consultant, or perhaps, on occasion, lecturer before groups with whom he is familiar, such as Parent-teacher associations - (Dunning p.354). Young and Striffler (p.313) quote that, "Health professionals should be cautious in answering requestes to participate directly in classroom instructions.

Teachers possess skills as unique to their profession as are the skills of the dentist, and they ordinarily are far better equipped to instruct than are dentists and dental hygienists".

The dentists however must not overlook the fact that there are occasions when he is needed to directly participate in classroom instructions. These situations would include:-

(a). When the class has been working on a project on dental health.

(b). When the students have questions which the teacher cannot answer.

(c). When the teacher feels that they would benefit from having a guest expert come into the classroom.

In such situations, the teacher and the dentists should closely work together in planning the session. There is much that dentists can do in working with faculties of various schools. They can help prepare educational materials and serve as resource people to the teachers, providing them with information or guiding them to suitable teaching materials. They also can review the content of dental health education textbooks for accuracy and for appropriateness to the local situation. In cooperation with the teach-

ers, they can offer to make their dental clinics available for field trips by a class of children or by a committee of the class who then in turn will report to the class on the experience.

Chair-side oral health education of patients is as important as schools and community-wide educational programmes. This must also be given full attention and must not be ignored. The dentist attitudes to dental treatment and time he should spend in communicating with patients, in the clinic or surgery is an important consideration. Dentists must establish a good relationship with patients in order to promote better communication and successful chair-side oral health education.

Role of Dental Auxiliaries.

The proper utilization of dental auxiliaries in the field of oral health education is very important. Dentists are often expensive to train, so their time must be carefully allocated to the type of work where he is mostly suited. This is especially so in developing countries like Western Samoa where the dentist man power is low. Dental auxiliaries, therefore are very useful in carrying out

simple oral health educational procedures.

There are about fifteen dental chair-side assistants all locally trained. One school dental nurse (Graduated from Penang) and two dental technicians. Some locally trained assistants are already in the expanded-duty auxiliary type category; their duties include, scaling and polishing, and sterilization of instruments, with very little or no activity at all in dental health education. Some of these auxiliaries with further training can be utilized in oral health educational programmes. They can be used in primary schools in actual educational activities to an extent to be determined by the degree of training and of their acceptance by the local teaching fraternity.
They can also be well used as resource personnel and even as coodinators of school dental health programmes. School dental nurses for this matter can be used as consultants on professional matters in the absence of a dentist and may be very valuable on school health councils.

During prophylaxis or topical fluoride therapy or when taking part in dental inspection of school children, dental auxiliaries will have opportunities for individual dental health teaching. She can have brief discussions on problems

of oral hygiene and dental care such as toothbrushing demonstration and home care advice.

Role of Other Health Personnel.

The role of other health personnel in oral health education must be considered and be utilized fully. Dental health has a low priority in the total health field in Western Samoa, therefore efforts must be placed to link oral health educational programmes with other health matters. This is where other health personnel will be most useful especially the doctors and nurses.

The doctor is usually a prominent, influencial person in community decision making in health issues. He must be well motivated about the importance of the educational approach and the role it plays in prevention of oral diseases and promotion of good oral health.

District nurses are usually in touch constantly with women's committees, (especially nursing and pre-natal mothers) and primary school children. District nurses are already being utilized in the field of oral health education in Samoa, especially in schools and rural villages. This trend in only

developing and needs further improvement.

All other health personnel should be educated to accept and promote oral health education within all levels of the community they are constantly in touch with.

SUMMARY

1. Oral health education is necessary if any wide-spread improvement in oral health is to be achieved. It can both be applied on the individual and community wide basis.

2. Effective oral health education results in adoption of desired dental behaviours. Therefore careful planning to include factor which motivate people towards good oral behaviours is important. The contribution of social scientists is becoming evident to be of great help although further research is needed in the application of such findings. The adaptation and application of psycho-social and cultural factors conducive to effective oral health education need further research and studies.

3. The real impetus to enliven and add meaning to oral health education must come from a concerned dental profession. The literature of today suggest unfortunately that a preventive orientation is limited in its dimensions or may not yet exist among many dent-

tists.

4. Western Samoa with minimal occurence of dental diseases must definitly utilize the educational approach if the prevalence of dental diseases is to be kept at its lowest level.
Oral health educational approach must be carefully planned and consider local traditions and culture, peoples existing knowledges and attitudes, their beliefs, the extent of learning experiences of people to enable them to understand or to desire the benefits which arise from new and modified dental health behaviour. The accessibility of dental services and of advice in which individuals have confidence and the economic feasibility of putting into practice the dental health measures advocated.

5. Dental care happens not to be a very pressing problem to many people. We must therefore find ways of relating dental health needs to other more fundamental primary needs, such as the desire to look beautiful, and for approval or social acceptance.

6. Group to be reached must be considered in order of priority. Primary school children is a top priority. Expectant and nursing mothers, and the rest of the adult population must also be educated, with special attention to the role of parents in influencing their children to develop desirable dental health behaviours.

7. Individual patient education must not be overlooked.

8. Good communication promotes better education, therefore methods of information disemination must be carefully selected. Active participation by patient, and involvement of recipients in educational projects is highly desirable for successful learning.

9. Close liasion with educational authorities, community leaders and other professionals is necessary.

10. Periodontal disease is the major problem in the country, therefore concepts and aims of oral health education must include prevention of periodontal diseases.

11. Fluoridation the most effective and economical mean

of preventive dental caries can only be implemented if the appropriate authorities are motivated.

12. Team work must be set up and there must also be a good division of individual assignments. The dentist the head of the team must decide and carefully utilize the dental auxiliaries and other health personnel especially doctors and district nurses and professional people.

13. Periodic evaluation to determine progress is desirable in any educational programme.

14. Since education and services go hand in hand, dental health education programmes should assist, where necessary in obtaining additional services and in proving the quality of existing services.

CONCLUSION

Although more research and studies are needed to determine factors in motivating people in oral health education, the available knowledge must be fully utilized in all aspects of prevention.

Western Samoa must use the educational approach fully to prevent and minimize the incidence of dental diseases. Oral health education can be utilized to promote better usage of existing dental services, and create additional services required according to the needs of the community. Oral health education must both be based on the community wide and individual patient education.

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