Imparting Health Education to the Selected Slum Dwellers

By

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Introduction

INTRODUCTION

"Life is noblest gift of God and
health is its greatest asset".

- Avvaiyar

Great philosophers have stressed that health is the greatest of all possessions, a priceless treasure but a treasure that is rarely appreciated until it is lost. Health is one of the fundamental requirements of man, and the foundation for the physical, emotional, mental, social and economic development of the nation. Health is a precious asset for everyone of us and everyone of us like to enjoy the satisfaction (Sidhu, 1983).

Nath (1988) opines that health is neither a commodity to be purchased nor a service to be given; "it is a process of knowing, living, participating and being", says the country's National Health Policy. One of the most crucial problems facing the nation today is the burgeoning population which has been growing at an alarming rate. Census of 1981 counted India's population as 685 million, which is double than that of 1947 figures. On 1st March 1987, it was estimated as 776 million and was found to be increased by about 13 million every year (Mehta, 1988).

Health and Education are the two acknowledged factors

influencing "Human Resource Development". Health assumes a more important role, vis-a-vis other determinants of Human Resource Development, because it comes first in the developmental process and therefore performance in other dimensions is importantly influenced by achievement in health (Singh et al, 1987).

Health education is the most powerful weapon to combat misbelievesin our country. People need be provided scientific knowledge to motivate them to adopt new practice in respect of healthful living including good nutrition, prevention of communicable diseases, immunization and care of pregnant women and the new borns(Reddy, 1987).

Health education is a process which effects changes in the health practices of people and in the knowledge and attitudes related to such changes. It is any combination of learning experience designed to facilitate voluntary adoption of behaviour conducive to health. Behaviour profoundly influences our health and behavioural change, therefore makes a lot of differences in achieving optimum health (Kumeresan, 1987). National Conference on Preventive Medicine in U.S.A. (1987) defines health education as a process that informs, motivates and helps people to adopt and maintain healthy practices and lifestyles, advocates environmental changes as needed to facilitate

this goal and conducts professional training and research to the same end.

John and Dales (1981) said that the Central Council of health stresses the importance of health education as preventing and curing of available sickness stimulating people to fully utilize the medical and public health facilites, helping them to change their unhealthy attitude and practices and enabling the people to achieve health by their own action and effort.

Sanjivi and Rao (1988), viewed that health education encompasses all the matters the citizen should know in order to maintain his own and his neighbour's health. Education is essentially a process that enables people to find out their health needs and match them with suitable behaviour. Health education should aim at the attainment of positive health through all the five levels of promotions, viz. health promotion, specific protection, early diagnosis and prompt treatment, disability limitation and rehabilitation. It is required for all ages, both sexes, all classes of people (literate or illiterate, rich or poor) and it is a continuous process.

One of the primary requirements for a healthy society is a clean and sanitary environment. Due to increase in population and lack of planning in our house building programmes in the past, there has been haphazard growth of villages and towns

without proper sanitation. Environmental sanitation is assuming greater importance in our country (Barlardword, 1980).

A slum is a residential area in which poorest people live in the worst housing with the least of public services as piped water, sewers and paved streets. Sociologically, a slum may be an area of heterogeneous social types, where all sorts of poor people live mixed together. Such a slum is more likely to be found near the centre of the city (Ishwaran and Anderson, 1965).

Slums may be characterized as areas of substandard housing conditions within a city. The slum is a complex product of many factors, as is true of many other social phenomena. But poverty is the foremost cause. The situation of slums deteriorates with increasing urbanization (Bergel, 1970).

Health depends upon the health conciousness of the people, economic conditions, availability of health services and way of living. If people do not make use of available health services, they have to face the problems of diseases, resulting to higher morbidity and mortality rates (Arasu, 1988). A United Nations Expert Committee listed twelve factors which would need to be improved if levels of living were to be raised. They are: heaalth including demographic conditions, food and nutrition, education including literacy and skills, conditions of work,

employment situations, aggregate consumption and savings, transportation, housing, clothing, recreation and entertainment, social security and human freedom. Conversely all these factors are involved in the striving for better health (Kumaraswami, 1988).

In 1977, the Annual World Health Assembly resolved that the main social target of the attainment by all citizens of the world, a level of health that will permit them to lead a socially and economically productive life - a goal that is termed as 'Health for All' by the year 2000 A.D. Health for All is meant as every individual should have access to primary health care system, with the objective of continuously improving the state of health of the total population (Nakarjuna, 1989).

India is a democratic country and the majority of our people live in rural areas. In these areas there is less number of house with proper ventilation. There is water stagnation in streets and the surroundings of the houses which results in flies and mosquitoes to breed and which transmit many communicable diseases like cholera, malaria, filaria etc. Literacy rate is also low in these areas. Hence to break these barriers and to bring a rapid change in the knowledge, attitude and behaviour of the people to adopt healthful habits, health education activity needs to be intensified extensively on a warfooting in the rural and slum areas in particular and in urban areas in general. There are only 14 years of time to achieve the goal of Health for All by 2000 A.D.(Reddy, 1986).

Hence, as a stepstone towards achieving the overall goal of "Health for All by 2000 A.D." the investigator planned to conduct health education programme in a selected slum, namely Kannappanagar in Coimbatore District. The following objectives were laid down:

1. Studying the profile of the selected slum
2. Identifying the health needs of the community
3. Planning programmes for health education
4. Implementing and monitoring the action plan
5. Evaluating the acquisition of knowledge, attitude and practices on health, nutrition and environmental sanitation

and 6. Arranging for effective follow-up programmes.

LIMITATIONS OF THE STUDY:

The study is confined to limited activities due to the following reasons:-

1. The area selected, Kannappanagar, was an unapproved layout of the Corporation and hence facilities desired to be put in, could not be provided - viz., common drainage facility, medical centre, platform for public water taps etc.
2. The study included only 100 homemakers as samples since, others were employed as coolies and left home early and returned late in the evening.
3. Only a beginning has been made to improve the health status of the community and hence effective follow-up programmes would pave way to reach the goal.

Review of Literature

II. REVIEW OF LITERATURE

The literature pertaining to this study is reviewed under the following headings:

A. Status of Health in India

B. Health Programmes in India

C. Health Education as an instrument of achieving Health for All by 2000 A.D.

and D. Research Inputs in the field of Health

A. Status of Health in India:

Status of health in India is discussed under the following headings:

1. Health standards
2. Infant mortality
3. Nutritional status
4. Environmental sanitation

and 5. Population status

1. Health standards:

Health standars in India today are indeed low by all criteria. The crude death rate in India, has been 13 per thousand per year while the same has been 6 for Japan and below 10 for all other countries. Infant mortality rate has been 93/1000 births per year while the infant mortality rates have been 9 for Canada, 7 for Japan and 8 for Switzerland. The comparative data for 'Life Expectancy at Birth' are also no less

discouraging for India. It would be too much to believe that India is going to achieve the target of health for all by 2000 A.D. We can hope that we would be putting more and be more determined effort (Sharma, 1986).

Table I gives the Expectation of life in India from 1901 to 1981.

TABLE I

EXPECTATION OF LIFE AT BIRTH AND CRUDE DEATH RATE IN INDIA 1901-1981

Period	Expectation of life at birth	Crude Death rate
1901-1911	22.9	42.6
1911-1921	20.1	47.2
1921-1931	26.8	36.3
1931-1941	31.8	31.2
1941-1951	32.1	27.4
1951-1961	41.3	22.8
1961-1971	45.6	19.0
1971-1981	54.1 /male 54.7 /female	12.5

Source: Year Book 1985-86, Family Welfare Programmes in India, Department of Family Welfare.

It can deduced that there has been a steady increase in the life expectation. While till 1901-1971 the expectation of life was equal for both sex but after 1971 to 1981 there was

a fractional variation between the two sex. Even the crude death declined gradually over these decades.

2. **Infant mortality:**

The overall Infant mortality rate (IMR) for the country declined from about 160 in 1945 to 146 in 1960 and to 120 in 1981. Child death rate (one to four years) declined from 26 in 1961 to 17 in 1981. But this reduction is not significant when compared to other developing countries (Gopalan, 1987).

Table II elicits, income, death rate and infant mortality rate for a period of 9 years.

TABLE II

INCOME, DEATH RATE AND INFANT MORTALITY RATE 1975-84

Year	Percapita income in Rs.(at 1970-71 prices)	Estimated death rate	Estimated infant mortality rate/ 1000 live births
1975	661.1	15.9	140
1976	649.5	14.7	129
1977	694.7	14.2	130
1978	717.0	14.2	127
1979	664.7	12.8	120
1980	699.5	12.6	114
1981	719.5	12.5	110
1982	721.0	11.9	105
1983	761.0	11.9	105
1984	771.5	12.5	104

Source: Living Standard and Health, Journal of Family Welfare.

Infant mortality rate decreased gradually from one hundred and forty for 1975 to hundred and four in 1984. Per capita income of the country also showed increase over the period.

3. **Nutritional status:**

Malnutrition is the major health problem of our country and it is acute and widespread. In India every year 1.5 million children and 1 lakh pregnant women die due to it. It is estimated that infants, children and mothers numbering about 100 million suffer from non-fatal degrees of malnutrition. Between 2-5 years, our infants and children are estimated to be suffering from severe Protein Calorie Malnutrition(PCM). Almost 15 per cent of children who were ~~are~~ admitted to any hospital showed frank nutritional deficiencies and about 90 per cent preschool children suffer from growth retardation. In rural communities 85 per cent families lost at least one child and 50 per cent lost 3 or more children, most of them due to entirely preventable diseases (Alexander, 1985).

According to Pandit Jawaharlal Nehru, the pursuit of health or the raising of health standards of the nation did not mean merely the curing of disease but much more than that - the prevention of it... while hospitals, dispensaries etc. were necessary. Nehru felt, what counted most, was the public health approach as well as health education (Kashyap, 1988).

4. **Environmental sanitation:**

Environmental sanitation has a direct bearing on health status of the people in the rural areas. In the absence of drainage system, the rural people are affected more. Diseases like diarrhoea, dysentry, typhoid and cholera which are so prevalent in rural areas can be reduced considerably if the environmental sanitation is improved. Despite the governmental efforts to improve the living conditions of the rural people the situation does not seem to have changed to the desired optimum level. This can only be achieved if people themselves get interested and take a lead in improving their own lot (Mishra, 1976 and Mair, 1980).

5. **Population status:**

Srivastava (1986) mentions that only 0.5 per cent of rural population has some sanitary facility for disposal of human excreta and 52 crores of them defecate in the open fields. To quote Mr. Brayne, "cattledung, human excreta and village sweepings are provided by providence to give you bumper crops, you burn the first and use second and third to poison the air and water and ruin the health, sight and physique of yourselves and your children".

The bulk of rural children in India are deprived of the basic necessity. There is no denying that institutional facilities are inadequate in villages but the major constraint in the utilisation of the available facilities seems due to people's ignorance, negligence towards the principles of health,

which contribute to the present poor state of health of our children are, under nutrition resulting from inadequate diets, and infection arising from poor sanitary environment (Mandal, 1981).

United Nations (1971) defines slum as a building or group of buildings conditioned by the absence of facilities or amenities. These conditions or any one of them, endanger the health, safety or morals of its inhabitants or the community.

Slums ordinarily are those areas of the city that are characterized by blight and obsolete housing and occupied by a poverty - stricken population. While slums are primarily located in transitional areas near the city, there are pockets of them located elsewhere in the metropoliton complex, such as in older suburban areas; and an occasional 'rural-fringe' slum is known to exist (Buller, 1976).

Anderson (1970) enumerates ten characteristics of the slum by its appearance, economic status, overloading, population, health and sanitation, morals, way of life, social isolation, mobility and slum permanency.

Table III and IV depict the population status and health status in India. Birth rate, death rate, infant mortality rate are given in Table III while the disease incidence are given in Table IV.

TABLE III

POPULATION STATUS IN INDIA

Factors		India
Birth rate	1981	36.6
	1983	33.6
Death rate	1981	16.1
	1983	11.9
Infant Mortality Rate	Rural	119.0
	Urban	62.0
	Total	110.0
Sex-Ratio	(1981)	934
Meanage at marriage female	(1981)	18.32
Married female in 15-19 years percentage of this age group	(1981)	43.47
Female life Expectancy	(1980-81)	52.4
Percentage of couples protected by all methods of Family Planning	(1984)	29.2
Percentage of children (First Dose) receiving		22.5
Immunization services (Booster Dose) of BCG	(1981)	3.8
Percentage of population covered by safe H_2O water	(1981)	41.3
morbidity Malnutrition (Percentage of population)	Rural	56.39
	Urban	71.01

TABLE IV

HEALTH STATUS IN INDIA

Health Indicator	Fact	Source
Blindness	Annual incidence 30,000 children	UNICEF, 1984 p. 52
Goitre	Thyroid hormonal deficiency in 4 per cent new-borns in endemic area	UNICEF, 1984 p. 55
Tuberculosis	Annual incidence: 10 million Annual deaths: 5,00,000	p. 36
Tetanus	Death in first months due to neonatal about 230-280 thousand	p.36
Measles	Annual Death of 2,00,000 children due to measles related complication	p.36
Poliomyelitis	Annual incidence 2,00,000 children Annual deaths 2,000	p.37
Diarrhoea	Annual incidence - 50 per cent 2,500 die per day	p. 37

Source: Social Change, March, 1988, pp. 4 and 5.

It is clear that death rate is comparatively less than birth and even the mortality rates have reduced which indicates there has been quite an improvement in the population status of the country with regard to indicators of health.

B. Health Programme in India:

Health programmes in India are discussed under the following headings:

1. National Malaria Eradication Programme
2. Diarrhoeal Disease Control Programme
3. National Filaria Control Programme
4. National Tuberculosis Control Programme
5. National Leprosy Control Programme
6. STD Control Programme
7. National Programme for Prevention of Visual Impairment and Control of Blindness
8. National Goitre Control Programme
9. Universal Immunization Programme
10. National Family Planning Programme
11. National Rural Water Supply and Sanitation Programme
12. Minimum Needs Programme
13. Maternal and Child Health Care
14. School Health Programme
15. National AIDS Control Programme
16. National mental Health Programme
17. Guinea Worm Eradication Programme and
18. National Policies for Health, Nutrition and Population

It is a government's duty to define and pursue the goals of health policy. The government defines the objectives of health policy and allocates resources applying five year plans that are revised annually. The general lines of health policy are laid down and decisions concerning investment and increases in personal are incorporated. In accordance with national plans provision for health care has risen to 64 per cent by the municipalities.. The infant mortality rate is among the lowest in Finland when compared to the rest of the world (Sailas, 1988).

Since India became free, several measures have been undertaken by the national government to improve the health of the people. Prominent among these measures are the National Health Programmes, which have been launched by the Central Government for the eradication of communicable diseases, improvement of environmental sanitation, nutrition, control of population and rural health. There is unlimited scope for health education in India. The official agencies cannot cope with the problem unless it is supplemented by voluntary effort on the part of the people (Park and Park, 1986).

1. **National Malaria Eradication Programme**

There has been gradual downward trend in malaria. As against 647 million cases in 1976, there were 1.79 million cases in 1986 showing reduction of 72.3 per cent over a period

of 10 years. The Kala-azar Unit of National Malaria Eradication programme is monitoring the Kala-azar situation in India and gave the report as in Table V.

TABLE V

SITUATION OF KALA AZAR IN INDIA

Year	Cases	Deaths
1985	17,277	44
1986	17,801	72
1987	11,891	35(upto 6th Nov.)

From the above column it is clear that there is a substantial reduction in Kala Azar incidence (Srivastava, 1987).

2. **National Diarrhoel Disease Conrol Programme**

Diarrhoeal Disease Control Programme was launched in the year 1981 with objective of reducing morbidity and mortality and to achieve health for all by 2000 A.D. This programme was formerly known as the Cholera Control Programme which included the components of Oral Rehydration Theraphy:

a. Production and distribution of ORS packets

b. Training of medical and para-medical health personnel as well as education of mothers and other members of the community

c. Operational-health services research for identification of suitable strategy implementation(Mehta, 1986)

Merson (1986) and Rao (1987), stated that between 1982 and 1985, the number of countries with national diarrhoeal diseases control (CDD) programmes doubled and more than 95 per cent of the developing world's population now lives in countries that have such programmes. Access to ORS (Oral Rehydration Salt) increased from 6 per cent to 33 per cent by 1984, and in a few countries diarrhoea mortality has already been reduced by 40-50 per cent by widespread implementation of ORT.

3. **National Filaria Control Programme**

For the control of filariasis, the National Filaria Control Programme was launched in 1955. Activities under the programme at present are confined only to antilarval operations in urban areas where 189 filaria control units provide protection to 3.8 crore persons (India, 1987). In 1980, 171 filaria control units, 83 filaria clinics operating in the endemic area, 12 head quarter units and three Regional Filaria Training and Research Centres are functioning at the state level (Issar, 1980).

4. **National Tuberculosis Control Programme**

With the inclusion of T.B. Programme in 20 Point Programme, the essential activities under the programme have

been considerably expanded. About 10.81 lakh new T.B. cases were detected during 1982-83 and about 14.39 lakh during 1986-87 have been detected. There is significant improvement in case detection and sputum examination (Srivastava, 1987). Under this programme District Tuberculosis Centres are provided by the Health Ministry with modern x-ray equipment, mini x-ray films and anti T.B. drugs.

5. **National Leprosy Control Programme**

The National Leprosy Control Programme was initiated in 1945-55. The family welfare council noted with satisfaction the drastic reduction in the prevalence rate of leprosy in the district which have completed the intensive phase of multi-drug therapy (MDT) (Mehta, 1988).

About 4 million leprosy cases are estimated to be present in India (Figure 1), 1/5th of whom are infectious, 20 per cent of the cases in the country are among children while another 15-20 per cent have deformities of the 412 districts, in1976, the prevalance rate exceeds 10 per cent per 1000 population, while in 125 district it ranges between 5 and 9.9 per cent. About 430 million population lives in these 20 per cent endemic districts (Srivastava, 1987). Free treatment is available in Government, Municipal Dispensaries and hospitals as well as in voluntary organisations all over the country (Dongre, 1986).

REGISTERED NUMBER OF LEPROSY CASES IN THE WORLD

Registered leprosy cases, 1985

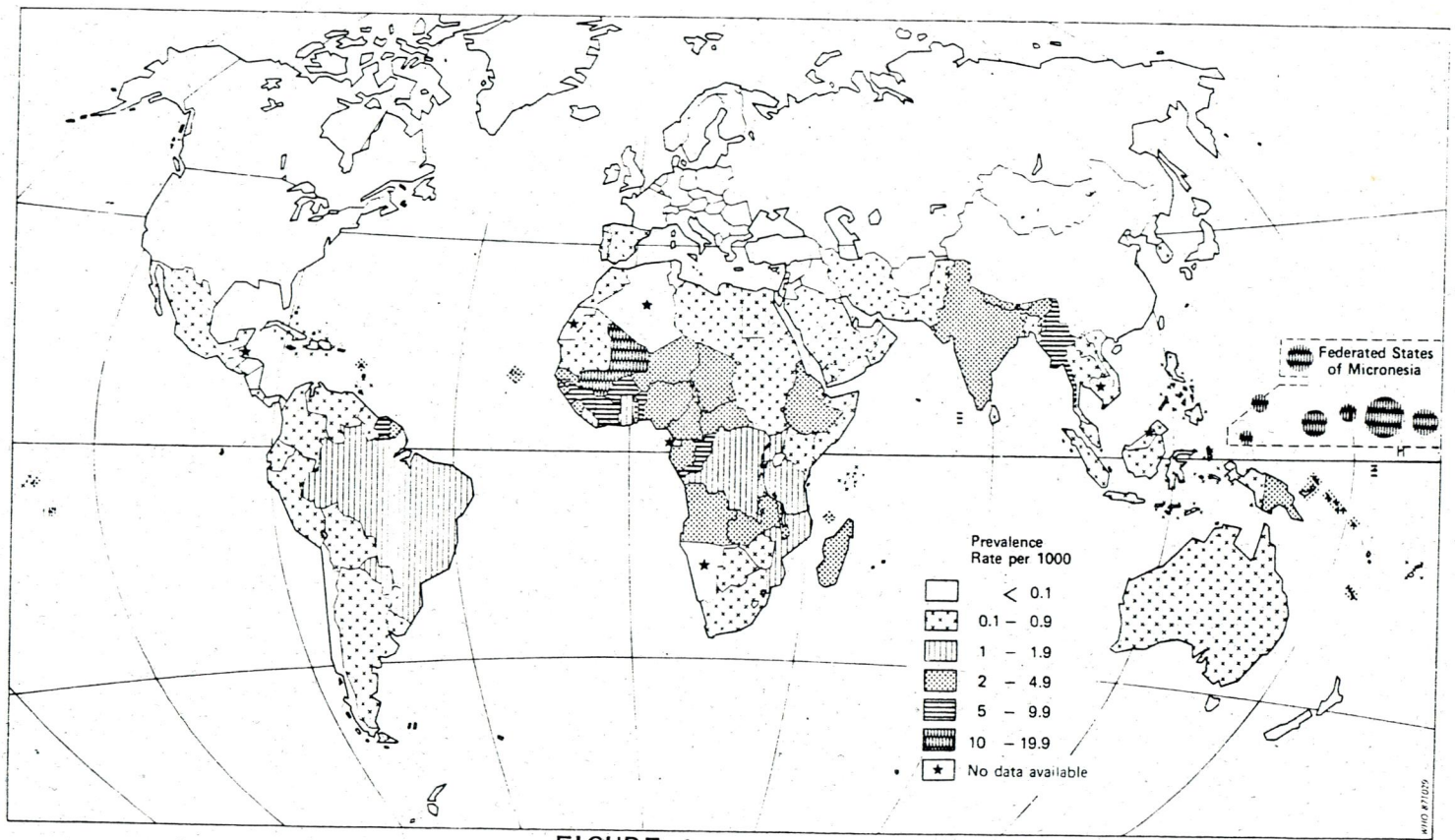


FIGURE 1

6. Sexually Transmitted Disease Control Programme

Rapid and far reaching strides have been made in the diagnosis and treatment of sexually transmitted diseases. But, their control appears still a long way off. STDs can be controlled with modern public health techniques. In 1986, there were 12,75,822 sexually transmitted disease cases reported (Bhargava, 1988). The major five STD cases reported is presented in Table VI.

TABLE VI

MAJOR STD CASES REPORTED

Year	Total number of Major 5 STD cases reported				
	Syphilis	Gonorrhoea	Chanchoid	LGU*	GI*
1981	76,099	30,111	74,016	7,959	2,869
1982	1,18,726	49,366	45,819	26,620	8,054
1983	1,24,980	29,581	42,367	1,267	9,710
1984	97,738	43,390	50,170	3,283	13,295
1985	1,02,060	62,954	87,053	8,504	13,548

* LGU - Lymphogranuloma
GI - Granuloma Inguinale

The Seventh Five Year Plan functions with 100 per cent central assistance with an outlay of Rs. 100 lakhs. The major components of STD programme of the Government of India

are teaching-cum-training, research, community education and epidemiology (Bhasin, 1987). One out of every 20 people suffer from Sexually Transmitted Disease (STD) in our country resulting in a wide scale morbidity and mortality (Bansal et al., 1988).

7. National Programme for Prevention of Visual Impairment and Control of Blindness

The survey undertaken by Indian Council of Medical Research in 1971-73 revealed that India has about 9 million blind and another 45 million suffer from visual impairment. The Government of India launched a massive programme for the prevention of blindness in November, 1976. The main aim is to reduce the blindness in the country from 1.4 per cent to 0.3 per cent by the year 2000 A.D. Children between 1-5 years are being given a oral dose of 20,000 µg of vitamin A once in 6 months (Srivastava, 1988).

Sample survey of population has indicated that 55 per cent of the nine million blind in the country are due to cataract. During the year 1986-87 the programme covered 1,76,84,000 children (NIPCCD, 1987).

Table VII shows the performance of cataract operation over a period of seven years.

TABLE VII

PERFORMANCE OF CATARACT OPERATION

Year	Target	Performance (lakhs)	Achievement (percentage)
1982-83	13.36	9.04	68
1983-84	12.58	10.69	85
1984-85	12.78	11.34	89
1985-86	13.84	12.18	88
1986-87	13.83	11.71	85
1987-88	12.24	2.11	(Upto Sept. 1987 provisional)

It is evident from the above table that, there has been flucuation both in case of performance and achievement over the period in case of cataract operation.

8. **National Goitre Control Programme**

The programme was launched by the Government of India during the end of Second Five Year Plan, with three main objectives namely:

i) To supply iodized salt in place of common salt

ii) To identify the goitre endemic areas

and iii) To assess the impact of goitre control measures over a period of time.

Table VIII gives the production of Iodized salt upto 1990.

TABLE VIII

LEVELS OF IODIZED SALT PRODUCTION

Year	Production of iodized salt in lakh(MT)
1986-87	7.53
1987-88	16.00
1988-89	22.00
1989-90	30.00

A constant increase in production of the salt seems to prove quite useful in achieving the objectives partially.

The UNICEF has donated 14 iodization plants. The ban on the sale of common salt is a pre-requisite to the supply of iodized salt in any goitre affected area.

9. **Universal Immunization Programme**

Chakravarty and Sharma (1980) pointed out the objectives of universal immunization programme as, to cover 85 per cent of eligible infants against six preventable diseases and to cover 100 per cent pregnant women by 1990. The programme was further strengthened by setting up of Immunization Mission in 1986, which had specific programme for vaccination for specified disease and indigenous production of vaccines as well as their preservaton equipment.

National Health Policy accords high priority to Mother and Child Health Programme and it aims at bringing down the Infant Mortality Rate below 60 per thousand live births by 2000 A.D. from the current level of 97 (India, 1985).

The immunization coverage given to the children are three doses of oral polio vaccine and three doses of DPT vaccine. About 50 per cent of children under two years and 50 per cent of children under one year in urban areas and 30 per cent in rural areas were the beneficiaries for the coverage (John, 1986).

Table IX gives the yearwise proposed number of beneficiaries.

TABLE IX

YEARWISE PROPOSED NUMBER OF BENEFICIARIES IMMUNIZATION

(1980-85 to 1989-90)

Beneficiaries	Vaccine		1985-86	1986-87	1987-88	1988-89	1989-90
Pregnant Women	TT	Percentage	12.9	15.2	18.6	21.9	23.9
		Number	(50)	(60)	(65)	(75)	(85)
Infants	DPT	Percentage	14.0	15.3	19.9	17.7	18.3
		Number	(60)	(67)	(75)	(80)	(85)
	BCG	Percentage	14.0	15.3	16.9	17.0	18.3
		Number	(60)	(67)	(75)	(80)	(85)
	Measles	Percentage	2.3	5.7	10.0	14.2	18.3
		Number	(10)	(25)	(45)	(65)	(85)

A constant increase in the number of beneficiaries over a period of five years makes the prospects better for achieving the target of health for all by 2000 A.D. though not fully but partially atleast.

The MCH programme is a vital element in bringing about the desired results under the family planning. The required data base including registration of eligible couples, births and deaths, antinatal cases, maternal and infant mortality should be built up under Universal Immunization Programme. The country should become self-reliant in terms of equipment under the cold chain of vaccine (Mehta, 1988).

10. National Family Planning Programme

The National Family Planning Programme was launched a modest scale in 1953. Rural Family Planning Centres were established at PHC and family planning sub-centre for every 10,000 population. The general goal of the family planning programe in India is to reduce the current birth rate of 34 per 1,000 population to 30 per 1000 by 1982-93 (Shatruga, 1984, India, 1985 and Park and Park, 1986).

11. National Rural Water Supply and Sanitation Programme (RWSP)

It was initiated in 1954 with the objective of prodiving safe water supply and adequate drainage arrangement for the entire rural and urban population of the country. The health benefits derived from the provision of safe drinking water are nullified accompanied by sanitary measures. India is committed to the goal of the International Drinking Water Supply Sanitation Decade 1981-90 that is to provide safe drinking water and adequate sanitation for all by 1990 (Sinha, 1983).

12. Minimum Needs Programme

Experience has shown that the benefits of a higher GNP do not necessarily percolate to the weakest sections of the community. Therefore the state has a duty to provide for the basic needs of life to every citizen. In this context, the Minimum Needs Programme was introduced in the first year of Fifth Five Year Plan. The basic needs of the people identified for this programme are elementary education, adult education, rural health, nutrition, rural water supply, rural roads, rural electrification, rural housing and environmental improvement of urban slums. In the field of rural health and nutrition, the emphasis is given in an increased way (Park and Park, 1986).

In the field of nutrition, the revised norms are midday meals for one fourth of children in the age group of 6-11 years, supplementary feeding programme for under-nourished children in the age group of 0-6 years (Mehta, 1988).

13. Maternal and Child Health Care

The MCH programme is a vital element in bringing about the desired result under the family planning (Mehta, 1988). Maternal and Child Health Care comprises antinatal, natal and postnatal care, infant care, care of the preschool children and school health besides the family welfare. Mothers are given tetanus toxoid immunization. Mothers and children are given prophylaxis treatment against nutritional anaemia. Vitamin A

solution is given to children to prevent night blindness (Visalakshi, 1980). The programme viogorously expanded both in rural and urban areas by setting up primary health centres and subcentres. There has been significant improvement in the performance under the programmme (Sidhu, 1983 and Mehta, 1988).

14. School Health Programme

School health programme of the PHC is concerned with child's growth and development of physical, emotional, intellectual and social. A complete health examination must be carried out to every child at the time of admission and reported after five years and before leaving the school (Philip, 1980; Abubeckar, 1983 and Mehta, 1988).

15. National AIDS Control Programme

This programme was initiated in 1981. As on January 1988, as many as 73,747 cases of AIDS have been reported to WHO, by January 31st as many as 79,279 high risk persons were reported (Mehta, 1988).

Table X give the State-wise break up of cases:

TABLE X

STATEWISE BREAK UP AIDS CASES

Delhi	11,497
Maharashtra	12,962
Pondicherry	2,509
Tamil Nadu	27,593
West Bengal	2,405
Other States	22,763

Indiscriminate sex or sexual aberration is one of the most important modes of transmission of human immunodeficiency or the transmission of the human virus called the AIDS virus (Nath, 1988). In 1988, 37 surveillance centres and four referral centres are functioning in our country. For the year 1987-88, a sum of Rs. 50 lakhs has been given for AIDS control work (Srivastava, 1988).

16. **National Mental Health Programme**

During the Seventh Five Year Plan period, Government of India initiated the programme on Mental health. A sum of Rs. 100 crore for implementation of the programme was allocated by the Planning Commission (Srivastava, 1988).

17. **Guinea-worm Eradication programme**

Guinea-worm eradication programme was initiated in 1983-84 as a centrally-sponsored scheme with 50 per cent central

assistance during the Sixth Five Year Plan(Government of India, 1985). Following activities are being taken up under this programme:

a) active case search twice a year by visiting every village in the endemic district.

b) Chemical treatment of unsafe water source periodically before and during peak transmission season by using temephos granules so as to give a concentration of 1 milligram per litre (1 ppm).

c) personal prophylaxis e.g. boiling drinking water

d) health education of the community

e) provision of safe water supplies

f) management of cases by occlusive bandaging of ulcers (Park and Park, 1986).

18. **National Policies for Health,Nutrition and population**

The National Health Policy, approved by Parliament in 1983, has set the long term demographic goal of achieving a Net Reproduction Rate (NRR) of one by the year 2000. The population policy was enunciated in April 1976. It called for an increase in the legal minimum age at marriage from 15 to 18 for females, and from 18 to 21 for males. The government is still in the process of evolving a more detailed and comprehensive National Population Policy (Government of India, 1984).

The policy guidelines for Health care for women has been accepted as an important intervention for women's development since the first Five Year Plan, in addition to the provision of health-care for general population it included (i) expansion of physical infrastructure for health (ii) initiating the family planning programme (iii) communicable disease control and (iv) establishing facilities for training to female health personnel (Government of India, 1988).

C. Health Education as an Instrument for Achieving Health for All by 2000 A.D.:

Health education as an instrument for achieving the goal of health for all by 2000 A.D. is discussed under the following headings:

1. Health for All by 2000 A.D. - concept
2. Role of health education
3. Aims of health education
4. Levels in the practice of health education

and

5. Use of audio visual aids in giving health education.

1. Health for all by 2000 A.D. - Concept

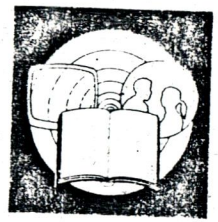
Health for all is a means that ensures health is to be brought within the reach of everyone in a given country. And by "health" is meant a personal state of well being, not just the availability of health services - a state of health that

enables a person to lead a socially and economic productive life. "Health for all" implies the removal of the obstacles to health - that is to say, the elimination of malnutrition, ignorance, contaminated drinking water and unhygienic housing - quite as much as it does the solution of medical problems such as lack of doctors, hospital beds, drugs and medicines(Mehler, 1981).

The concepts and principles of HFA elaborated at Alma Ata in 1978 provided the world with ethical precepts, political imperatives and technical directions that have, become critical guidelines for the health and community world wide (Figure 2)(Viedma, 1988 and Bregout, 1988). Rao (1987) viewed that health for all must become a movement. Our ultimate aim must be to start a nation-wide debate on our health systems and create adequate consciousness among people about their health needs. He added that a major focus was to transform family welfare programme into a genuine people's movement by restructuring organizational and operational aspects of the programme. The appropriate motivation of people was a crucial factor here. He expressed the hope that a close linkage between health and family welfare and other related sectors would be established, both at the national and grassroots level.

The process of persuading people to accept measures which will improve their health and to reject those which will have an adverse effect is called health education. The science of health education itself must be concerned with change in the behaviour and attitudes of people(Larg and Horrison, 1985).

"HEALTH FOR ALL" - AREAS OF WORK

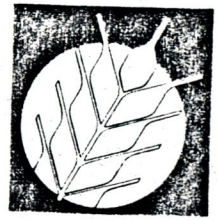


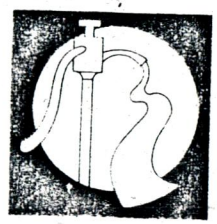
EDUCATION

Literate and informed mothers are better mothers. The same is true for fathers

FOOD AND NUTRITION

The family's food should be adequate, affordable and balanced in nutrients



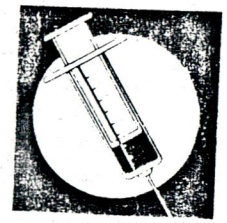


WATER SANITATION

A safe water supply and clean disposal of wastes are vital

MATERNAL AND CHILD CARE

Healthy mothers are more likely to have healthy children

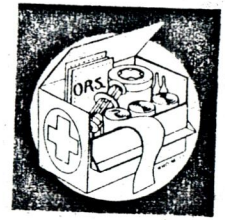


IMMUNIZATION

Many of the diseases that kill children by the millions are preventable

ENDEMIC DISEASES

Killer diseases like malaria and schistosomiasis can be prevented



ILLNESS AND INJURY

Treating common ailments and injuries – all part of primary health care

ESSENTIAL DRUGS

The most-needed drugs should be available and affordable by all

FIGURE - 2

2. Role of health education

The World Health Assembly considering the report of the Alma Ata conference on primary health care has reaffirmed that the main social target of government and of WHO in the devleoping decades should be attainment by the citizens of the world health level that will permit them to lead a socially and economically productive life by year 2000 A.D. (Christian, 1988).

It is appropriate to consider that unmet health needs of the society as a challenge for medical education. For, nothing can be accomplished if we do not incorporate health education in the undergraduate medical curriculum and give it a place of prime importance (Walt, 1985).

3. Aims of health education

Berthet (1984) pointed out the five aims of the International Union for Health Education as: To

1. asset the role of health education in the economic and social development of human communities and to keep its theoretical basis upto date.
2. promote international exchanges among those responsible for health aspects of economic and social development through the organization of conferences, seminars and working parties.

3. contribute to the growth of knowledge of education and the promotion, protection and restoration of health.

4. ensure the international dissemination of publications and research relating to health education and

5. develop working relations with international institutions, government and non-government.

WHO (1979) exhorts three main objectives of health education as informing people, motivating people and guiding into action.

4. Levels in the practice of health education

a) Individual and Family Health Education: This can be given by personal interviews. The biggest advantage of this teaching is that we can discuss, argue and persuade the individual to change his behaviour.

b) Group Health Education: This is given through lectures, group discussion, panel discussion, symposium, workshop, institute, role playing, demonstrations, programmed instruction and simulation exercise.

c) Education of the General Public: These are mainly done by employing mass media like Television, radios, press, films, health magazines, posters and exhibitions (Park and Park, 1986).

Health Education is an essential element in the control and prevention of diarrhoeal disease. It must be directed to the whole population in order to raise standards of hygiene and to obtain community participation, but the most important target groups are mothers and other family members who take care of children, top decision makers who fix priorities in allocating resources, school teachers and health workers (WHO and UNICEF, 1979).

5. **Use of audio-visual aids in giving health education**

Health education in the present context amounts to throwing the idea to the public through the media of T.V., radio, film shows, exhibitions, wall posters, cinema, slides and by publishing do's and dono'sthrough newspapers. The study revealed that the health educators must first learn culturally regulated behaviour of the community, their beliefs and traditional approach to the health problems. It concluded with the fact, face-to-face education was much superior to television and media appeals (Kalra and Nrasimha,1988).

Zielinskin (1986), in his study found that in countries with very large populations, many languages and many subcultures exist and reading skills were often limited. Hence health publication for the grass roots in these countries must therefore be simple and adequate.

D. Research Inputs in the Field of Health:

Research studied related to health are discussed under the following headings:

1. Fundamental studies
2. Applied studies

and 3. Evaluatory studies.

1. Fundamental studies

A field study carried out by WHO and UNICEF (1979) in Aukure, Turkey, on Oral Rehydration Therapy (ORT) revealed it to be an acceptabe and effective method in the management of and moderate degrees of dehydration in children suffering from diarrhoea. In addition the children given ORT gained comparitively more weight than those treated by conventional methods.

A study on "status of women and population growth" conducted by Singh (1981) analysed the relationship between status of women and their crude birth rate and infant mortality rate. They assumed that, the status of women was an independent variable and fertility dependent variable of infant mortality.

A study by Mandal (1981) conducted in Bihar slums with 100 households revealed that all the villagers were so accustomed to unhealthy surrounding and were hardly aware of

usefulness of keeping their villages clean. Because of the unhygienic condition of the water, the children were affected by common fever, which was followed by pneumonia (21 per cent), typhoid (13 per cent), cold and cough (12 per cent) and diarrhoeal disease (23 per cent).

Srinivasan (1984), in his study found that the common ailments among the slum dwellers were gastro intestinal disorders (19 per cent) fever (17 per cent) typhoid (15.5 per cent) and tuberculosis (9 per cent) while coughs, jaundice, measles and small pox each accounted for 4.5 per cent. For this he suggested a development of large scale out reach programme which needs to cover only 4,700,000 of population who live in slums and pavements, which might include one full time auxillary nurse, mid wife and five part time health guides for 5,000 population. Their duties would be immunization, anti-natal care, detection of diseases, health education and so forth. Roughly 1,000 such units would be required in order to cover the wide slum population.

Singh et al (1987) in their survey conducted in two rural blocks in Ranchi district had found that 2/3rd of the tribal children under five suffered from malnutrition, the prevelance being more in girls (48 per cent) than in boys (42 per cent).

Singh (1987) studied the infant mortality rate in Uttar Pradesh (U.P.) revealed that infant mortality was high in U.P. because majority of the deliveries were assisted by family members, neighbours and untrained midwives. Ignorance, poverty, poor environmental sanitation, too strenuous work schedule during pregnancy, short birth intervals, lack of medical care malnutrition were responsible for the high rate of infant mortality in Uttar Pradesh.

Malison et al (1987) in their study estimated the utilization of health services in Mbale district in uganda, with 75 households. The result showed high rate of mortality and low levels of utilization of primary health care serrvices, despite easy access to the health facilities. The basic PHC services like immunization and treatment of diarrhoea were also poorly utilized.

Singh et al (1987) took up a study on the "myth of the healthy tribals" of Ranchi district and found that out of 40 samples taken only 58 per cent had monthly income of Rs. 200 and another 31 per cent between Rs. 201 and 400, were unhealthy (28 per cent families reported illness). Only 2/3rd of the children were immunized and 44 per cent were severely malnutrition and 2/3rd of them did not take bath daily.

Singh et al (1987) conducted a study on Health Modernity Education Project (HMEP) with a sample consisting of 99 cases with 498 males and 493 females from Kauke and Namkum blocks of Ranchi district. The sample stratification had been on sex (Males/females) and four age categories that was 15-24, 25-34, 35-44 and 45+ years, 81 per cent of the tribals were illiterates and female out number by 95 per cent. The income for 58 per cent were nil or just Rs. 200/- month.

Walker et al (1987) in their study on 'Mental Deaths in Jamaica, revealed that almost two thirds were attributable to pre-ecalampsia, ecalmpsia, haemorrhage, ruptured actopic pregnancy, or sepsis. Avoidable factors that might have increased the probability of death were identified and recommendation aimed at reducing maternal mortality were presented.

Verma et al (1988) in their study on 'A profile of terminal methods of Family Planning' in rural community attempted to study the acceptar of terminal method of family limitation among rural population of district. Battinda, Punjab, over a period of 2 years between 1975-76 and 1985-86. The number of acceptors increased threefold; but their profile showed the development of unfavourable trends. Considering the present size of the country's population and its high growth potential, a plea was made for propagating one-child families.

2. Applied studies

Rana (1986), in a small field survey on the impact of Comic book on School Children. He took the areas in and around two towns in Madhya Pradesh, India. The survey covered 197 boys and 132 girls mostly aged 8 to 12, with a few 15 years. Of the children surveyed, 78 went to schools, classified as rural, 109 to semi-urban schools and 142 to urban. And the result was evaluated, based on a series of 24 questions posed verbally, recorded that although comic books were available in local bookshops, only 31 per cent of the children read any; of which 95 per cent were urban school children and only 15 per cent rural and semi urban combined.

A study on 'Family Planning and Child Care in rural tribals of Chitanapur' was conducted by Singh et al. (1987). On a Sample of 498 males and 493 females in two tribal rural blocks of Ranchi District. Data on information, with regard to attitudes and behaviour in relation to family planning, child care and breast feeding were collected through personal interviews. The data revealed that there was wide spread ignorance and misconception about these issues. As a remedial measure health population education, using audio-visual aid has been suggested.

Mehta (1988), foound the infant mortality rate per thousand live births on all India basis which reached a high level of 140 in 1975, had come down to 97 per 1000 live birth.

Rao (1988), in his study found in India about 400 million people lived in areas where leprosy was endemic and were therefore exposed to the risk of infection. Prevalence rates of at least 10 per 1000 occurred in 76 districts while in 125 districts the rate is 5-9 per 1000. The estimated case amounted to 3,950,000 lakhs of which 20 per cent were multi bacillary patients and that of affected children was about 15 per cent. Multidrug therapy was the sheet anchor of the eradication programme. Table XI gives the district covered by multidrug therapy;

TABLE XI

PREVALENCE RATES BEFORE AND AFTER COMPLETION OF INTENSIVE PHASE OF MULTIDRUG THERAPY

District	Prevalence rate per 1000	
	Before intensive phase	After completion of intensive phase
Wardha	9.8	1.9
Srikakulam	16.2	3.5
Ganjam	13.1	2.8
Vizianagaram	13.1	4.4
Purulia	3.8	8.4

It is clear from the Table XI that there had been a good effect of multidrug therapy in reducing the rate of leprosy in four out of five districts taken up for the study. Only in Purulia the prevalence rate was higher than the initial phase.

A study was conducted by Singh et al. (1988) taking 40 cases for a control group of 40 cases each for two experimental groups, without discussion and the other with discussion on cleanliness education material (CEM). Both sexes were selected equally of 4 age groups 15-24; 25-34; 35-44 and 45-54. Both the control and experimental groups were similar in age, sex, ethnics, place of residence and level of literacy. The result deducted proved that CEM were understood well by 60 per cent for without and 73 per cent for with discussion groups.

Saroj (1988), conducted a study by developing a series of 27 colour slide transparencies depicting various real-life situations of people living in slums of Bombay. Each slide showed one to six practices; some healthy and some unhealthy. The slides were exhibited to two group of 20 and 30 women from the slums. And the team which scored the maximum were declared as winner. And the finding was that the question and answer method was more satisfying to the educator since it improved communication as well as audience participation.

Joseph et al. (1988) made a study on the causes of unsatisfactory progress in immunization in an area of Tamil Nadu. The area for the study was divided into four sectors vis. the community health workers, auxiliary nurse, midwives, community health nurses and other development staff. The findings led to the appointment of additional community health workers, improvement in their supervision, increased accessibility to health services as a result of increase in the number of peripheral clinics and organizing a temporary clinics and the concentration of effort on underprivileged groups.

3. **Evaluatory studies**

Wong (1984) conducted an immunization camp in Dewas District having a population of 8·00 000 lakhs approximately by initiating a series of camps in all the six administrative blocks. The following were some of the lessons learned by the Dewas:

1. It was possible to implement an effective immunization programme provided there is good people's participation and adequate publicity and orientation for the entire duration of the campaign.

2. A mass campaign approach was very effective in covering the backlog of unvaccinated children.

3. A fourth or 'mop-up' round should be built into the programme from the beginning, to avoid miss.

4. An adequate cold chain would facilitate in tapping local resources.

5. There must be political will and determination at the highest level.

6. As political commitment could help to achieve results, the achieved results could bring about the commitment.

A study on 'Impact of social change on health problems of tribal women' was conducted by Ramalingaswami (1986) with a sample consisting of 372 tribal women in 15 to 45 age group living in Visakapatnam District in Andhra Pradesh. However, 107 out of 372 were aware about ANM, as a trained person and preferred to have her attend on them. Likewise almost everyone was aware of the malaria workers and associated with fever tablets and blood smear. Only 29 per cent of the women could mention the important symptoms of T.B and leprosy and were aware of the possibilities of treatment. Family Planning Programme reached the women. Among them 50 per cent were aware about agricultural programme and the schemes for weaker sections.

Bijlani (1988) conducted a project on improving slums in Hyderabad. He dealt not only with the physical infrastructure but also the socio-economic need; health, nutrition, pre-school education and training programmes. Special studies were undertaken to evaluate these programmes. Future emphasis had been laid so that the poorest were not left out.

A study on "Evaluation of immunisation Coverage" was conducted by District Health Department in Coimbatore District during (1988) Rural population of 21,47,907 were taken for the survey and 30 villages were selected by cluster sampling method and a total number of 210 children were selected. Among them 27 children were fully immunized, 162 were partially immunized and 21 of them were not at all immunized. The percentage of fully immunized children lowered mainly because of low coverage of BCG and measles vaccine.

Carr (1988) in his findings, revealed that over a period of more than 10 years a Health Education Programme for mothers and pregnant women had been developed in many villages of the West Bork. A determined effort had been made to use local resources. The study began for 44 village teachers from the north and middle districts and increased to 129 villages by the next year. The evaluation showed that the health education programme had a favourable impact on certain attitudes and aspects of behaviour of mothers and that there was trend towards better health. In fact mortality rate reduced in these villages.

A study by Mahopatra et al (1988) was conducted on medical officer in charge of primary Health Centres in rural Districts of Andhra Pradesh, India. The study revealed significant deficiencies in their knowledge and performance. A total of 114 officers from 80 PHC in Andhra Pradesh

participated in the study and scores were given based on the response to various questions on nutrition, particularly of PHC responsibilities of different workers. The result of the study showed only 11 per cent of the respondents obtained satisfactory scores.

Experimental Procedure

III. EXPERIMENTAL PROCEDURE

The experimental procedure pertaining to the study on **"Imparting Health Education to the Slum Dwellers"** is discussed under the following headings:

A. Selection of the Area

B. Selection of the Samples

C. Collection of the Data

D. Preparation of the Plan of Work

E. Implementation of the Action Plan

F. Construction and Administration of the Tools of Evaluation

and G. Analysis and Interpretation of the Data

A. Selection of the Area:

The area selected for the project was Narayanasamy Gounder Street of Kannappa Nagar, a slum of Sanganoor Division in Coimbatore Corporation. The slum was situated five kilometers away from the University. It had been one of the ten adopted slums of the University of Mass Literacy Programme (MLP), as assigned by the Collector of Coimbatore. Since adult education was being carried out continuously, it was felt that health and nutrition inputs in the same area would bring about holistic development of the slum dwellers. Hence this area was chosen (Figure 3).

B. **Selection of the Samples:**

The inhabitants of the whole slum consisting of 270 families and with a population of 3020, served as smaples to get to know the health status, infrastructural facilities available for health and extent of maintainence of environmental and personal hygiene. Of these, a homogenous group of hundred full time homemakers were drawn as samples for the action project and were exposed for imparting health and nutrition education.

C. **Collection of the Data:**

Primary and Secondary data were resorted to in collecting information about the slum as well as the samples.

Data which are not orignally collected but rather obtained from published or unpublished sources are known as secondary data (Gupta,1989). Here, the Family Planning enumeration register served the investigator as secondary data. Details with regard to the total population, male-female ratio, number of children, categorised sex-wise, number immunized, income levels of the families, literate-illiterate ratio and number sterilized, both male and female for the entire slum selected were obtained from the register.

Primary source was resorted to in collecting the background information of the samples. Chaudhari (1989) refers to a set of statements and/or questions to be answered by the

COIMBATORE DISTRICT CORPORATION MAP - AREA OF THE STUDY

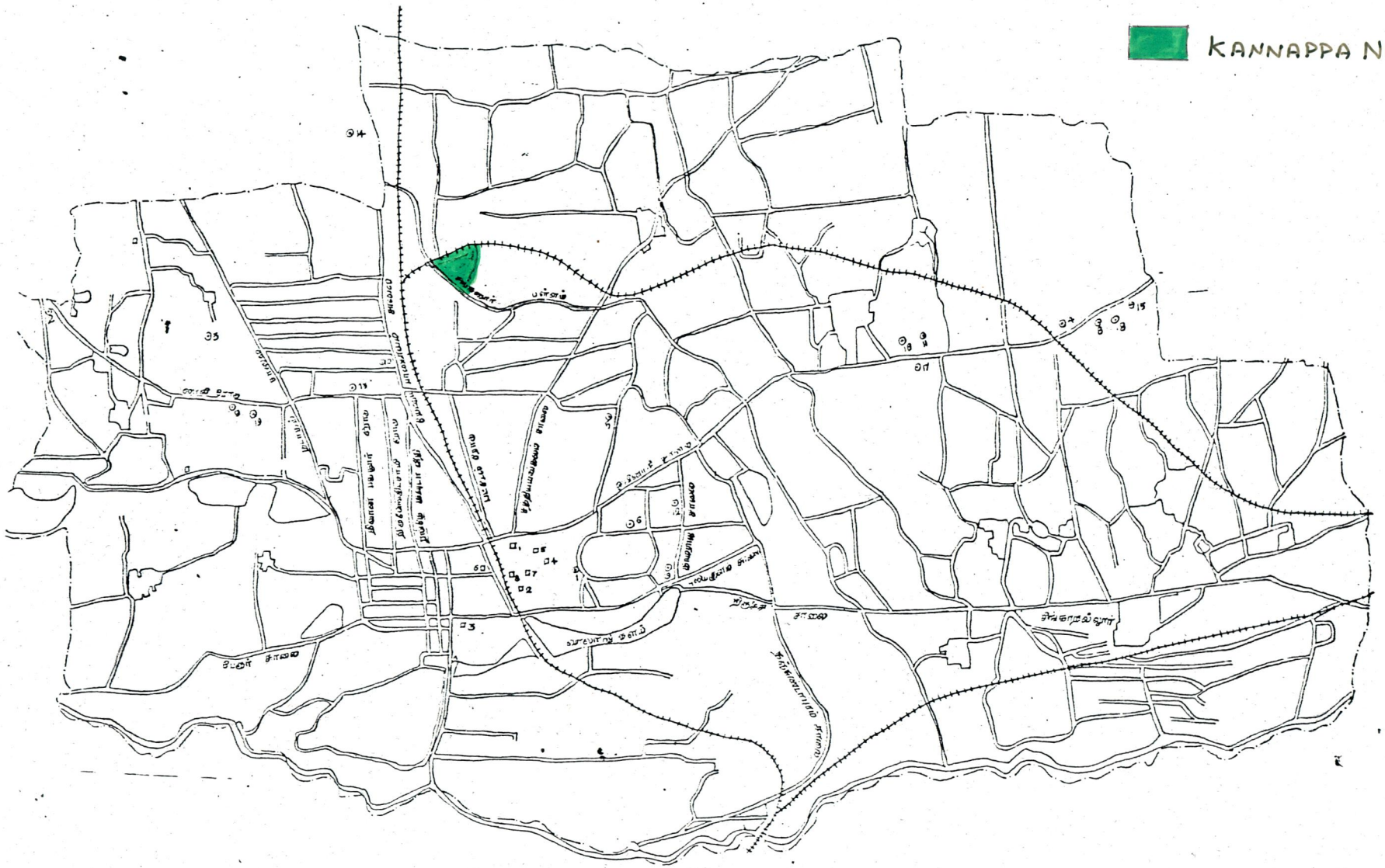


FIGURE 3

respondents in face to face contact and filled in by the interviewer, as an interview schedule, and this is a tool for collecting primary data. Hence, the background information of the selected samples were collected using an Interview Schedule (Appendix I).

Based on the data gathered the samples were exposed to a module on health and nutrition education programme for a period of six months (August 1989 to January 1990). The effect of the education was tested in terms of knowledge gained, attitudinal change and practice adopted. The scores of pretest and post test were subjected to statistical treatment to find the significance of the teaching.

D. **Preparation of the Plan of Work:**

The plan of work was prepared based on the collection of baseline information which included a course outline for a period of six months. The investigator formulated suitable guidelines on the health and nutrition concepts to be imparted to the community in addition to what they already knew. The plan of work (Table XII) included topics on importance of health hygiene, functions of foods, their nutritive value, best way of cooking vegetables and rice, immunization schedule to be followed and environmental sanitation. In addition, health and immunization camps were also included in the plan of action. To make the programme effective, a combination of audio-visual aids and lecture from experts were also incorporated in this plan.

Table XII indicates the details of the plan of action followed in imparting education on health and nutrition to a group of 100 homemakers in the selected slum.

TABLE XII

PLAN OF WORK

S.No.	Objective	Activities	Aid used	Method	Person incharge	Place	Beneficiaries	Evaluation
Unit I Health & Hygiene:								
1.	Creating rapport	Collecting general information about the slum	Interview schedule	Individual	Investigator	Individual houses	Selected sample	Response method
2.	Creating awareness on health	Informal talk with the ladies on health habits	Informal talk	Group	do	Adult Education Centre	Adult Education learners	Discussion
3.	Making the slum clean	Cleaning campaign	NIL	Mass	Sanitary Inspector and Master	Whole slum	Community	Observation
4.	Mobilizing the infrastructure	Meeting the District Health Educator	Official letter	Individual	Investigator	DHO		
5.	Making the women aware of Health and Immunization	Lecture cum Film show	NIL	Group	DHE and his team, Investigator	Private school	Women	Interview
6.	Preventing water logging in front of the house	Demonstration on soak pit	NIL	Mass	Sanitary Inspector and Master	House of a learner	Community	Observation

7.	Fixing up for immunization camp for the children	Meeting the medical officer	NIL	Individual	Investigator	Municipal Corporation		
8.	Immunizing the children and give health checkup	Immunization and Health camp	NIL	NIL	Medical Officer, Rathinapuri and Staff Nurse	Tailor shop	Community	Observation
9.	Controlling of diarrhoea at domestic level	ORT salt preparation Demonstration	Equipments for demonstration	Group	Investigator	Adult Education Centre	Women	Performance test
10.	Imparting knowledge on personal Health habits	Story telling on effect of micro organism on the child's health	Flash card	Group	Investigator	Adult Education Centre	Women	Interview Method
Unit II Nutrition:								
11.	Making the group, aware of basic 5 food groups	Putting charts and showing the items on that. Informal talk	Charts & Models	Group	Investigator	Adult Education Centre	Women and community	Discussion
12.	Methods of conserving nutrients in vegetables	Demonstration	NIL	Group	Investigator	Adult Education Centre	Women	Recall Method after a week

13.	Giving visual aid and audio measures to make nutrition education effective	Film show	NIL	Mass	Field publicity office people and investigator	Private school	Women	Aptitude scale
14.	Conserving nutrient and food while cooking Rice	Demonstration of Hay Box method of cooking	Hay box	Group	Investigator and group	Adult Education Centre	Women	Practice scale
15.	Preservation of vegetables and fruits for lean period	Pickle making and jam making	Cooking equipments	Group	Investigator	Adult Education Centre	Women	Practice scale
16.	Making the group aware of importance of teeth	Story telling	Picture	Group	Investigator	School	Children	Check list
17.	Importance of Bathing	Informal talk	Picture chart	Group	Investigator	Learner's house	Community	Attitude scale
18.	Coughing and Sneezing causes infection	Lecture	Photos	Group	Investigator	Learner's house	Community	Check list
19.	Personal hygiene is important for a sound health	Game on healthy habits	Game board and Dice	Group of 4	Investigator & group	Learner's house	Community	Score of the individual
20.	Maintaining the luster in the hair	Informal talk	NIL	Group	Investigator	School	Women & children	Observation

E. Implementation of the Action Plan:

Based on the guidelines formulated the plan of work was implemented using several audio-visual aids, visual aids and combination of methods and aids. For making the programme a successful one, help was sought from Sanitary Inspectors of Rathnapuri division. From Corporation, the health officer, Coimbatore Corporation, was requested to help us with immunization coverage for the area and this was coupled with health check up by the Medical Officer of the division. The staff nurses were quite cooperative and attended to the programme as per the schedule. District Extension Educator of District Health Office also rendered his services by delivering lecture cum film show on better family living, immunization and its importance, and on nutrition and health. Films on sanitation and prevention of communicable disease were also screened by getting the films from Field Publicity Officer. Thus, the different units in the plan of work was carried out to a satisfactory level.

F. Construction and Administration of the Tools for Evaluation:

Guruswamy and Jayaraman (1989) interpret evaluation as that which signifies one's attempt to know how far a given project has achieved its desired objectives. Hence to find the impact of the education, tools such as knowledge test, attitude scale and check list were prepared and changes affected in these areas on the target grouups were consolidated and the results

of the evaluation were studied. The tools are given in Appendix II.

Table XIII gives the details of tools adopted by the investigator and the units covered in these tools.

TABLE XIII

DISTRIBUTION OF TOOLS OF EVALUATION

S.No.	Units	Number of Questions		
		Knowledge test	Attitude scale	Check list
1.	Health and hygiene	8	4	7
2.	Methods of cooking	-	1	1
3.	Components of nutritious diet	1	2	4
4.	Food and their functions	4	2	3
5.	Immunization	2	1	-
	Total	**15**	**10**	**15**

Each of the item carried one mark and the scores of the pretest and post test were subjected to statistical analysis.

G. Analysis and Interpretation of the Data:

The data obtained were analysed in terms of qualitative and quantitative achievments and presented in Chapter IV.

Results and Discussion

IV. RESULTS AND DISCUSSION

The results of the study on "**Imparting Health Education to the Slum Dwellers**" are discussed under the following headings:

A. Socio-economic profile of the slum and of the samples selected for the study.

B. Impact of health and nutrition education on the community and the samples selected.

and C. Factors influencing the health and nutritional knowledge, practices and attitude of the selected samples.

A. Socio-economic Profile of the Slum and the Samples Selected for the Study:

Socio-economic profile of the slum and the samples are disucssed under the following headings:

1. Demographic details
2. Family pattern
3. Educational status
4. Occupational status
5. Economic status

and 6. Marital status

1. Demographic details

Table XIV gives the details of the demographic profile of the slum and the samples selected.

TABLE XIV

DEMOGRAPHIC DETAILS OF THE SLUM AND OF THE NATION

S.No.	Details	Slum		Nation	
		Number	Percentage	Number (in lakhs)	Percentage
1.	Number of male population	1473	49	3439	52
2.	Number of female population	1547	51	3214	48
3.	Total population	3020	..	6653	..
4.	Male-Female Ratio	1.9:2.0	..	2:1.9	..

It was quite interesting to note that the population of the slum when compared with the national demographic level was fractional. The ratio of male vs female of the slum was also contrasting when compared with National average. The male population of the country is higher when compared with the female while it is just the opposite with regard to the slum.

2. Family pattern

Ninety per cent of the families in the slum were nuclear type while only 10 per cent were adopting joint family system. The same was the case with respect to the samples selected. Majority of families had 4 members while only five per cent had more than 5 members, both in the cases of slum and samples selected.

3. Educational status

Table XV gives the educational levels of the slum population, samples selected and national average.

TABLE XV

EDUCATIONAL STATUS OF THE POPULATION

S.No.	Status	Percentage		
		Slum	Samples	National
1.	Illiterate	22	98	54
2.	Literate	78	2	36

It can be inferred that majority of the population of the slum were literates, while the 100 samples selected were in the process of becoming literates by enrolling themselves in the adult education programme. The national average is contrasting to the situation in the slum, since there are only 36 per cent literate, in the nation while there are 78 per cent in the slum.

4. Occupational status

Occupational distribution of the slum population and family heads of the selected samples is presented in Table XVI.

TABLE XVI

OCCUPATIONAL STATUS OF THE AREA

S.No.	Occupation	Slum				Samples			
		Male		Female		Male		Female	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
1.	Coolie	673	46	520	34	49	49	4	4
2.	Mill Workers and workshop	424	29	30	2	17	17	-	-
3.	Clerical	84	6	-	-	20	20	-	-
4.	Own business	147	10	-	-	11	11	-	-
5.	Non-working force	144	10	997	65	3	3	96	96
	Total	**1473**	**100**	**1547**	**100**	**100**	**100**	**100**	**100**

Majority of the male population were working as coolies and mill workers and only 35 per cent of women were gainfully employed, out of which only 2 per cent were employed in workshop, the rest as coolies. Care was taken to enroll full time homemakers as samples and hence only 4 per cent among them were employed as coolies due to economic stress. But when the occupational pattern of the heads of family of the samples were analysed it was found that majority were coolies and 20 per cent of them were in clerical and only three per cent were falling in the non-working force of the population which had been the reason for the wives becoming full time homemakers to take care of the families.

5. **Income range**

Table XVII gives the income range of the families.

TABLE XVII

DISTRIBUTION OF INCOME LEVELS OF THE FAMILIES

S.No.	Level	Sample		Slum		National	
		Number	Percentage	Number	Percentage	Number (in lakhs	Percentage
1.	Above poverty line	44	44	1476	49	2462	48
2.	Below poverty line	66	66	1444	51	4191	52

In all the three levels, that is, samples. slum's and National, the number below poverty line was more than the level above. According to Planning Commission, Government of India (1987), Rs. 4,800 per annum is the income below poverty line. Based on this it was found that 66 per cent of the samples were having income below Rs. 4,800 per annum (Figure 4)

6. **Marital status**

Ninety five per cent of the population in the slum were married and eighty per cent of the samples selected were also married, while two per cent were either divorced or widowed and only three per cent of the population of girls and boys of marriageable age remained single. Of the 95 per cent of the married couples in the slum, 78 per cent were eligible for undergoing family planning measures.

B. Impact of Health and Nutrition Education on the Community and the Samples:

A homogenous group of 100 samples was exposed to health and nutrition education in areas viz - importance of health and hygiene, better methods of cooking, components of nutritious diet functions of food and necessity for immunization. Impact of health and nutrition education is discussed under the following headings:

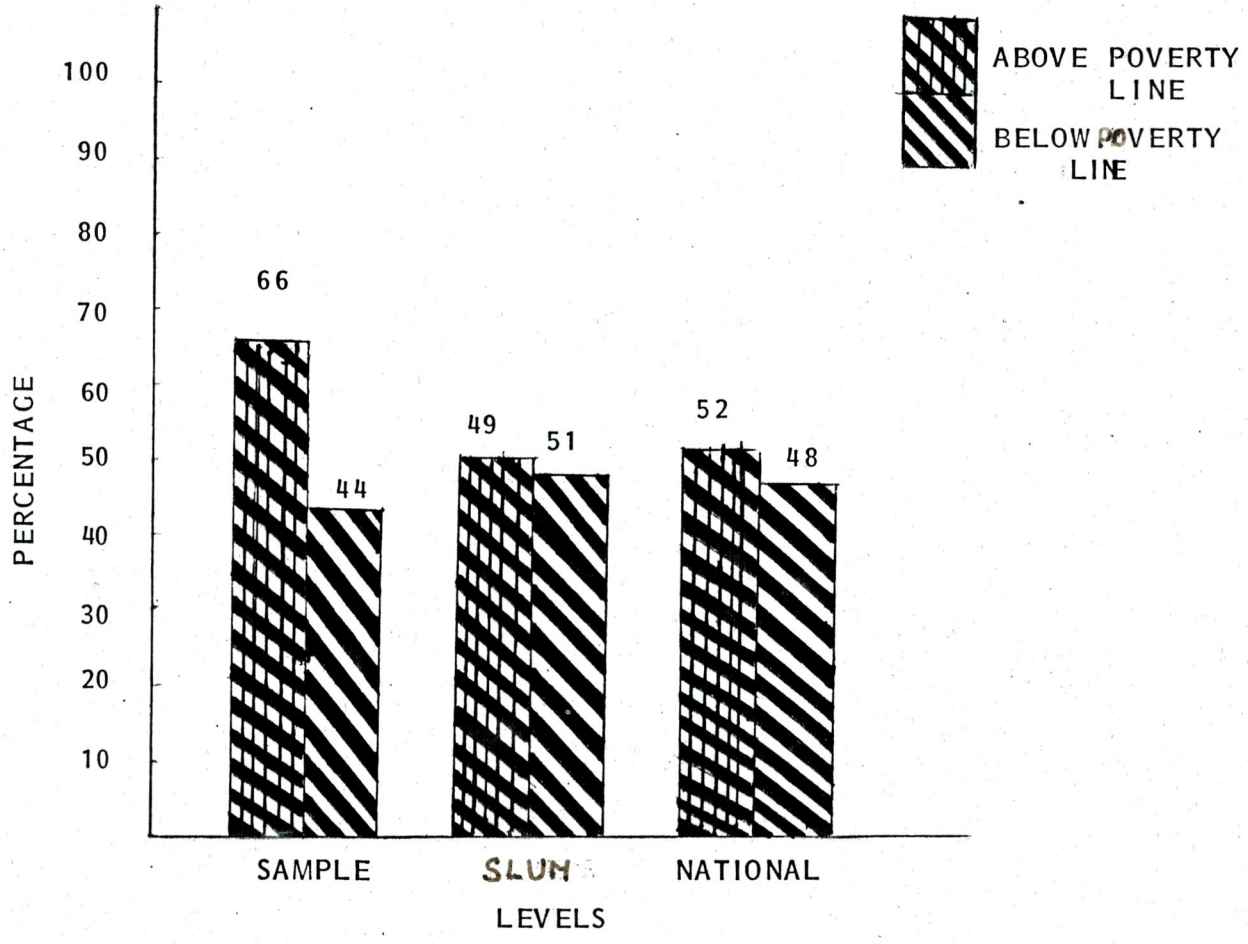


Figure 4

INCOME DISTRIBUTION

1. Improved immunization status in the community.
2. Effect of participation of the samples in cleaning campaign
3. Participation of the samples in media exposure.

and 4. Changes in the practices of the samples

1. Improved immunization status in the community

The total number of child population of the slum was estimated to be 1032; of this 52 per cent constituted the male population and the rest were females. This was in contrast with the adult population i.e. the male dominated the scene.

Table XVIII give the immunization status of the entire population before and after the camp.

TABLE XVIII

IMMUNIZATION STATUS OF CHILDREN BEFORE AND AFTER HEALTH CAMP

S.No.	Name of the vaccine	Age (in months)									
		3-9		9-18		18-24		24 and above		Total	
		Before	After	Before	After	Before	After	Before	After	Before	After
1.	I dose	3	27	8	13	4	5	5	5	20	50
	DPT/Polio II dose	-	-	12	58	4	24	6	4	22	86
	III dose	-	-	-	-	7	9	6	12	13	21
2.	BCG	4	48	12	14	3	4	1	4	20	70
3.	Polio-Booster	-	-	-	-	-	-	22	42	22	42
4.	Measles	18	62	14	46	2	24	1	9	35	141
5.	Tetanus Toxoid	21	52	28	49	35	18	6*	89*	90	211
6.	DT	-	-	-	-	-	-	97	296	97	296
	Total	**46**	**189**	**74**	**180**	**55**	**84**	**144**	**461**	**319**	**911**

*Tetanus Toxoid - Numbers Include Pregnant Women also

The conduct of the camp enabled the families to get their children immunized. The change in the immunization status could be clearly seen from the table. The worst suffered age group was children of 3-9 months, as many were not immunized even with the basic vaccine, like DPT and Polio. The number not immunized against the bivalent vaccine of DT was found to be the highest and they benefitted considerably after the camp. The camp had brought about a remarkable change amongst all age groups(Plate Ia,b).

2. **Effect of participation of the samples in cleaning campaign**

As against occasional cleaning of the garbage from the streets, the investigator conducted a camp and constant follow-up was made to clear the garbage fortnightly.

Table XIX gives the future expectations of the samples with regard to environmental cleanliness (Plate Ic,d).

Extent Of Participation In The Camp.

a. Immunization

b. Health.

c. Cleaning.

d. Disinfectation.

Plate - 1.

TABLE XIX

EXPECTATIONS OF THE SAMPLES TOWARDS ENVIRONMENTAL HYGIENE

S.No.	Particulars	Duration of Activity (N=100)			
		Daily	Fort-nightly	Monthly	Occa-sionally
1.	Cleaning road and clearing garbage	75	22	8	5
2.	Spraying insecticides	20	48	24	8
3.	Visit by Health worker	13	79	7	1
4.	Immunization camp	..	22	71	7
5.	Filmshow on health programme	4	69	25	2

Majority of the population desired daily cleaning up of streets while only 25 per cent expressed fortnightly, monthly or occasional cleaning. Hence, the investigator made arrangements with the sanitary inspector to clean the streets and clear the garbage atleast once in a fortnight. Spraying of insecticides was also made a fortnightly activity. Film shows on health, nutrition, and environmental sanitation were arranged only twice within a period of six months. Hence, efforts are to be mobilised for frequent mass media education.

3. **Participaiton of the samples to the media exposure**

Audio-viosual aids make teaching learning process an effective one. Reddy (1988) opines that audio-visual aids are used to improve teaching, that is to increase the concreteness, clarity and effectiveness of the ideas and skills being transferred(Plate 2).

Table XX gives the percentage attendance of the participants in different activities.

TABLE XX

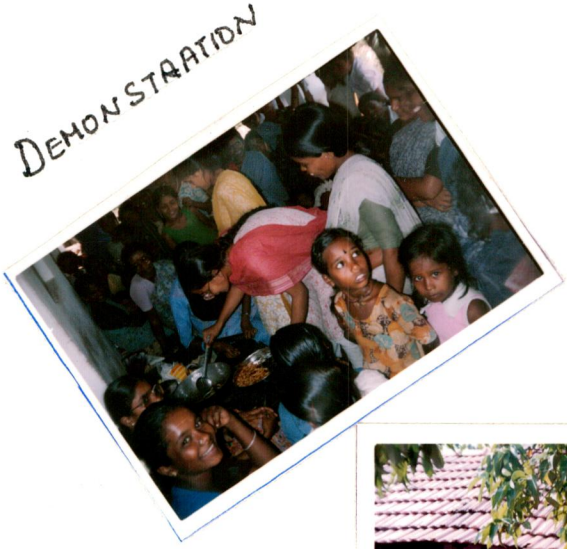
EXTENT OF PARTICIPATION OF THE SAMPLES

S.No.	Activity	Percentage of attendance (N=100)
1.	Demonstration	90
2.	Cultural programme and exhibition	85
3.	Film show	72
4.	Informal talk	30
5.	Story telling	25

There was appreciable participation in programme like demonstration (90 per cent), cultural show and exhibition (85 per cent) and film show (72 per cent). Group contacts like informal talk and story telling had limited response, indicating that only combination of methods and action oriented teaching was effective (Figure 5).

MEDIA EXPOSURE.

DEMONSTRATION



FILM SHOW

CULTURAL PROGRAMME

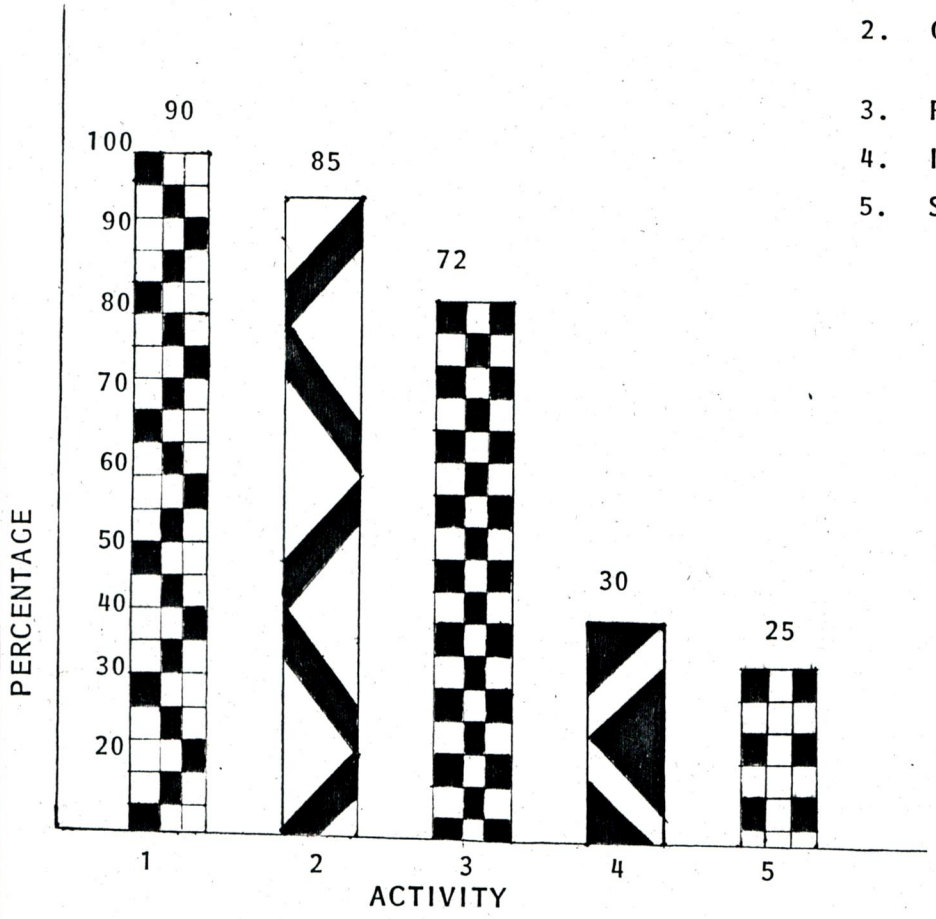
INFORMAL TALK.

STORY TELLING

PLATE - 2.

KEY:

1. Demonstration
2. Cultural Programme and Exhibition
3. Film Show
4. Informal Talk
5. Story Telling



EXTENT OF PARTICIPATION OF THE SAMPLES

Figure 5

The present study was in cohesion with Reddy's view who in 1987 opined that preaching health education without educational aids would have no impact on the individual group or community. For intensified health education and for better impact on implementation of health programmes, in rural areas and slums, filmshows and other aids were very essential to combat misbelieves and superstitions in the society.

4. Changes in the practices of the samples

The changes in the practices of the selected samples are discussed under the following heading:

a) Effect of the education programme
b) Change of scene in personal hygiene
c) Dietary practices adopted by the samples

a) Effect of education programme

Table XXI gives the changes brought forth in the practices of the samples as the result of health education programme.

TABLE XXI

EFFECT OF EDUCATIONAL PROGRAMMES ON THE COMMUNITY

S.No.	Particulars	Percentage		
		Before (N=100)	After (N=100)	Increase
1.	Disposal of waste in the dust bin	20	78	58
2.	Utilisation of public toilets	5	52	47
3.	Erection of soak pits	1	12	11
4.	Kitchen gardening	2	14	12

It is heartening to see the positive changes of health habits among the samples. Majority of the sample after conducting the cleaning camp and imparting education, disposed the garbage in the dust bins. The usage of public lavatory showed an increase by 47 per cent while soak pit and kitchen garden were adopted by less than 15 per cent of the samples (Plate 3). This was owing to lack of finance to put up pit and lack of space for maintaining kitchen gardens. However the effort taken in the direction of home food production initiated 12 per cent of the samples in taking to kitchen gardening.

b) Change of scene in personal hygiene

Table XXII gives the change of scene in personal hygiene.

Before - After Scene.

Before

After

Use Of Dustbin

Before

After.

Soak Pit.

Plate - 3.

TABLE XXII

ADOPTION OF DESIRABLE HEALTH PRACTICES

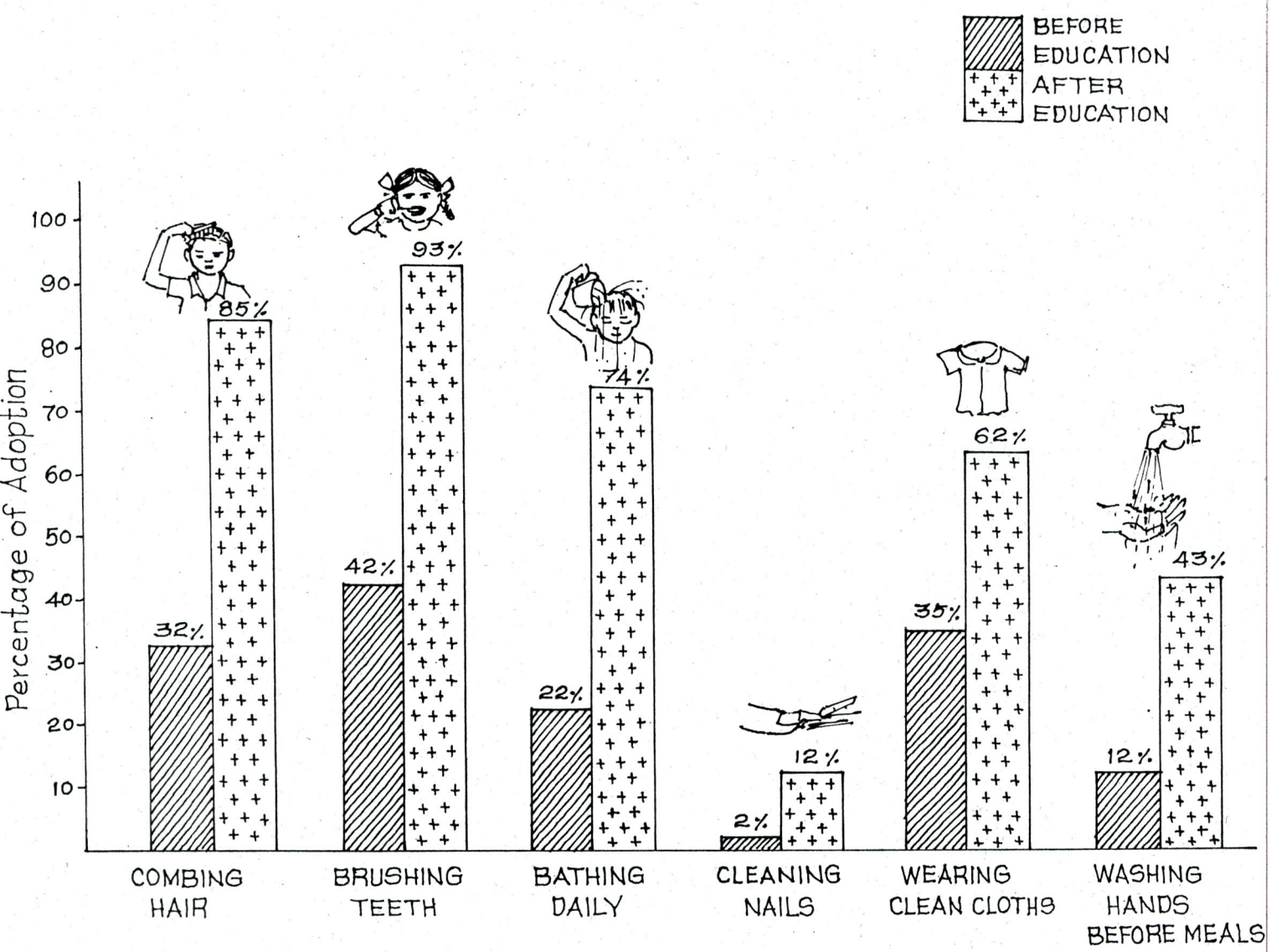
S.No.	Habit	Before (N=100)	After (N=100)	Increase in numbers
1.	Combing hair	32	85	53
2.	Brushing teeth	42	93	51
3.	Bathing daily	22	74	52
4.	Cleaning nails	2	12	10
5.	Wearing clean cloths	35	62	27
6.	Washing hands before eating	12	43	31

Initially the personal hygiene among the samples was far from satisfaction. Of the hundred samples only twenty two had their bath daily and forty two had the habit of brushing their teeth daily atleast once. The importance of personal hygiene imparted in the programme resulted in an increased percentage of people changing their habits with regard to personal hygiene. Clean clothes could be afforded only by 62 per cent of the samples even after the education due to economic stresses (Figure 6).

c) Dietary practices adopted by the selected samples:

The nutrition education imparted, has brought forth the following changes in their cooking practices.

Table XXIII gives a realistic picture of the effect of nutrition education on the samples.



ADOPTION OF DESIRABLE HEALTH HABITS

Figure. 6

TABLE XXIII

CHANGES IN PRACTICES

S.No.	Practice adopted	Percentage of adoption (N=100)		
		Before	After	Increase
1.	Absorption method of cooking rice	40	85	45
2.	Absorption method of cooking vegetables	22	78	56
3.	Cutting vegetables into big pieces and washing them before cutting	18	82	64
4.	Preparation of ORT at domestic level	2	76	74
5.	Preserving food in the form of pickle and juice	5	18	13
6.	Inclusion of basic five in daily menu	1	12	11

Effect of demonstration had proved quite satisfactory; 45 per cent of the samples adopted absorption method of cooking rice and 56 per cent in the case of cooking vegetables. Similar was the trend followed with respect to the processing of vegetables before cooking.

Preparation of Oral Rehydration Therapy salt (ORT) was known only to 2 per cent of the sample and even they did not know the exact procedure. But, as a result of demonstration, 76 per cent of the samples having children in the age group of 5-10 years adopted the therapy, when their children suffered from diarrhoea and felt satisfied.

C. Factors Influencing the Health and Nutritional Knowledge, Practice and Attitude of the Samples:

1. Age as an influencing factor

and 2. Income and education as influencing factors

Pre and post tests were conducted on the samples selected, and their scores were subjected to statistical treatment.

1. Age as an influencing factor

The collected data were homogenised based on the category, as young adults (ranging from 18-25 years) adults (25-32 years) and middle age (32 and above) to find the levels of perception of knowledge, change in attitude and practice.

The improvement in the pretest to the post test scores showed the impact of health education in the knowledge, practicce and attitudinal change of the samples.

Table XXIV gives the differential study made and the levels of signifcance of the scores.

TABLE XXIV

DIFFERENTAL STUDY

S.No.	Groups		N	Arithmetic Mean ± S.D.	Difference between the Mean	't' value	significant
1.	**Young Adults:**	Knowledge	Pretest = 44	4.22 ± 1.49			
			Posttest= 44	12.30 ± 1.52	8.08	6.39	Highly significant
		Attitude	Pretest = 44	3.36 ± 1.5			
			Posttest = 44	8.73 ± 1.2	5.37	7.05	Highly significant
		Practice	Pretest = 44	4.81 ± 1.68			
			Posttest = 44	12.52 ± 1.6	7.71	6.69	Highly significant
2,	**Adult:**	Knowledge	Pretest = 44	4.43 ± 1.8			
			Posttest = 40	12.5 ± 1.5	8.07	6.39	Highly significant
		Attitude	Pretest = 40	3.7 ± 1.5			
			Posttest = 40	9.0 ± 1.0	5.3	6.38	Highly significant
		Practice	Pretest = 40	5.07 ± 1.9			
			Posttest = 40	12.2 ± 2.7	7.13	6.32	Highly significant
3.	**Middle Age:**	Knowledge	Pretest = 16	3.94 ± 1.5			
			Posttest = 16	11.68 ± 1.5	7.74	3.89	Significant
		Attitude	Pretest = 16	3.2 ± 1.17			
			Posttest = 16	8.6 ± 1.21	5.4	3.95	significant
		Practice	Pretest = 16	3.7 ± 1.7			
			Posttest = 16	11.25 ± 2.4	7.55	3.95	Significant

Significant at 1% level

The 't' values in the case of knowledge gained, attitude change and practices of the group (pretest and post-test) were highly significant in the case of young adults and adults and significant in the case of middle age. There was a significant difference between the arithmetic mean (AM) of pretest and post test of knowledge, attitude and practice which shows the teaching has been effective to a considerable extent. The calculations are enclosed in Appendix III. The results proved that young adults and adults scored high scores while the scores were less for the middle age participants who belong to the age group of 32 years and above. Thus, we conclude that younger the age, higher had been the scores.

2. **Income and education as influencing factors**

In this study correlation between -

a) Income and scores of pretest and post test

and b) Education and scores of pretest and post test were calculated.

Table XXV gives the correlation coefficient found in both levels.

TABLE XXV

CORRELATION BETWEEN INCOME vs SCORE AND EDUCATION vs SCORE

S.No.	Variables	Pretest	Post test
1.	Coefficient of correlation between Income and Scores	0.5814	0.4469
2.	Coefficient of correlation between education and scores	0.6886	0.6074

In order to see the effect of income on pretest and post test scores of the selected samples, the two variables the income and the scores were subjected to statistical treatment by method of correlation analayis (Appendix IV).

The same procedure was followed for education and scores (Appendix V).

The results proved that both income and education had an effect on scores of the subjects both at pretest and post test stages. In both the cases the variables were positively correlated, which implied that when the income and educational level was more the scores secured also proved to be high and vice versa.

Summary and Conclusion

V. SUMMARY AND CONCLUSION

In order to raise the health status of the slum dwellers of Kannappa Nagar, a slum of Sanganoor division in Coimbatore Corporation, a detailed programme was chalked for a period of six months for imparting health education to the inhabitants. One hundred full time home makers, falling into age group of 18-45 years were selected as samples from the population who were mainly residents of Narayanaswamy Gounder Street. To make the task effective, various infra-structures were mobilized and officials were requested to deliver lectures in their areas of specialization. Camps for immunization, cleaning and disinfectation were also arranged with the cooperation of the concerned authorities. The impact was assessed in terms of knowledge gained, practices adopted and change of attitude in the samples towards raising their health standards and the conclusions drawn are discussed under the following headings:

A. Profile of the Slum

B. Profile of the Selected Samples

C. Impact of Health and Nutrition Education

A. Profile of the Slum

1. The demographic profile of the slum was in reverse cohesion with the national average.

2. Majority of the population (78 per cent) were literate and an appreciable number was enrolled in the Mass Literacy Programme of the slum.

3. The working force constituted 46 per cent coolies and 26 per cent mill workers. The male population dominated the scene.

4. Forty four per cent of the population were found to be economically better off, while 66 per cent were lying below the poverty line compared to the national level of 52 per cent lying below the poverty line.

5. Except for five per cent of the population, the rest were married and of these 78 per cent were eligible for family planning measures. The divorce and widowhood rate was meagre.

6. The improvement in the health status was measured in terms of the immunization status of the community before and after the camp. It indicated a remarkable change amongst all the age groups. The children below 15 years, constituting 34 per cent of the population, benefitted to a great extent as a result of the camp.

B. **Profile of the Selected Samples**

1. The samples selected were homogenous group of 100 full time homemakers; hence it was a all women programme.

2. The occupational status of the heads of the families selected were 49 per cent coolies and 17 per cent mill workers.

3. As the selected samples were members of the Mass Literacy Programme, most of them (98 per cent) were in the process of becoming literates.

4. Of the samples selected, only 44 per cent were above the slab of poverty line and this made about four per cent to take up coolie job occasionally to manage their large family.

5. All the samples selected were married and most of them (92 per cent) were eligible for adopting family planning measures.

C. **Impact of Health and Nutrition Education**

1. Cleaning camp improved the environmental hygiene of the samples to an appreciable extent; 75 per cent desired sweeping of roads and clearance of garbage a daily activity, while other measures as fortnightly activity.

2. The effectiveness of combination of aids was evident from this part of the study. The facts revealed that 90 per cent took part in demonstration methods proving that participatory activities and achievement motivation proved fruitful.

3. Adoption of desirable practices like garbage disposal into the dust bin and erecting soak pit was quite appreciable. A few (11 per cent) adopted kitchen garden. Due to economic stress and lack of place many were unable to erect soak pit and put up kitchen gardens.

4. Personal hygiene of the samples which was far from satisfaction, evinced improvement in terms of keeping head to foot clean, washing clothes and keeping them neat and following good eating habits. The percentage of increase was also appreciable with regard to combing hair (53 per cent) and daily bathing (51 per cent).

5. As a result of nutrition education, 85 percentage of the samples adopted absorption method of cooking rice and 78 per cent in case of cooking vegetables and domestic level preparation of ORT salt was practised by 76 per cent of the samples

6. The statistical analysis revealed that the mean scores of the samples increased after the health and nutrition education programme, to a marked extent in young adult (18-25 years) and adult (25-35 years) and to a limited extent in the middle aged (32 and above), which led to the conclusion that age is a significant factor for gaining knowledge, following improved practices and changing attitude. Correlation study showed that the income and education contributed to the raise in scores of the individual's knowledge gained, practice adopted and attitudinal change

evinced. The two variables showed positive correlation in all three aspects at pretest and post test stages.

The following recommendations emerged from the action project:

1. The Corporation should approve the plots and provide basic amenities to the slum dwellers.
2. Provision should be made to hold regular cleaning campaign, mass immunization camps and health check up to raise the overall health status of the community.
3. Small Scale Industries could be initiated by District Industries Centre or Khadi and Village Industries to enable the slum dwellers to enhance their ncome.
4. Voluntary agencies could adoptcertain slum and strive for their holistic development.

The study has great scope in terms of follow up programmes like:

1. Adult and Continuing Education Programme.
2. Poverty alleviation programmes.
3. Operation Health Centres
4. Utilizing Health Educators to give health and nutrition education
5. Transfer of appropriate technology to women

and 6. Population studies

Let us all take a plea and say that "health for all not remain an empty slogan,but become a movement and let each individual take a vow, that he will work for his social and economic betterment and not expect other's to work for his improvement". If this is perceived by each individual he can improve himself and thus influence the Universal goal of achieving "Health for All by 2000 A.D.".

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Appendices

APPENDIX - I

SRI AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER DUCATION FOR WOMEN

(Deemed University)

Coimbatore 641 043

INTERVIEW SCHEDULE TO ELICIT INFORMATION FROM THE COMMUNITY ABOUT THE HEALTH AND NUTRITION ASPECTS

Name of the slum : Date :

Name of the area : Address:

Name of the interviwer :

Name of the interviewee :

I. General Information:

a) Name of the head of the family :

b) Age of the Respondents :

c) Income if employed(in Rupees) : Rs.

d) Total income of the family :

e) Educational level : Illiterate [ ]
Literate [ ]

f) Type of family : Joint [ ]
Nuclear [ ]

g) Total number in the family : No.

h) Family Background

S.No.	Name of the members	Sex		Relation to the head of the family	Age in years	Educational level	Occupation	Income per month (in Rupees)	Marital status
		Male	Female						

II. **Health Aspects:**

a) Does anyone from maternity hospital visit your slum?

Yes [ ] No [ ]

b) How often does the sanitary inspector visit your slum?

i) Daily [ ]

ii) Weekly [ ]

iii) Fortnightly [ ]

iv) Monthly [ ]

c) Do you have dust bin near your house?

Yes [ ] No [ ]

d) Do you have toilet facility in your house?

i) Common [ ]

ii) Individual [ ]

iii) None [ ]

e) How have you averted water logging?

i) Erecting soak pit [ ]

ii) Drainage [ ]

iii) Chlorination [ ]

iv) None [ ]

III. **Nutrtitional Aspect:**

a) Do you know the important functions of the food?

Yes [ ] No [ ]

b) Is there nutrition education programme as a part of your slum activity?

Yes [ ] No [ ]

c) What method do you adopt for cooking rice?

i) Absorption [ ]

ii) Boiling [ ]

iii) Straining [ ]

IV. Family Welfare Aspect:

a) Are you married?

Yes [ ] No [ ]

b) Do you have children?

i) One

ii) Two

iii) More than two

c) Do you know what is an ideal size of a family?

Yes [ ] No [ ]

d) Have you adopted Family Planning measures?

yes [ ] No [ ]

If yes, what measures?

i) Pills [ ]

ii) Copper-T [ ]

iii) Operation(Vasectomy/Tubectomy) [ ]

APPENDIX - II

SRI AVINASHILINGAM INSTITUTE FOR HOME SCIENCE

AND HIGHER EDUCATION FOR WOMEN

(Deemed University)

Coimbatore 641 043

"IMPARTING HEALTH EDUCATION TO SLUM DWELLERS"

SCHEDULE TO ASSESS THE HEALTH AND NUTRITION KNOWLEDGE ATTITUDE AND PRACTICES OF THE SAMPLES USING KNOWLEDGE SCALE, ATTITUDE SCALE AND CHECKLIST

a) **Knowledge Scale**

Name of the Interviewer: Date

Name of the Respondent : Address

Income(monthly) :

Age : Educaiton

1. Why is it necessary to keep the environment clean?
2. Where should we defeacate?
3. How to prevent the spread of infectious diseases?
4. How to keep your eyes healthy and clean?
5. How to avoid tooth decay?
6. Why should one bath daily?
7. Why should water logging be avoided near the house?
8. Why should we close our mouth while we sneeze/cough?
9. How many food groups are there and what are its nutrient composition?
10. Mention any two nutritional deficiency diseases?
11. List five growth promoting foods?

12. Give four foods rich in iron.

13. What are the nutrient present in milk and green leafy vegetables?

14. At what age immunization should be administered to children?

15. What is the name of the vaccine administered to expectant mothers?

b) **Attitude Scale**

Reading the following statements, say in the appropriate column whether, you agree or disagree

S.No.	Statement	Agree	Disagree
1.	Unhygienic food gives access to diseases		
2.	Washing hands and plates before meal is a good practice		
3.	Nail corners are best access for infectious diseases		
4.	Brushing teeth daily is a must		
5.	Steaming method of cooking rice conserves nutrients		
6.	Taking fruits daily is a good practice		
7.	Pulses and meat are rich in proteins		
8.	Eating raw vegetables is not good for health		
9.	Ragi malt is good for school children		
10.	Immunization saves children from 6 dreadful diseases		

c) Check List

Indicate your answer by putting a tick in the appropriate box.

1.	Do you have kitchen garden in your house?	Yes [ ] No [ ]
2.	Do you have a place for waste disposal?	Yes [ ] No [ ]
3.	Soak pit prevents water logging in the absence of proper drainage	Yes [ ] No [ ]
4.	Do you wear slipper when you go out?	Yes [ ] No [ ]
5.	What do you use to clean your hands?	Soap[ ] Flour[ ] None[ ]
6.	Do you know to prepare ORT salt at home?	Yes [ ] No [ ]
7.	Boiling kill most of the germs present in water	Yes [ ] No [ ]
8.	The best method of cooking rice and vegetables is	Steaming[ ] Straining[ ]
9.	Do you include fruits in your daily diet?	Yes [ ] No [ ]
10.	Do you include mixed creals in your diet?	Yes [ ] No [ ]
11.	Milk and milk products should be included in daily diet	Yes [ ] No [ ]
12.	Do you consume greens daily along with other diets?	Yes [ ] No [ ]
13.	Raw vegetables like carrots, cucumber and tomatoes are good for health and it is nutritious	Yes [ ] No [ ]
14.	Cutting vegetable into small pieces conserves its nutrients	Yes [ ] No [ ]
15.	Do you wash the vegetables before cutting?	Yes [ ] No [ ]

APPANENDIX - III

INDIVIDUAL SCORES OF THREE TESTS

(a) YOUNG ADULT

S.No.	KNOWLEDGE			PRACTICE			ATTITUDE		
	Pre-test	Post test	Differ-ence	Pre-test	Post test	Differ-ence	Pre-test	Post test	Differ-ence
1.	6	15	9	8	15	7	6	10	4
2.	7	13	6	7	14	7	6	10	4
3.	7	15	8	5	13	8	8	10	2
4.	2	11	9	4	12	8	2	8	6
5.	4	9	5	4	11	7	2	7	5
6.	4	12	8	5	13	8	3	10	7
7.	3	10	7	3	10	7	2	8	6
8.	2	10	8	3	11	8	0	7	7
9.	3	11	8	3	11	8	3	9	6
10.	3	10	7	4	12	8	3	8	5
11.	4	13	9	5	13	8	5	10	5
12.	5	14	9	5	13	8	3	8	5
13.	3	12	9	2	7	5	1	7	6
14.	3	13	10	3	12	9	2	8	6
15.	5	13	8	4	12	8	1	7	6
16.	3	11	8	5	14	9	5	10	5
17.	6	14	8	3	13	10	4	10	6
18.	2	10	8	3	13	10	4	10	7
19.	5	12	7	2	9	7	1	8	7
20.	6	14	8	5	14	9	4	10	6

S.No.	KNOWLEDGE			PRACTICE			ATTITUDE		
	Pre-test	Post test	Difference	Pre-test	Post test	Difference	Pre-test	Post test	Difference
21.	5	15	9	3	13	10	3	8	5
22.	4	13	8	3	10	7	2	7	5
23	5	13	8	5	15	10	5	10	5
24.	4	13	9	7	15	8	4	10	6
25.	3	12	9	5	14	6	5	10	5
26.	3	12	9	5	13	8	3	9	6
27.	7	14	7	7	14	7	4	10	6
28.	6	14	8	5	15	7	5	9	4
29.	4	12	8	4	12	8	2	7	5
30.	7	13	6	4	12	8	2	7	5
31.	4	11	6	4	12	8	2	7	5
32.	3	11	8	4	11	7	3	8	5
33.	7	14	7	6	13	7	4	9	5
34.	4	11	7	5	13	8	3	8	5
35.	4	14	10	5	12	7	3	8	5
36.	3	12	9	4	11	7	2	7	5
37.	4	11	7	4	12	8	3	9	6
38.	4	11	7	4	12	8	4	9	5
39.	3	12	9	5	13	8	3	8	5
40.	4	14	10	5	13	8	3	8	5
41.	3	11	8	7	14	7	4	10	6
42.	2	11	9	8	14	6	4	10	6
43.	5	13	8	9	15	6	5	10	5
44.	3	12	9	5	12	7	3	8	5

$$t = \frac{\bar{d}\sqrt{n}}{S}$$

(b) **ADULT**

S.No.	KNOWLEDGE			PRACTICE			ATTITUDE		
	Pre-test	Post test	Difference	Pre-test	Post test	Difference	Pre-test	Post test	Difference
1	4	14	10	6	13	7	4	10	6
2	9	15	6	9	15	6	7	10	3
3.	4	12	8	5	13	8	4	8	4
4.	5	14	9	7	14	7	5	10	5
5.	8	15	7	8	15	9	7	10	3
6.	3	12	9	4	12	8	2	9	7
7.	3	13	10	3	10	7	2	9	7
8.	3	12	9	4	12	8	4	9	5
9.	3	13	10	3	10	7	2	9	7
10.	2	11	9	3	10	7	2	9	7
11.	2	9	7	2	9	7	2	9	7
12.	2	10	8	2	10	8	2	8	6
13.	3	13	10	2	10	8	2	8	6
14.	5	12	7	2	9	7	2	9	7
15.	3	13	10	5	14	9	4	9	5
16.	4	13	9	3	9	6	2	9	7
17.	5	13	8	2	9	7	2	9	7
18.	3	10	7	7	14	7	5	10	5
19.	3	10	7	4	9	5	2	7	5
20.	8	14	6	4	9	5	3	7	4

S.No.	KNOWLEDGE			PRACTICE			ATTITUDE		
	Pre-test	Post test	Differ-ence	Pre-test	Post test	Differ-ence	Pre-test	Post test	Differ-ence
21.	6	13	7	7	15	8	6	10	4
22.	4	11	7	7	14	7	5	10	5
23.	3	10	7	4	11	7	3	8	5
24.	4	12	8	4	9	5	2	7	5
25.	4	13	9	6	14	8	3	8	5
26.	3	12	9	7	14	7	5	10	5
27.	4	14	9	4	11	7	3	9	6
28.	6	13	7	5	13	8	2	7	5
29.	4	14	10	4	9	5	3	9	6
30.	3	10	7	5	11	6	4	9	5
31.	4	12	8	7	13	6	4	10	6
32.	5	13	8	7	14	7	4	7	5
33.	5	13	8	4	12	8	5	10	5
34.	3	11	8	7	14	7	5	10	5
35.	6	13	7	6	14	8	6	10	4
36.	5	15	8	7	14	7	5	10	5
37.	8	14	6	7	14	7	5	10	5
38.	7	14	7	8	14	6	5	10	5
39.	6	13	7	5	13	8	4	9	5
40.	5	13	8	6	14	8	5	10	5

(c) MIDDLE AGE

S.No.	KNOWLEDGE			PRACTICE			ATTITUDE		
	Pre-test	Post test	Difference	Pre-test	Post test	Difference	Pre-test	Post test	Difference
1	3	11	8	3	11	8	3	8	5
2	2	9	7	3	11	3	3	9	6
3	2	10	8	2	7	5	3	8	5
4	2	10	8	4	10	6	2	9	7
5	3	12	9	2	11	9	3	3	5
6	4	11	7	2	10	8	2	10	8
7	5	12	7	4	14	10	5	10	5
8	3	12	9	3	9	6	2	7	5
9	4	11	7	4	13	9	4	9	5
10	6	15	9	3	10	7	3	7	4
11	3	12	9	3	11	7	3	7	4
12	4	11	7	7	15	8	4	10	6
13	7	14	7	6	14	8	5	10	5
14	5	13	8	4	13	9	3	8	5
15	4	11	7	2	7	5	1	7	6
16	6	13	7	7	14	7	5	10	5

APPENDIX IV

CORRELATION BETWEEN INCOME AND SCORES OF THE INDIVIDUAL

(a) Pretest Score

$V=\frac{Y-12.5}{5}$		-1		0		1		2				
Mid Y		7.5		12.5		17.5		22.5				
$U=\frac{X-750}{500}$	Mid x	Scores Y / Income X		5-10		1-15		15-20		20-25	Total (f)	fU	fU^2	FUV
-1	300	100- 500	37	37	13	0	4	-4	-	0	54	-54	54	33
0	750	500-1000	4	0	19	0	11	0	6	0	40	0	0	0
1	1250	1000-1500	-	0	2	0	4	4	-	0	6	6	6	37
		Total f	41		34		19		6		100	-48	30	37
		fV	-41		0		19		12		-10			
		fV^2	41		0		19		24		84			
		fVU	37		0		0		0		37			

$$r = \frac{\Sigma fUV}{n} - \frac{\Sigma fU}{n} \quad \frac{\Sigma fU}{n}$$

$$\sqrt{(\Sigma fU)^2/n - (\Sigma fU)^2/n \times (\Sigma fV)^2/n - (\Sigma fV)^2/n}$$

$$= 0.5814$$

(b) Post test

$U=\frac{\bar{X}-1,250}{500}$	Mid x	$V=\frac{\bar{Y}-27.5}{5}$	-2	-1	0	1	2				
		Mid Y	17.5	22.5	27.5	32.5	37.5				
		Score Y / Income X	15-20	20-25	25-30	30-35	35-40	Total f	fU	fU^2	fUV
-2	300	100- 500	1	-	27	21	9	58	716	232	-74
-1	750	500-1000	-	1	6	7	23	37	-37	37	-52
0	1250	1000-1500	-	-	-	1	4	5	0	0	0
		Total	1	1	33	29	36	100	-153	268	126
		fV	-2	-1	0	29	72	98			
		fV^2	4	1	0	29	144	178			
		fVU	4	1	0	-49	-82	-126			

$r = 0.4469$

APPENDIX V

CORRELATION BETWEEN EDUCATION AND SCORES OF THE INDIVIDUAL

(a) Pretest

		$-V=\frac{X-12.5}{S}$	-1	0	1	2			
	Score Y / Education X	5-10	10-15	15-20	20-25	Total	fU	fU^2	fUV
-1	(Illiterate) 0	39 (39)	20 (0)	11 (-11)	- (0)	70	-70	70	28
0	(I-IV) 1	- (0)	8 (0)	1 (0)	- (0)	9	0	0	0
1	(V-VIII) 2	- (0)	2 (0)	13 (13)	2 (4)	17	17	17	17
2	(X-XII) 3	- (0)	- (0)	1 (2)	3 (12)	4	8	16	14
		39	30	26	5	100	-45	103	59
		fv	39	0	26	10	-3		
		fV^2	39	0	26	20	85		
		fVU	39	0	4	16	59		

(b) Post test

		$V=\frac{\bar{Y}-12.5}{5}$	-2	-1	0	1	2				
		Mid Y	17.5	22.5	27.5	32.5	37.5				
	U	Score Y / Education X	15-20	20-25	25-30	30-35	35-40	Total	fU	fU^2	fUV
	-2	0	1 (4)	1 (2)	33 (0)	24 (-48)	13 (-52)	72	-144	288	-94
	-1	1	- (0)	- (-)	1 (0)	3 (-3)	4 (-4)	8	- 8	8	- 7
	0	2	- (-)	- (-)	- (-)	1 (-)	16 (-)	17	0	0	-
	1	3	- (-)	- (-)	- (-)	- (-)	3 (2)	3	3	3	2
		Total	1	1	34	28	36	100	-149	299	-99
		fV	-2	-1	0	28	72	97			
		fV^2	4	1	0	28	144	167			
		fVU	4	2	0	-51	-54	-99			

$r = 0.6074$