swasth hind

FEBRUARY 1986

- Year 1990: Towards universal immunization
- Health and medical care of the aged
- Mental disability
- Nutrition and mental impairment
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- Remove the clouds of depression
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swasth hind

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OBJECTIVES

Swasth Hind (Healthy India) is a monthly journal Published by the Central Health Education Bureau Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, New Delhi. Some of its important objectives and aims are to :

REPORT and interpret the policies, plans, programmes and achievements of the Union Ministry of Health and Family Welfare.

ACT as a medium of exchange of information on health activities of the Central and State Health Organisations.

FOCUS attention on the major public health problems in India and to report on the latest trends in public health.

KEEP in touch with health and welfare workers and agencies in India and abroad.

REPORT on important seminars, conferences, discussions etc., on health topics.

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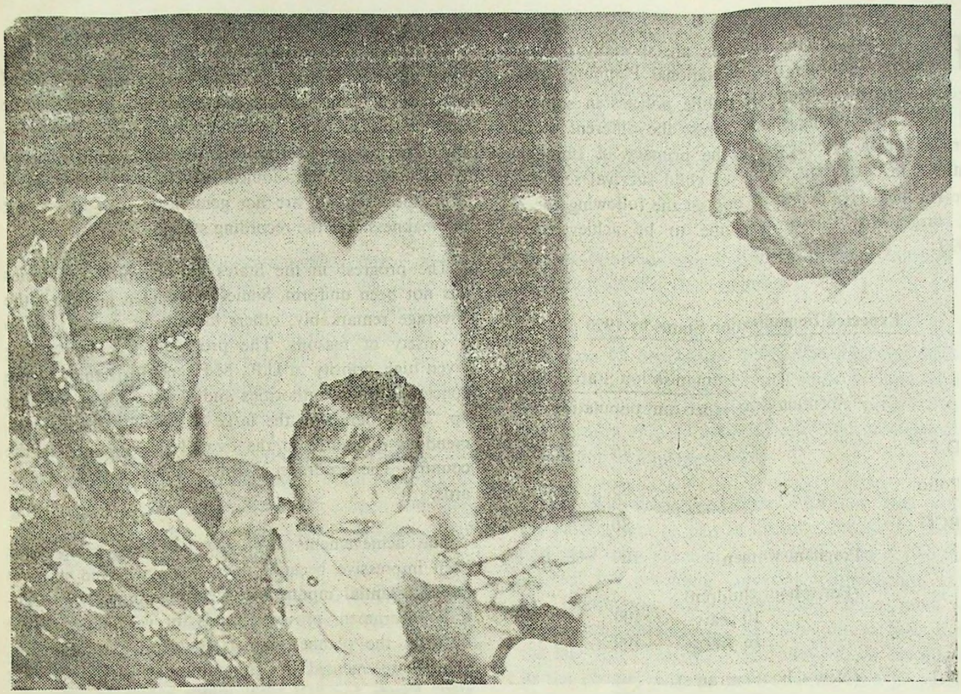


YEAR 1990:
TOWARDS UNIVERSAL IMMUNIZATION

It is planned to immunize 85 % of infants and expectant mothers by 1990 against six vaccine-preventable diseases. The coverage will be extended over a five-year period in a phased manner immunizing about 18 million infants and 24 million mothers every year.

THE interests of the children are specially finding place of priority in the National Planning process. A broad spectrum of public policies in support of children is taking shape across the different social service sectors. Recognising the primacy of Immunization in the package of child survival services, the National Health Policy has set the following specific targets for this programme to be achieved by 1990:

Expected Immunisation Status by 1990

	Infants	Immunisation Status:1990 (per cent population)
D.P.T.	—	85
Polio	—	85
BCG	—	80
TT	Pregnant women	100
TT	(For school children)	
	10 years	100
	16 years	100
D.T.	(New school entrants)	
	5–6 years	85
Typhoid	–do–	85

Even though measles vaccination was not mentioned in the immunization package under the National Health Policy, the Planning Commission's Steering Group on Health and Family Welfare has recommended universal coverage (85%) of measles vaccination for infants. For other vaccination programmes, coverage will be extended from the present level of about 40% to 50%.

While inadequate facilities have limited the services, the coverage of the eligibles in areas where services are available can be augmented by reducing the dropouts from the first to the third doses. By cutting down the dropouts, the effective coverage would increase substantially. Usually, the targetted number of children are reported to have been contacted at least once and if they could be induced to return to complete the schedule, we would not be far behind the planned targets.

Although the reasons for the dropout rates vary from place to place, the ones most commonly noted are the lack of information regarding the schedule and the use of blunt or unsterilised needles, the schedules not being at convenient hours and mild illnesses being taken as contra-indications. In some cases, however, the dropouts are not genuine but are the result of weaknesses in the recording system.

The progress in the States and Union Territories has not been uniform. Some States have increased the coverage remarkably, others have been slower due to a variety of reasons. The programme is now being given high priority in U.P., M.P. and Rajasthan by the concerned State authorities and show signs of picking up. The progress in the large States will make a tremendous difference to the overall performance in the country. The coverage in Bihar is low by any standards.

The achievements over the past few years have been impressive because these were achieved without any substantial inputs into the programme. The Central Government provided funds for vaccines required to meet the planned targets and the State Governments implemented the programme with the existing staff. Funds for POL, ice, minor repair of refrigerators and other contingent expenditure were not provided for separately and were usually met from the "Miscellaneous Purpose Funds" under the family welfare programme. Lack of funds often led to acute shortages of syringes, needles and other essential supplies in many areas. Further increase in immunization coverage will be possible only if adequate provision is made for recurring expenditure. This will be more than compensated by the prevention of disease, disability and death due to the EPI diseases and the positive impact on the family welfare programme.

It is planned to immunize 85% of infants and expectant mothers by 1990 against six vaccine-preventable diseases. The coverage will be extended over a five-year period in a phased manner immunizing about 18 million infants and 24 million mothers every year. In line with the expected fertility behaviour, the number of pregnant women and infants are expected to show a declining trend during 1985-90 period. To a great extent, this decline in fertility will be neutralized by rising population base. Therefore, for programme

UNIVERSAL IMMUNIZATION CAMPAIGN LAUNCHED

THE Universal Immunization Programme aiming at providing protection to all the expectant mothers and children against six vaccine-preventable diseases by 1990 was launched in the country by Shri Rajiv Gandhi, the Prime Minister of India, on 19 November, 1985, at Fatehpur Beri, Primary Health Centre, near Mehrauli, New Delhi.

This programme which envisages to ensure greater child survival has been dedicated to the memory of Smt. Indira Gandhi whose love for women and children was so intense. The campaign, therefore, began from November 19. her birthday.

Inaugurating this campaign, Shri Rajiv Gandhi felt that child health care should become an essential part of the family welfare programme.

Hoping that the programme would reach every nook and corner of the country, especially rural India, Shri Rajiv Gandhi called on all sections of society to do what they could for its success.

Among others, Smt. Mohsina Kidwai, Union Minister of Health and Family Welfare, Shri S. Krishnakumar, Union Deputy Minister, Health and Family Welfare, Shri Jag Pravesh Chandra, Chief Executive Councillor, Delhi Administration, Rtd. Air Vice Marshal H. L. Kapur, Lieut. Governor, Delhi, Shri Mohinder Singh Saathi, Mayor of Delhi, Shri S. S. Dhanoa, Secretary, Health & F.W., Shri R. P. Kapoor, Addl. Secy & Commissioner (FW & MCH) and Dr D. B. Bisht, Dir. General, Health Services, also attended.

The Ministry of Health and Family Welfare has been making hectic preparations for planning and seeking involvement of all concerned in putting the first phase of this programme on ground.

Numerous communications were issued from the Centre to State leadership and others including Panchayat Pradhans drawing their attention towards the objectives of this vital campaign.

In a letter addressed to Health Ministers of all the States on 12 September, 1985, Smt. Mohsina Kidwai, Union Minister of Health and Family Welfare informed them about the dedication of the programme to the memory of Smt. Indira Gandhi and provided other details for its implementation.

Smt. Kidwai informed the Ministers that during the current year as part of overall strategy, 30 districts and catchment areas of 50 medical colleges had been selected for providing universal immunization services. During the coming years, she added, more and more such districts will be taken up so that during the last year of the plan, i.e., 1989-90, all the districts in the country will be covered under the programme of Universal Immunization. She added that additional inputs in the form of additional staff, vaccines, equipments for storage and transportation of vaccine, etc., have been provided to these districts. Vehicles have also been sanctioned to improve mobility for outreach operations and supervisory visits. The expenditure will be met in full by the Government of India as per the prescribed pattern.

Smt. Kidwai emphasised that successful implementation of the programme would require very careful planning and effective management. It would also require full political and administrative support.

In a follow-up communication to the States, Shri R. P. Kapoor, Additional Secretary and Commissioner (Family Welfare & MCH), stated that the proposed programme had placed a responsibility on all of us to ensure that the various activities under the scheme were carried out effectively and within the specified time-schedule. He added that lessons learnt during this campaign would prove helpful in extending the campaign to other districts. △ △

(*Continued from Page 30*)

purposes, we may plan for an infant population of 22 million and 24 million expectant mothers to be covered annually.

Year-wise Proposed Number of Beneficiaries
1985-86 to 1989-90

(*in millions*)

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

Obviously to be effective, the vaccine must be given to the individual before he has been exposed to the disease. In India where most of the vaccine preventable diseases occur at an early age, it is important that the full course of the vaccine is completed before the child reaches his first birthday or soon thereafter upto 14 months.

The main thrust of the programme will be the coverage of pregnant women with two doses or a booster dose of TT and of infants with three doses each of DPT and polio vaccines. In the urban areas and in areas where the training of MPWs has been completed, BCG vaccine will also be included. Since measles vaccine is being included in the programme in 1985-86, greater effort and focussed training programmes will be necessary to reach high level of 85% coverage in 1990 starting from zero in the base year: 1984.

Prime Minister's Message
On
UNIVERSAL IMMUNIZATION CAMPAIGN

Every infant that is born has the right to grow into a healthy adult. The more successful we are in reducing infant mortality and ensuring child survival, the more likely is it that we will succeed in our family welfare programmes.

Indiraji had an abiding love for children. She enjoyed meeting them, playing with them, teaching them. She said:

> "Every child has a right to health, to education, to congenial employment. But his share of the sun and air, of water and sustaining food, is limited by the economic status of his parents. We feel that it is the duty of the State to correct this injustice. All children do not come with the same natural endowments, but every government should be able to give to every child the best opportunity to develop its potentialities to the fullest".

She took a great interest in the Programme of Universal Immunization which, by the beginning of the next decade, will cover the entire country. She did not herself live to see the Programme reach full fruition. But there could be no more appropriate living memorial to her.

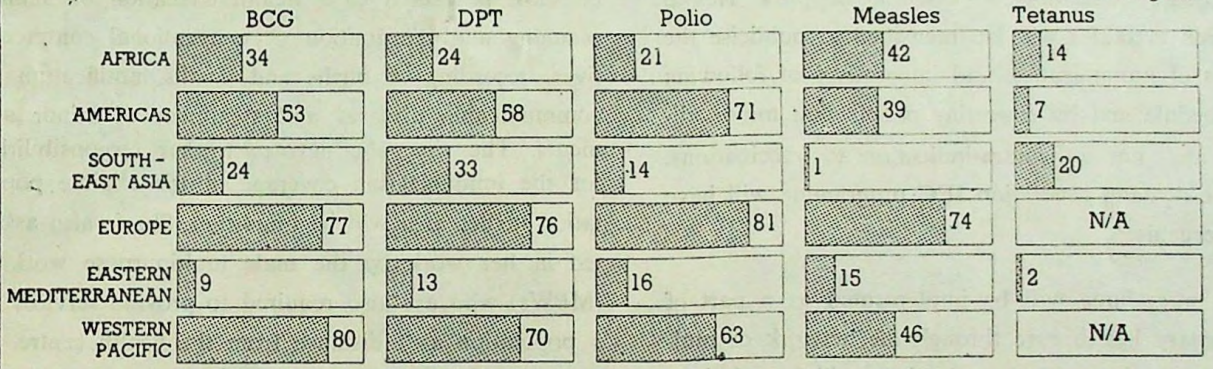
October 28, 1985

(RAJIV GANDHI)

Immunization World-Wide

Every year, five million children die and five million more are disabled by diseases which can be immunized against for $5 per child. (UNICEF)

PERCENTAGE OF THE WORLD'S CHILDREN IMMUNIZED IN THE FIRST YEAR OF LIFE



BCG immunizes against Tuberculosis
DPT (3 injections) immunizes against Diphtheria, Pertussis (whooping cough) and Tetanus
Tetanus Toxoid (2 injections) given to a woman in pregnancy immunizes her child against Tetanus in the first month of life—the most dangerous period

Source Adapted from WHO

VACCINE-PREVENTABLE DEATHS

Estimated annual number of child deaths from the main diseases which can be cheaply immunized against:-

COUNTRY	Neonatal Tetanus	Measles	Whooping Cough	Total
India	298,000	782,000	189,000	1,269,000
Pakistan	132,000	163,000	66,000	361,000
Bangladesh	119,000	173,000	69,000	361,000
Indonesia	71,000	218,000	63,000	352,000
Nigeria	64,000	171,000	68,000	303,000
Mexico	31,000	57,000	19,000	107,000
Ethiopia	16,000	60,000	25,000	101,000
Zaire	21,000	45,000	19,000	85,000
Philippines	12,000	59,000	12,000	83,000
Brazil	28,000	34,000	18,000	80,000
Burma	20,000	43,000	16,000	79,000
Thailand	10,000	57,000	11,000	78,000
Vietnam	12,000	46,000	19,000	77,000
Kenya	9,000	37,000	15,000	61,000
Egypt	16,000	32,000	13,000	61,000
South Africa	11,000	35,000	14,000	60,000
Sudan	8,000	36,000	15,000	59,000
Afghanistan	11,000	27,000	11,000	49,000
Iran	17,000	19,000	9,000	45,000
Algeria	10,000	25,000	8,000	43,000
Morocco	10,000	21,000	5,000	36,000
Turkey	8,000	16,000	5,000	29,000
Colombia	9,000	14,000	6,000	29,000
Tanzania	6,000	7,000	6,000	19,000
Rep of Korea	5,000	10,000	2,000	17,000
All other developing countries	181,000	411,000	139,000	731,000
Grand total	1,135,000	2,598,000	842,000	4,575,000

Table excludes China. Source Adapted from WHO

1984-NEW STYLE CAMPAIGNS

New style immunization campaigns have this year revolutionised immunization coverage in:-

BRAZIL

where immunization rates have been lifted towards 90% by a campaign involving 450,000 volunteers manning over 90,000 immunization posts across an area larger than Western Europe

COLOMBIA

where almost a million children have been immunized on each of 3 National Vaccination Days - more than doubling the percentage of children immunized

NIGERIA

where a pilot campaign in the Owo area has increased immunization coverage from 9% to over 70% in preparation for the launch of a national campaign

INDIA

where campaigns in thousands of villages of Karnataka and Madhya Pradesh and in the majority of Delhi's poorer areas have boosted vaccination coverage to unprecedented levels

PAKISTAN

where the proportion of the nation's children immunized has risen from less than 5% to more than 25% in one year (end of 1984 target - 50%)

The strategies behind the successes -

- Massive public education campaigns using every possible channel of communication to let parents know the importance of immunizing their children
- Taking immunization nearer to the people by setting up immunization posts in schools, parks, polling booths, mosques, churches, temples, bazaars and markets - as well as in clinics and health centres

Chart: Stephen Hawkins Oxford Illustrators

—UNICEF

Since most vaccines require multiple doses, efforts will be directed towards cutting down dropouts for the second and the third doses. This is proposed by improving the services by making them more accessible through outreach operations and by providing in adequate quantities the essential supplies. Health education activities will be intensified to publicise the benefits of immunization and imperatives of following full schedule and by educating people that minor ailments are not a contra-indication to vaccinations. Massive demand generation IEC programme will have to be organised.

The programme will be implemented as a part of the primary health care through the network of multipurpose workers. The vaccinations will be administered by the female and male multipurpose workers. The MPWs will be assisted by the village health guides, trained dais, *anganwadi* workers, social workers and others for the collection of children during outreach operations and follow-up for subsequent doses. The active involvement of medical and nursing students will be encouraged. Community awareness and involvement will be the key to its success.

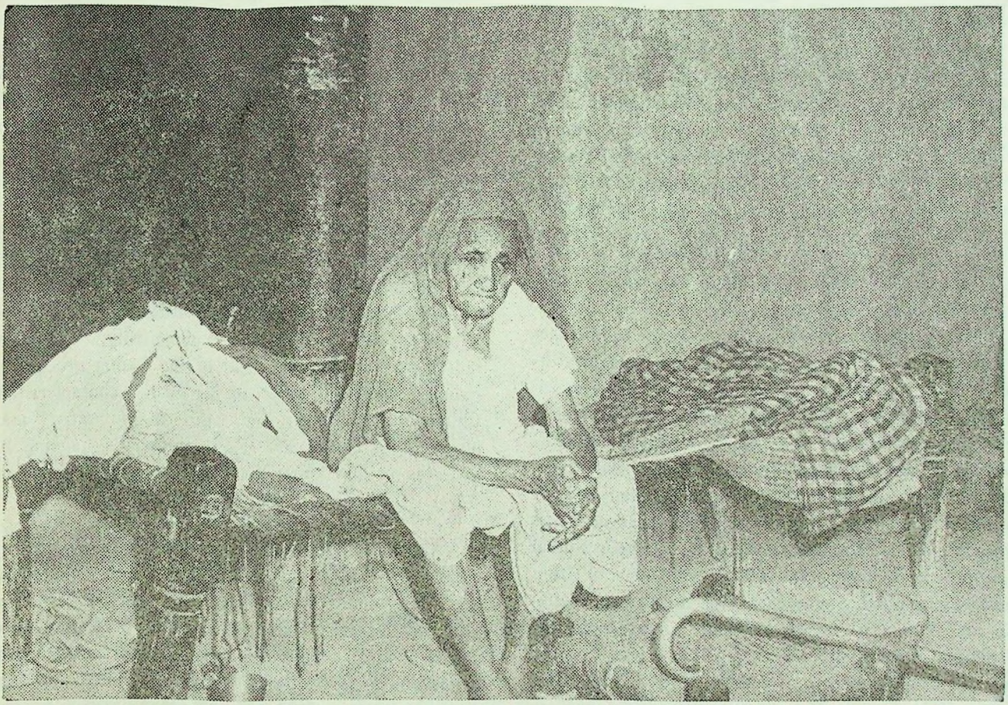
Different strategies will be adopted depending on local conditions and availability of resources. As far as possible, a fixed centre approach will be followed since it is not only cheaper, organisationally easier and less time-consuming but it is also the easiest to sustain over the years. However, such an approach will not in itself lead to a high coverage and will, therefore, be combined with outreach operations. The MPWs will visit the villages on a prefixed day and organise the sessions at a convenient site. All vaccines will be made available at each session.

Human resources are essential to effectively carry out various tasks under the immunization programme. The job responsibilities are varied requiring highly qualified personnel for vaccine production, and quality control, programme management and communications to those with skilled level of training in service delivery.

At the field level, the ANM is the key person in the implementation of the programme. She, however, has several other duties and responsibilities which include providing care during pregnancy, conducting deliveries, supervising deliveries conducted by trained dais, post-natal care, health education on family planning and distribution of conventional contraceptives, recording of births and deaths, notification of communicable diseases and treatment of minor ailments. The time she devotes to her responsibilities for the immunization coverage of the eligible population in her area will be important. She is also assisted in her work by the male multipurpose workers (MPWs) who are also required to provide services to a population at a distance from the health centre. If those aspects of the project which do not require long specialised training can be taken over by the members of the community, the MPWs would be in a position to cover a large number of beneficiaries over a shorter period of time. Moreover, availability of essential supplies in adequate quantities would also increase efficiency. Under the programme both these approaches will be adopted.

India has got more than 106 medical colleges with an annual intake of over 12,000 medical students per year. In addition, there are a large number of nursing schools. The participation of both the medical and nursing students is being activated by organising training courses and involvement in the field work. Involvement of students from other educational institutions is being encouraged for motivational and health educational activities, follow-up for completion of immunization schedule and surveillance.

EPI has been integrated in the basic curricula of the training courses of medical students, nursing students and other paramedical workers. However, specific inservice courses related to EPI will have to be organised to increase the efficiency and effectiveness of the programme to achieve maximum benefits within the available resources. △



HEALTH AND MEDICAL CARE OF THE AGED

Dr S. R. Mehta

A judicious mix of curative services, legal protective measures and health education can become a basis for tackling the health and medical care problems of the aged. But more than that the community members have also to be sensitized about the problems of the aged so that a greater commitment and involvement of the community leaders could be ensured in order to include "care for the aged" within the purview of Primary Health care.

YOUTH is assuming a higher value than the old in the modern society because of active work force needed to reconstruct and transform the traditional social order. That does not mean that the old has no place in the modern setup. The cummulative experience and wisdom of the old can form a basis for the foundation of a modern social system provided the youth is oriented adequately and appropriately to embody the thought patterns and the guidelines of the old in the developmental strategy.

It has been observed that the social and psychological aspects of the ageing experience can be explained by categorizing that into phases or stages denoting the human life cycle (Atehley, 1972; Birren, 1964). However, as per the disengagement theory of ageing, it is in the interest of the society to phase out those persons whose deaths would disrupt the smooth functioning of the social order. This functionalist perspective advocates an orderly means of transferring power from the older members of society to the younger. There has to be a mutual withdrawal of ageing individuals and society from each other and this process of withdrawal is inevitable and necessary for "Successful" ageing (Elaine Cumming and William Henery, 1961). That is why, societies develop norms of retiring people from work at a certain age. But this disengagement process is not confined only to separation from occupational work; rather it affects the other regular social roles and activities of an individual. This makes the disengagement a much more complex process than the theory allows.

It has however, been recognized that improved health and medical care services, nutrition, and sanitary living conditions have contributed in providing longevity to people and even in the developing countries, the life span for both sexes have been raised. This necessitated a change in the social norms of retiring and related regular activities. It is increasingly expressed that for successful ageing, persons maintain fairly constant levels of activity. Further the amount of engagement or disengagement, to a large extent are determined by past life styles and socio-economic considerations rather than by intrinsic and inevitable processes (Erdman Palmore, 1969).

However, this activity theory of ageing, fails to account for the behaviour of all individuals as some aged persons because of physical, mental or socio-economic reasons, may not be able to carry forward their middle aged experience of active living to old age. Moreover, they may not judge themselves according to the norms of the earlier social life. Despite these limitations, the activity theory for ageing provides promise for role of active ageing in development of nations.

Lately, continuity theory has provided a wider spectrum to explain the several aspects of ageing. It is observed that as an individual advances in his or her different phases or states of life cycle, he or she develops more stable values, attitudes, norms, and habits as part of his or her personality. Thus an individual may tend to react to the ageing process by maintaining consistency in his or her characteristics, traits and predispositions. But an individual may also change his or her reaction towards ageing by adapting to new situations (Atehley, 1972, Neugarten, 1964).

A brief account of the main trends in ageing theory which have caught the attention of social gerentology, do bring home the fact that physical hazards, impairness, mental infirmities, reality of feeling tired and sick and inability to cope up with various problems due to recognition of impending death, produce several problems of adjustment and depression for the aged persons.

Health and Medical Care Problems

The socio-emotional, psychological adaptation, economic or attitudinal adjustment, health and social welfare problems of the aged are so interrelated that it is difficult to separate one from the other. But the role of active ageing within the "Activity" perspective has to recognize the health and medical care problems of the aged persons. To keep oneself active in some activity which may be productive in terms of economic return or unproductive for the sake of deriving pleasure or satisfaction in the leisure time available with the old, it is necessary that the old persons are educated about the preventive and promotional aspects of health so as to maintain themselves as healthy. In addition, medical care services have to be made accessible to them so that they be cured of the diseases or physical hazards or infirmities. In the case of an older person, the certification of the physician based on certain signs and symptoms that would declare him sick or ill is not

that much as his subjective assessment of a health problem that would influence him to seek medical care or to utilize the available health services. Because of inherent stratification system based on different dimensions including sex and age, in the social structure of developing countries, the distribution of health and medical care services, managed mostly by government is largely uneven. Due to elite structure of health care in the developing countries, there is a skewed distribution, and despite the well taken welfare measures by the government State, the older persons especially the women are often neglected.

Health is now being viewed more as a holistic concept because of the limitation of the functionalist perspective to consider illness or sickness within the monolithic and homogenous social structure whose participants act under the influence of exterior reified values. Even the Interactionists, who advocate cultural pluralism as relevant to the understanding of the phenomenon of illness, seem to fall into the trap of Functionalists, as their plural groups are also subservient of their values. That is why, Dingwall, advocates ethnomedicine approach in understanding the concepts of health and illness as these are based on the knowledge that members of some collectively draw on to make sense in their social and natural world and on the content and organization of that knowledge. (Dingwall, 1976). This pluralistic approach in health care rather than functionalist monolithic model, provides a wider perspective in conceiving health and illness by including within its purview the folk and indigenous medicine practices followed by lay persons from different socio-economic strata. Older persons, because of scarce resources at their disposal are likely to follow some of the home medications or folk health practices either to keep themselves healthy or to get cured of minor ailments. This may even include light physical or Yoga exercises which do not involve any cost and are suitable to "culture of poverty" groups.

What are the major health hazards or problems faced by older persons? No doubt, there may be many health problems more attributable to the inevitable process of ageing, yet quite a few of them are due to neglect and lack of care. A study carried out in Chandigarh and the surrounding villages has revealed that the most frequently mentioned health problems by the aged are defective eyesight, general weakness, pain in joints, chronic cough and cold, defective hearing, high blood pressure, digestive complaints, breathing trouble, trembling of limbs, etc. (O'Souza, 1984). However there are variations reported on sex, class and environment basis. The nature of health problems reported would need both preventive and curative care to be provided to the ageing persons.

Health and medical care services

In order that many of the aged could become active in taking productive or non-productive pursuits because of economic necessity or otherwise, one has to take care of health and medical problems of the aged. It is, generally, suggested that a three pronged approach should be followed in providing health care to the people. First, the community area and target groups vulnerable to the health and medical problems should be flooded with health care services so that there is adequacy of opportunity with the sick persons to avail of such services. But in view of scarce resources at our disposal, we cannot provide liberal medical care to the old and aged persons in our society.

Secondly, we should provide legal protection to the needy and deserving persons. This legal approach becomes more significant in the case of the aged who because of their limitation of physical mobility and financial constraints are often neglected while seeking medical care at the hospitals or dispensaries. There is a need to provide health insurance schemes for this group and to open special window counters or provide exclusive beds in the hospitals for them. Even there should be incentive schemes for indigenous medicine practitioners including Ayurvaids and Homeopaths or provide subsidised health care to the old in the community. Though this may appear to encourage dependency of the old on the State/government, yet to keep the old in fit condition for active ageing, it is important. Through legislations the elected representatives to State Assemblies and Central Parliament, should play an active role in safeguarding the health interests of the aged persons.

Health education

Simultaneously with the above approaches, health education of the aged constitutes another important aspect of the health care needed so that they could learn certain do's and dont's related to the different

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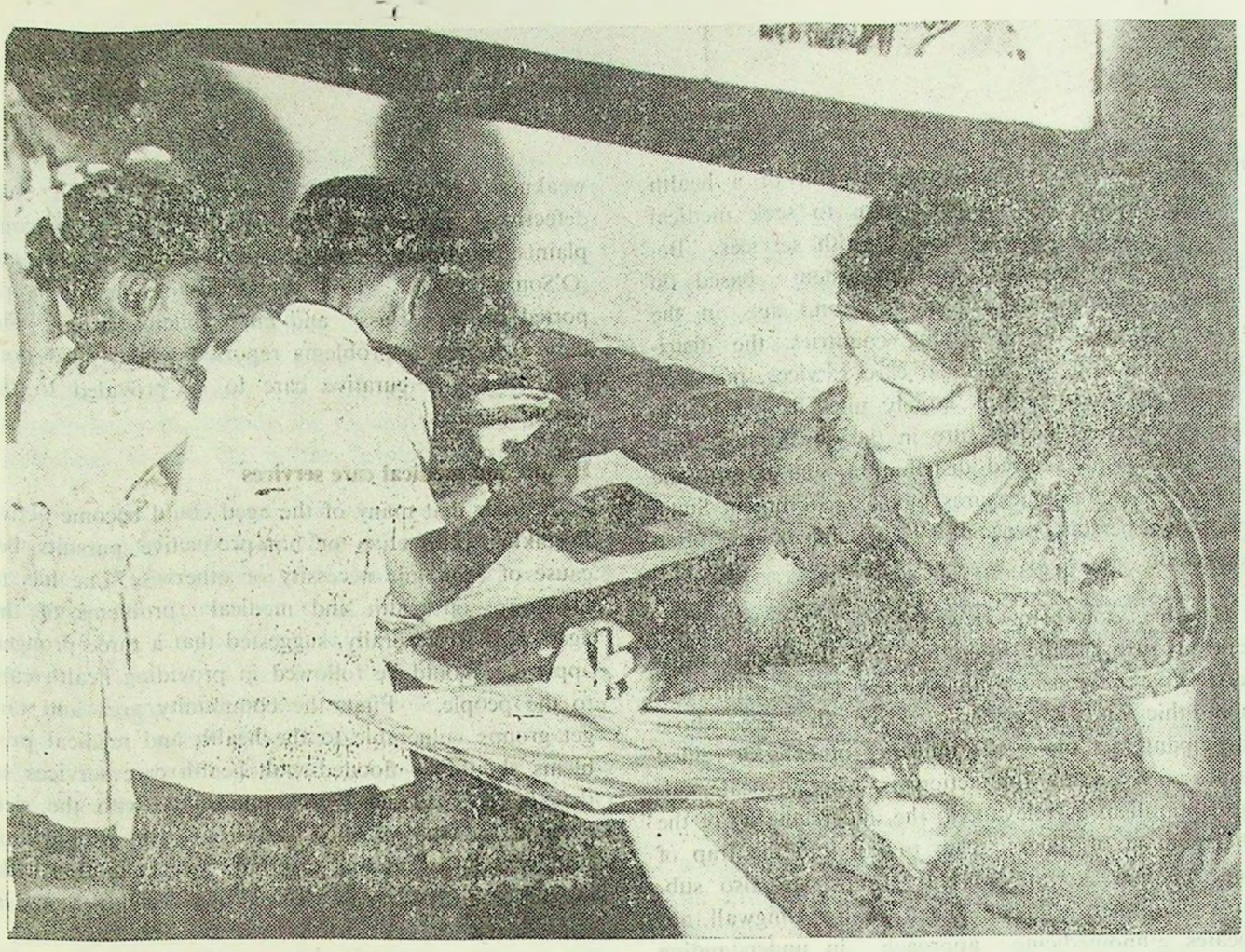

MENTAL DISABILITY

PROF. JASWANT SINGH NEKI

Disability is a complex concept. It ranges from physical, through psychological, to social disablement. Its manifestations differ widely in visibility and hence in the concern they evoke. Such physical disabilities as blindness and deafness, being most visible, have easily attracted the active interest not only of health professionals and charitable organizations, but also of many governments. Disability resulting from mental disorder, on the other hand, has attracted insufficient attention from the public even while it generates greater anxiety, disgust and repulsion than physical disability. Yet it can often be equally devastating, and afflicts not only the disabled but also many of those around them, especially members of their family.

MRS. B., the 25-year-old wife of a diplomat, had a severe phobia of pollution. She had to spend almost three hours every morning in the protracted ritual of her ablutions. Her family pleaded with her to interrupt this ritual but in vain. She realised her folly, but felt helpless before it and was herself very miserable. To worsen her predicament she gave birth to a baby whose toilet needs multiplied her ritual to several times a day. By now she was spending most of the day in her bathroom. The whole family was in misery.

Fear of pollution (misophobia) is only one of many kinds of phobias. The incidence of phobic disorders sufficiently severe to cause definite disability is between one and two per thousand in the developed world, where they account for between two and three per cent of psychiatric patients. A high proportion of these are agoraphobics—those who have fear of open spaces. They cannot leave their homes unaccompanied and are therefore severely incapacitated individuals.

There are many other varieties of phobia. As an airliner took off from Athens airport not long ago, a middleaged man sprang to his feet and shouted, "My heart! my heart!" he clasped his chest with his hands and his brow was studded with sweat. Being the only doctor on board, I was called in to assist. I listened to his heart and took his blood pressure: both looked normal. I asked him, "Do you fear closed spaces?" "Yes", he replied "I didn't want to fly, but had to."

A great many people are afraid of lizards, mice, spiders, cockroaches or what have you. Yet their disability is often known to themselves alone or to those immediately around them.

These are by no means the only disabled group of psychiatric patients. Dr K. L., a 45-year-old physicist, was stricken with depression. He stayed in bed, uncommunicative. He had even to be cajoled to eat, which he barely did, and in four weeks lost four kilograms of weight. Previously, he had loved his laboratory and his family—but now would not even look at them. His mind was full of gloomy thoughts and he spent much of the time planning how to end his own life. He had twice attempted suicide, but each time prompt medical help saved him. His illness had incapacited him more than any paralysis would.

Again, depressive illness is quite a common condition. Its life-expectancy rates obtained from population studies vary from 9 to 18 per 1,000 for males and 22 to 28 per 1,000 for females.

The most dreaded of all psychiatric illnesses is schizophrenia, which is associated with a variety of handicaps and disabilities. First, there is the "premorbid handicap"—the handicap due to factors that precede the illness. These include poor social class, lack of education, poverty of skills, and social isolation. Next, there is the primary handicap due to the illness itself, with such "negative" symptoms as impoverishment of feeling, social withdrawal, poverty of speech, slowness of movement, lack of motivation and initiative. The schizophrenic is thus walking a tight-rope, in danger on the one hand of an under-stimulating environment aggravating his or her "negative" symptoms, and overstimulation on the other hand aggravating the overt psychotic symptoms such as delusions or hallucinations. Certain secondary handicaps, not arising from the illness directly, may result from prolonged institutionalisation. These include apathy, loss of interest, loss of initiative, lack of individuality, lack of assertiveness, and deterioration of personal habits.

These handicaps not only aggravate disability but also make rehabilitation an arduous task. Where psychiatric help is not readily available, families really do not know how to contend with schizophrenic kinsfolk. Loss of social skills render them particularly unfit to fulfil their expected roles—whether as wage-earner, housekeeper, spouse or parent. They present a wide spectrum of incapacitation and disability.

Cultural variations especially seem to characterise the disability of this disorder. There is perceptibly less disability from schizophrenia in the developing than in the developed world. This difference is further widened by the higher and more complicated expectations of patients in the developed world.

The disability from which epileptics suffer may appear only intermittently but social handicap is present all the time. They may not drive, nor swim, and must not expose themselves to dangerous situations, for instance by working with heavy machinery. The prevalence of epilepsy is much higher among psychiatric patients (3 to 10 per cent) than that found in the general population (0.6 per cent).

Mental retardation is another condition beset with severe disability. Though detected in childhood, this condition may continue well into adulthood due to improved chances of survival of the patients. There may be need for the provision of special schools, special residential placements and special guidance services.

Then there is the disability produced by treatment itself. Most drugs used in treating mental disorders have side-effects—luckily reversible in a majority of cases. But sometimes a severely disabling and irreversible disorder may remain behind. Electroconvulsive therapy can produce memory disturbances, especially disabling in those who have to do intellectual work. Luckily, they tend to recede with time, but may take several months to disappear completely.

Clearly psychiatric disability has a very wide spectrum. Though the physically disabled have already become a powerful pressure group in contemporary society, the same cannot be said of the psychiatrically disabled. They offer a major challenge to society in their search for equal rights. △

—World Health
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NUTRITION AND MENTAL IMPAIRMENT

DR R. D. SHARMA

THERE is accumulating evidence to show that disorders of nutrition may cause some mental disturbances. We do not know just what lack of metabolic food elements may be responsible for the retarded development, but we do know that when the nutritional deficiency is corrected, there is marked improvement in the mental reaction of the child (Levinson, 1967).

Maternal nutrition prior to delivery affects the brain growth (Sharma, 1984). The peak period of brain growth are the last fifteen weeks, of pregnancy, which coincides with the period of maximum growth of the foetus on the whole. During this period the nutritional demands of the growing foetus are greatly enhanced, and if the mother fails to meet these demands, the satisfactory growth of brain is likely to be adversely affected. Maternal nutrition may, therefore, interfere with fetal neuronal development. The growth of human brain involves enormous proliferation of neurons, extension of axons, and dendrites and the process of mylination. (Manocha, 1975). During its peak growth period, synthesis of protein and lipo proteins make up to ninety per cent of the dry weight of the brain (Cowley and Griessel, 1966).

It is estimated that there is two thousand times increase in protein substances during the process of maturation of a neuroblast into an anterior horncell. If this figure is magnified for the entire brain, the latter at the time of birth is gaining weight at a rate of 1 or 2 mg/minute. A generous supply of nutrients is, therefore, essential for the mother, who in turn must obtain it from her dietary source. Whereas a marginal supply of nutrients to the mother may be enough to sustain the foetus in its early stages of pregnancy, the needs of the rapidly growing foetus during the last trimester are indeed considerable and may outstrip maternal supplies if no serious attempt is made by the mother to increase significantly her nutrient intake during this period (Manocha, 1975). If the mother fails to provide the needed nutrients, the results are disastrous for the baby because it is likely to change the composition of the brain (Reoder and Chow, 1972). The deficiency of essential nutrients affects the intellect by directly modifying the growth and bio-chemical maturation of the brain. Dobbing (1968) and Manocha (1972) have suggested a direct damage to the structure of the brain in humans and monkeys during their period of fastest growth, which occurs at about the time of birth. Those newborn babies who succumb to malnutrition soon after birth show a marked reduction in their brain cellularity (Winick and Rosso, 1969). Some of the survivors in this group are left permanently with the small cellular endowment (Winick, 1970). Such anatomical damage manifests itself in irreversible functional impairment (Monckeberg, 1969). Some studies suggest that various regions of the brain have once in a life opportunity to grow properly and during this period (late pre-natal and less than two years of post-natal life), even mild to moderate malnutrition may produce irreversible damage. It is quite probable that satisfactory brain development during this period is a pre-requisite for satisfactory subsequent bodily growth (Winick, 1972; Dobbing, 1973, 1974; Dobbing 1973, 1974, Dobbing and Sands, 1973). It may be remembered that by the time a child is three years old, eight per cent of his brain development has been completed compared to only, twenty per cent of his body development. Under these conditions, malnutrition that affects the growth of the baby is likely to affect the brain development as well (livingston, 1971, Widdowson, 1972).

Electro Encephalographic (EEG) abnormalities are a good index of functional impairment, which most likely reflects anatomical damage (Stoch and Smythe, 1963). If the degree of malnutrition suffered in its intra-uterine life, because of the mother's inability to provide nutrients is severe enough, the EEG abnormalities may never become normal even if the child is apparently physically rehabilitated in his later life.

Hypoglycemia of the neonate whose growth has been retarded in its intra-uterine life, may also be responsible for damage to the brain. The hypoglycemic infants show a deficiency of hepatic glycogen. This will adversely affect the brain of a newborn baby which has very little stored glycogen and is totally dependent on blood glucose for its energy requirements (Naeye, 1966). With respect to direct involvement of the nervous system during the episode of severe malnutrition, one may reasonably conclude that malnourished babies do exhibit a profound ability for catch up growth including physical size, brain growth or head circumference, but there is a critical period during intra-uterine and neonatal life during which malnutrition may cause irreversible damage to the brain and adversely affect learning ability (Manocha), 1975).

During the intra-uterine life the environmental factors also play an important role. It has been observed that infants who are malnourished in their fetal life belong to parents from lowest socio-economic group who are trapped in poverty and illiteracy. A child belonging

to them is not only malnourished, and prone to catching common infections because of the insanitary dwelling in which he lives, but also experiences retardation in language, personal, social and psychological behaviour because of the cultural impoverishment of the parents (Barnes, 1972; Craviote and De Licardle, 1968; Monckeberg, 1968, 1972; Schrimshaw, 1968; Cheek *et al*, 1972; Vahlquist, 1972).

It may be worthwhile to summarize the findings of a few pertinent investigations which indicate the effects of early malnutrition on intellectual performance. Cabak and Najdanvic (1965) studied the effects of undernutrition in early life on the physical and mental development of 36 Serbian children who were hospitalized for severe malnutrition between 4-24 months of age. It was found that their mean I.Q. level was 88 as compared to an average of 93 in children of unskilled Serbian workers. Kagan (1973) believes that during the period of 12 to 18 months, some important cognitive changes occur in the child's mental development. It is likely that malnutrition at this critical age vitally affects the cognitive development of the child.

Liang *et al* (1967) in a study on malnourished children who were in the age group 2-4 years found that these children were lagging in their I.Q. due to deficiency of vitamin A.

It may be reasonably concluded that children who suffered severe episodes of malnutrition in their early life suffer severe handicaps in their adult life, fail to learn the substance of human culture and do not acquire the skill necessary for competing in this aggressively competitive world.

Conclusion

The well being of the newborn and the mother is a matter of great significance in every society. Improved nutrition of the mother will decrease the chances of mental impairment in the child as well as improve its learning abilities (Chow, 1973). A well nourished mother will meet most of the requirements of her growing fetus. Therefore, it is very important to disseminate knowledge on nutrition for infants, adolescents, pregnant and lactating mothers.

In view of nutritional problems the following suggestions are given to deal with these problems:

1. There should be proper facilities for treatment and prevention of malnutrition.
2. Nutrition Education should be an integral part of health, non-formal, adult and population education.
3. There should be proper training for physicians, nurses, midwives and all medical and health personnel to deal with nutritional problems.
4. Planners, nutritionists and social scientists should join on common platform to deal with nutritional problems.

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Appropriate Technology for Birth

There is no more crucial passage in life than birth. Yet 60 per cent of the world's women do not have access to pregnancy care and safe delivery care, which would dramatically reduce the risk of maternal and newborn mortality. Making available to them the appropriate technology that is required would be a decisive step towards Health for All.

The basic kit shown below is simple, inexpensive and can be made from locally available materials. It supports three essential factors that will dramatically reduce the risk of infection in mother and child: a clean delivery surface, clean hands (soap and a nailstick), clean cutting of the umbilical cord (a razor blade and cotton for tying off the cord). A tape measure enables the health worker to monitor the growth of the uterus regularly, in order to detect conditions that require special care. Newborn babies and infants can lose as much as 25 per cent of their body heat unless they are well wrapped up; a simple cap made from several layers of cloth (photo right) can conserve a large part of their body heat, and thus make them less vulnerable to sickness. This is another example of Appropriate Technology for Birth.

Above: *Even a short training course for traditional birth attendants can dramatically reduce perinatal mortality: see graph, far right.*
Photo WHO/ILO

Below: *If they are too short, women may have difficulties during the delivery. They can easily be identified with a measuring stick and referred to more specialised care.* Photo WHO/J. Bentley

Photo WHO

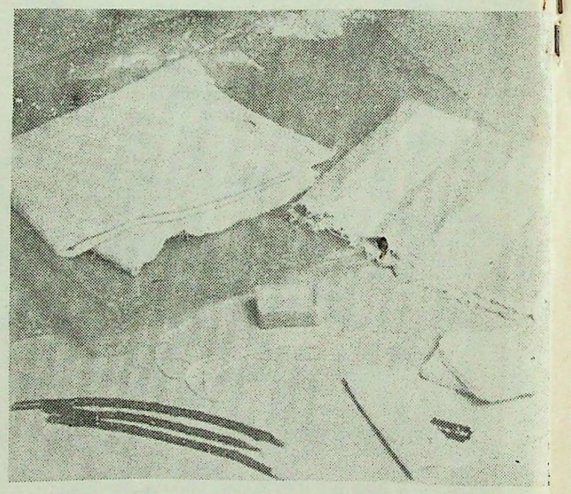
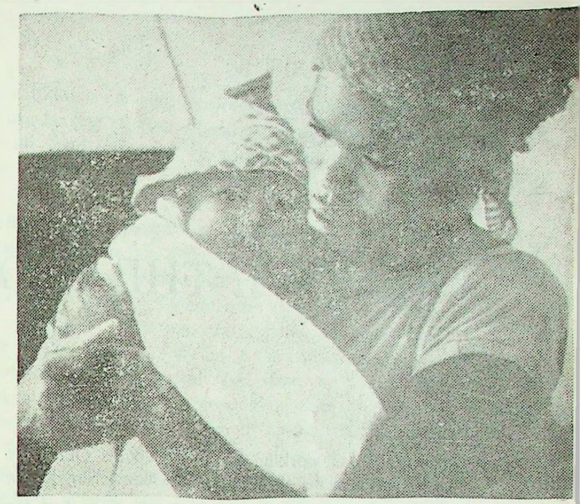


Photo WHO/A. Pratinidhi



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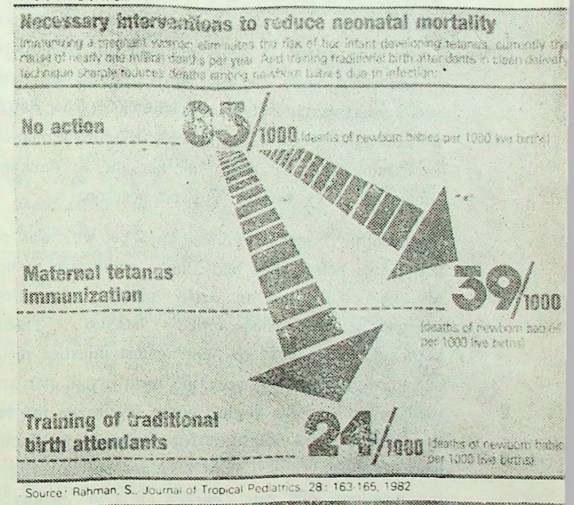

Source: Rahman, S., Journal of Tropical Pediatrics, 28: 163-165, 1982

FEATURE

REMOVE THE CLOUDS OF DEPRESSION

DR H. MAHADEVAPPA

The general public is under the impression that only those who are mad ought to visit the Mental Hospital. They fail to realise that the stress and strains of modern way of life can give rise to many major illnesses which can be effectively treated by a Psychiatrist.

LAXMI was working as an Accounts Officer in a Government office. Her husband Nagaraj, was working as a lecturer in a College. They had three Children. All were going to School in Malleswaram. Laxmi was about 35 years old and full of activities in her social circle. Laxmi's mother-in-law Mallamma was a good woman. She was taking care of her daughter-in-law very well. Laxmi and Mallamma's relations were more like that of a mother and a daughter. Financially they were in a good position.

Recently Nagaraj noticed that his wife was not active like before. She had almost withdrawn to herself. Earlier she was an active member of various women's organisations like 'MANINI', 'FEMINA CLUB' etc. She used to fight against injustice meted out to women. Every week the members of her area used to get together in her house to discuss the further course of action. But for the past one month he had noticed that Laxmi was not participating in the meetings. She was earlier an avid reader of women's magazines. Now she had totally left reading any of the magazines. When asked about it, she had replied that she had lost interest in women Liberation movement in India. She told him that she did not like to meet people. She wanted to stay alone in the house. She had stopped chatting and gossiping. This was a surprise for Nagaraj, as she was very active in social circle. It was a real surprise for him.

Once Mallamma asked his son when he was alone, "Nagu, I am seeing some subtle changes in the behaviour of Laxmi. Now-a-days, she does not talk to me freely. Previously she used to work in the kitchen also. Now she does not even bother to prepare a cup of tea. Of course, I do not mind to work in the kitchen. Afterall, I have no other work to do. But, Nagu, I feel, that at times she talks to herself. I had heard her talking even when no one was there in the room. Once I asked her the reasons for this behaviour. But she did not respond to my queries. She was looking at me as if I was a stranger. Please do not think that I am complaining against your wife. I just suspected if you had any quarrel with her. Is it so?".

Nagaraj, replied in the negative. He told his mother that he also had observed that kind of behaviour. After all we have no problem to lead a happy life, he said. Socially, financially and medically he had felt that she was fine. Then what is wrong with her now, he wondered.

When Laxmi lost interest in eating food and even in sex, he became very much concerned. He got Laxmi examined by a general practitioner. The

General practitioner was a very busy Doctor. As Nagaraj, complained that his wife had lost interest in eating food, and did not get a good amount of sleep, the Doctor prescribed some tablets and tonics, and as usual he gave an injection of B-Complex. The examination had taken only four minutes. However, even after few days, the condition did not improve. Laxmi remained as she was. She had withdrawn now totally. He did not know what to do now.

Nagaraj talked to his friend Mohan, who was a technician in the Radiology Department of a hospital. He knew a little about mental illness. He suggested Nagaraj to get the treatment in a Mental Hospital. But Nagaraj, did not agree. "What? in the Mental Hospital. My wife is not a mad woman. Of course, she is not as active as before. She does not take food properly. She had lost interest even in sex. But these are the things which even normal people can have. Even I had the same problem when I had fought with my boss", he told Mohan. But Mohan persisted "See! you have taken her to one of the best General Practitioners in this area. Did she improve? No. Even if you take her to another physician. I bet that they would not prescribe more than what a General Practitioner has already given. To my mind, it appears that there is nothing wrong with her physical health. The problem is with her mind. For that reason, it is better to consult a Psychiatrist. Why don't you bring your wife on Thursday?"

Initially, Laxmi was not willing to get examined by a Psychiatrist. There was almost a small quarrel over this issue. Finally Laxmi agreed. Nagaraj, took her to Dr Chandrashekar, the Psychiatrist of a Mental Hospital.

Dr Chandrashekar, was an experienced Psychiatrist. He was a popular Doctor. He had mild manners and sympathetic attitude towards the patients. He listened patiently to what Nagaraj had to say, and interviewed the patient in detail. Finally he came to a conclusion that the patient had sufferred from Endogeneous Depression.

What is Depression?

Is it an incurable illness? No, it is definitely curable. All of us at times feel depressed. It may be due to a blow to our ago, loss of money, or disability or it can be due to separation from the loved ones such as the death of spouse or parents. But we overcome the depressed mood and go on to lead a normal life.

But in some patients, there need not be any precipitating factor to make them depressed. Without any reason these patients can get depressed. They withdraw from most of the activities they were interested in previously. They lose the appetite and may lose the weight. They may get up in the early, hours in the morning, sit in the chair and start looking at the ceiling with a vacant expression on their face. When questioned they may refuse to answer the question. Even when they reply, they may do so in Monosyllables. They may lose their interest in sex too. If the husband persists and proceeds in the act, they may be just passive partners in the game. When questioned about it, they may tell that they have lost interest in it. The depressed mood may last in some patients for a few weeks and in others it may last for few months. Though this illness may effect any age group most commonly it effects the adults, middle aged and elderly. It is more common in women. Particularly, it may occur when the woman is near the menopausal phase of her life—the crucial period in women's life, when she loses her confidence in her beauty, attractiveness and sex appeal.

In severe cases, the patient may try to commit suicide. If, she is rescued by the cautious relatives or friends, she may become angry and violent. She may try to commit suicide again. So, the threat of suicide, thoughts of suicide, or suicidal attempts should be taken seriously, as it is one of the main features of depressive illness. During the critical period, constant watch is necessary.

Many people think that such illness may not get cured by medical methods. So they resort to other methods like going to a traditional healer, an astrologer, or to a temple of their choice. They try all these methods before coming to a Psychiatrist. Such practice is more common in rural areas. The reason being that the stigma attached to the patient who visits the Mental Hospital still persists. The general public is under the impression that only those who are mad ought to visit the Mental Hospital. They fail

to realise that the stress and strains of modern way of life can give rise to many major illnesses which can be effectively treated by a Psychiatrist.

The reason for these types of depressive illness is now recognised to be due to changes in the amines in the brain. In this particular illness there may or may not be any stress factor. Though it is to a some extent hereditary, it can be effectively treated.

Most of the times the patient can be treated by oral tablets alone. Injections are not necessary. It is useless to give B-Complex injections and other vitamins in the hope that the patient will gain some strength to carry on the activities. So also with the tonics. If the patient says that she has lost appetite, the first thing the husband does normally, is to go to a Medical shop and bring an attractive bottle of tonic. Tonics are not necessary and are useless in this kind of patients, as the symptoms of loss of appetite and other features are caused by the changes in the mind.

If the condition is severe, then the patient may need to be given Electro-Convulsive Therapy. This can be given every 2 to 3 days. Normally, it may be necessary to take about ½ doz. therapies (E.C.Ts). As anaesthesia is given in modern mental hospitals. ECT is not painful. Patient will get enormous benefit with this procedure, though there are some controversies over this issue. It is specifically indicated where the suicidal possibilities are higher. As drugs take about a month to be effective, E.C.T. is used to treat the severely depressed patients.

Now, Laxmi has recovered from illness. However, the Doctor has advised her to take drugs for another six months. Now she has understood her illness and so have her family-members. She no longer feels sad. She joints in all activities which she was fond of earlier. Whenever she feels sad, or feels like commuting suicide, she tells about her feelings either to her husband or to the Psychiatrist. She takes the drugs regularly and though she at times feels that she had now become a mental patient, she is confident that she can live like any other normal individual. Her husband and mother-in-law do give their psychological support to fight her illness. Now Laxmi is no more sad. She is now happy and full of vigour and vitality, and so is her husband. The clouds of depression have been removed. △

(*contd. from page* 37)

diseases and inculcate these in their behaviour patterns through constant practice so as to prevent the occurrence of diseases or reducing the effects of illnesses. Experience has shown that education by itself in the developing countries may not be that effective. As such, it is necessary to support it with curative services to be provided by different health personnel and agencies.

Group talks on health matters supplemented with projected media may be effective for educating the aged persons. Social gerontology should also form a part of the syllabi for medical professionals and para-medical professionals so that they could integrate health education alongwith health care to be provided to the aged persons.

Perhaps, a judicious mix of curative services, legal protective measures and health education can become a basis for tackling the health and medical care problems of the aged. But more than that the community members have also to be sensitized about the problems of the aged so that a greater commitment and involvement of the community leaders could be ensured in order to include "care for the aged" within the purview of Primary Health Care rather than making it a responsibility of Secondary and Tertiary Hospital Based Care.

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PEOPLES PARTICIPATION— NEED FOR COMMUNICATION

— Prof. B. C. Srivastava
— Dr Sanjay Chaturvedi and
— Surendra Mohan

Health for all means attainment by all the people of the world of a level of health that will permit them to lead a socially and economically productive life. It does not mean that by the year 2000 doctors will provide medical treatment to everybody in the world nor it means that nobody will fall sick in the year 2000. But it means that essential health care will be *accessable* to all individuals and families in acceptable and affordable way and with their full involvement. The people will realise their responsibility and power in prevention of diseases and promotion of health. Conceding its feasibility, we propose that the current infant mortality rate of 120 per 1000 live births comes down to 60 and present death rate of 15/1000 drops to 9/1000 by the year 2000. By the same time birth rate should come down to 21 from 33 and net reproduction rate to 1.00 from 1.67. This will be possible by effective protection of 60 per cent of the eligible couples against 22 per cent at present.

The key to attainment of "Health for all by the year 2000" is to develop the system of primary health care. With Primary Health Care as its principal instrument 'Health for all' becomes a practical proposition and not merely a pious hope. Several action research studies undertaken in various parts of India and in other countries reveal that, given the necessary encouragement and guidance, the community can look after majority of its preventive, promotive and simple curative health problems, leaving only a proportionately small quantum of the difficult curative problems to be dealt with by the more sophisticated health care services.

People's responsibility of their own health

Governments have a responsibility for the health of the people, but people, too, have the right and the duty to take an active part in maintaining their own health and, when they are ill in looking after themselves. They have the same duty with respect to their families, their workmates, their neighbours. All of them can be agents of change for health—ordinary citizens going about their daily business in villages and towns, grouping together in families and communities, and associating with one another in all forms of social and political groups, educational and research institutions, non-governmental organisations and professional associations. Health workers, too, are part of the people; so are others who have community responsibility, such as civic and religious leaders, teachers, magistrates, community workers and social workers. Without the dedicated involvement of people health for all will be a constantly receding horizon.

But to act wisely, people must understand what health is all about. And it is the duty of those who possess health knowledge to share it with others. The days are over when action for health was the prerogative of all-knowing individuals holding their professional secrets to themselves and handing out doses of it to ignorant, passive patients lining up for charity. To bring about widespread understanding about health was the reason for giving pride of place among the essential elements of primary health care to education concerning prevailing health problems and methods of preventing and controlling them.

What can people do about their health?

To give a few examples, people can take individual and community action to ensure that they have sufficient food of the right kind. They can get together to make the most of whatever safe water is available, or can be made available, making sure that it is protected from pollution and contamination. They can insist on acceptable standards of hygiene in and around their homes, in market places and shops, in schools, in factories, in canteens, and restaurants. They can learn how to space the children they desire in such a way as to give each and every one of them a good chance of survival, reasonable education, and a decent quality of life.

Women can help one another to remain healthy during pregnancy and breastfeeding, seeking the advice of health workers as and when necessary. Parents can learn how to rear their infants in a healthy manner, to look after them if they get diarrhoea or respiratory infections, and to ensure that their children are immunised against the prevailing infectious diseases, for which the country and community can afford to provide immunisations. They can be taught to recognise those serious conditions that require attention from more knowledgeable health workers.

Communities, with the help and guidance of community health workers, can undertake tasks to fight against such diseases as malaria and other parasitic diseases, for example, by organising insecticide spraying and the control of insects and other carriers of disease such as rats houseflies and snails. Mothers and fathers can make sure that their children get the drugs they need to prevent and treat malaria and ensure that their elders or the disabled receive the care they need but are unable to provide by themselves. Communities can see to it that school children receive training in first-aid and in the elementary care of simple illnesses. Communities can also take action to ensure that drugs that are essential become available to them at a cost they can afford.

Need for communication

Education for health requires both motivation and communication. For communication can and *should* not only provide insight into what is needed to remain healthy and what should be done when health begins to fail; it also can and should heighten individual and community aspirations towards better health. Effective communication will give rise to greater motivation and this in turn to improved communication.

A steady flow of information is required, not only by the written word, through local and international newspapers, and journals, but also through talks, group discussions, radios, television, comic strips, plays, films, vocal music and the like. And this communication should take place in families, schools, factories, offices, universities, social and religious groups, trade unions, political parties, and at all places wherever people meet. △

"The transformation of health between the eighteenth and twentieth centuries was due essentially to the decline of infectious diseases, brought about mainly—until 1900 wholly—by better nutrition, provision of clean water, improvements in sewage disposal and a reduction in birth rates... It is probably true to say that if [these] basic measures were implemented throughout the world by the year 2000 the goal of 'health for all' would be achieved if nothing else were done; if these measures are not implemented, the goal will not be achieved whatever else is done."

—Report of the First Meeting of the ACMR Sub-committee on Health Research Strategy for HFA|2000

WASTE DISPOSAL—A BREAKTHROUGH

N. K. RAY

NATURE has its own in-built system of maintaining ecological balance. If we examine its wonderful method of maintaining its environment and keeping the balance of things in it, we will be amazed to find the perfect arrangement made by Mother Nature. But with the development of mankind, growth of civilisation and rapid industrialisation, man has not only polluted the natural environment, but has also brought it to the brink of destruction and disaster.

Ecologists have now realised that unless effective steps are taken to save the situation, a time will come when man will die of hunger, thirst, disease and even suffocation.

Among many factors which have contributed to disturb ecological balance, ignorance tops everything. Time is near when rivers will be nothing but perennial drains and lush forests, nothing but deserts.

Keeping our environment clean needs vigorous efforts. Disposal of human waste is one among the various important problems to be solved.

For the first time, The Sulabh International, Voluntary Social Organisation, has taken up the gigantic task of pioneering a scientific system of human waste disposal.

A proper system for the disposal of night-soil is an important aspect of environmental sanitation. The existence of nearly 41 lakh service type latrines throughout the country is posing a serious problem affecting the health of the nation.

Disease causing

Owing to non-availability of a suitable system of night-soil disposal, human excreta becomes a reservoir of causative agents for diseases such as cholera, dysentery, typhoid, paratyphoid fever, infectious hepatitis, hook-worm, and so on. Consumption of polluted water and contaminated food and exposure of the population to polluted soil results in transmission of diseases. One of the most effective measures for combating such diseases is to create a barrier to break the chain responsible for transmission of diseases. Proper disposal of human excreta is thus the most important measure for the control of spreading diseases.

Various systems such as the sewerage and septic tank, for the proper, safe and hygienic disposal of human wastes adopted so far have not attracted mass acceptance due to their high cost of construction and maintenance and inadequate supply of water. These are the retrogressions which have caused a lop-sided situation. Thus, out of 3245 towns in India, most do not have even a partial sewerage system.

Sanitary engineers, planners, social scientists and health organisations have been making all-out efforts to develop or even invent a more economical, safe and hygienic system for the disposal of human waste, keeping in view the aforesaid constraints. In Bihar, standard/design of low cost waterseal hand flush sanitary latrine with lateral pits was developed which is popularly known as "Sulabh Shauchalaya". It is a suitable sanitary latrine in which the surface soil is not contaminated and, pollution of ground and surface water is eliminated. It prevents access of flies and animals to waste. It does not necessitate handling of excreta for disposal. The method of its construction is simple and inexpensive. It is odourless too.

Nearly one lakh Sulabh Shauchalayas have been installed in Bihar so far and 5,000 in West Bengal. The crusade is on. The programme is being carried on in other States and some neighbouring countries too. Apart from motivating individual house-holders, the organisation also constructs and maintains public latrines in places like railway stations, bus stands, market areas, hospitals, office compounds, etc. About 50,000 people are daily availing of such facilities in Patna alone. In Calcutta, three public latrines and bath complexes comprising 60 seats have been constructed and about 3000 persons are using this facility daily.

Wide adaptability

An assessment of the data collected and specific studies made by various international agencies, such as WHO, UNDP and UNICEF, reveal that this system can be adopted in almost all hydrogeological conditions without any risk of pollution. It has been widely accepted in different parts of the country and abroad under varying soil, water, climatic and biological conditions.

In the seminar on low-cost sanitation, held in Calcutta in February 1982, sponsored by the All-India Institute of Hygiene and Public Health Engi-

neering Directorate, Government of West Bengal, the consensus was that in unsewered areas, the two-pit pour-flush latrines were the most suitable for human waste disposal. It was also recommended that the programme should be introduced in order to eliminate the existing manual privy system. In recent seminars held at Udaipur and Ooty in collaboration with UNDP, the importance of low-cost sanitation has been further emphasised in the context of environmental sanitation.

Popularity

In 1979 a socio-economic survey of Sulabh Shauchalayas installed in the Ranchi Municipal areas was conducted by the Xavier Institute of Social Services. Beneficiaries expressed their full satisfaction and majority of them were convinced that vulnerability to epidemics had decreased considerably after the installation of Sulabh Shauchalayas.

So, the low-cost sanitation with an on-site excreta disposal system developed by the 'Sulabh International' and widely known as 'Sulabh Shauchalaya' fully meets all the requirements of a safe, sound and hygienic system, which can serve as an alternative to the sewerage and septic tank systems, particularly in under-developed and developing areas, where economic constraints stand in the way of such projects. Conversion of bucket latrines into Sulabh Shauchalayas as also construction of public Sulabh Shauchalaya complexes can go a long way in solving, to a large extent, the sanitation problems in urban and semi-urban areas which, in turn, will refurbish the environmental condition in general and eliminate pollution in rivers and other water bodies. △

ENVIRONMENTAL POLLUTION : SPECIAL FACTORS IN DEVELOPING COUNTRIES

The pathophysiological effects of exposure to environmental pollutants are not expected to vary from one part of the world to another, but the intensity of the effects may be more pronounced in developing countries because of unhygienic living conditions, malnutrition, etc.....

When discussing respiratory diseases caused by environmental pollution, one has to take note of the high incidence of pulmonary heart disease (corpulmonale) in women exposed to the fumes of firewood, dried animal dung, or even kerosene inside their homes in crowded urban settlements. Recent studies have revealed that the smoke generated by these fuels contains almost all of the toxic components found in the smoke emitted when fossil fuels are burnt, but in concentrations far exceeding those established for these substances in the WHO environmental health criteria and national standards.

Dietary factors can influence the toxicity of chemicals in several ways. The toxicities of several pesticides are enhanded in rats given different levels of protein in their diet. The direct effect of protein deficiency on the capacity of the liver to detoxify xenobiotics is well established.

The inherited susceptibility of many people living in tropical Africa to the side-effects of antimalarial or anti-tubercular drugs, haemolytic anaemias, and pancreatitis, and the vulnerability of the tribal people in countries like India to various infections, all demonstrate the influence of genetic factors on the response of the host to xenobiotics.

The toxic potential of environmental pollutants can be affected by the high ambient temperature of many developing countries. In the high temperature and humidity of the working environment, it is uncomfortable to wear protective clothing. This can increase the level of exposure to and absorption of toxic chemicals.

The influence of altitude on the health effects due to exposure to air pollutants is apparent in Mexico City, and in workers engaged in the processing of mineral resources in high altitude areas of Chile, Bolivia, India, and Nepal who are exposed to noxious smoke and fumes in addition to the physiological stress of altitude.

In summary, it would be unrealistic to assume that the threshold limit value (for pollutants) derived for the highly industrialized countries are applicable to workers and the general population in tropical or semitropical countries who may have a background of undernutrition and parasitic infections and who may be exposed to an unhygienic environment. This may also be true for acceptable daily intakes.

From: WHO Technical Report Series, No. 718, 1985 (Environmental pollution control in relation to development: report of a WHO Expert Committee), pp. 14—15.

Continuing Global Increase in Alcohol Production and Consumption

"MANY disabling and sometimes fatal physical and psychological conditions can be attributed either wholly or in part to excessive drinking . . ." "Alcohol is destroying millions more than the famine in the Sahel, and in some countries the number of known alcoholics equals the population of the largest cities . . ." "Advertising cannot be blamed for alcohol abuse . . ." These are some of the statements aired in a controversial round table discussion on the alcohol trade and alcoholism published in *World Health Forum*, rd. 6, No. 3, 1985, a publication of the World Health Organization (WHO) which constitutes an international forum for discussion on all aspects of public health whilst not necessarily reflecting WHO's own policies.

World commercial production of alcohol rose by almost 50% between 1965 and 1980. Two-thirds of the world's alcohol production occurred in Europe and North America but since population growth in these regions has been the least rapid, this would indicate a growing importance in international trading in alcoholic beverages. The Republic of Korea, Japan and Mexico have experienced very rapid rates of increase in alcohol consumption and other countries in Africa, Latin America and Asia have already embarked on paths that lead in the same direction.

Opinions were divided on the importance of marketing practices and advertising as a causal factor for the increase in alcohol consumption. Advertising practices include the sponsorship of sporting and cultural events, the dissemination of brand names and logos on clothing, as well as the more traditional forms of advertising. This could be an issue of special concern in countries that do not have a long tradition of popular advertising and where the population may be more vulnerable to extravagant claims. In developing countries, young men living in urban areas are often the first to adopt the practice of heavy drinking. However, another opinion was that advertising is most unlikely to have more than a minuscule effect on total alcohol consumption and that factors such as unemployment, broken homes, stress and psychological disorders often have a greater influence on drinking patterns. It was pointed out that abuse of illegal drugs was clearly not the result of advertising.

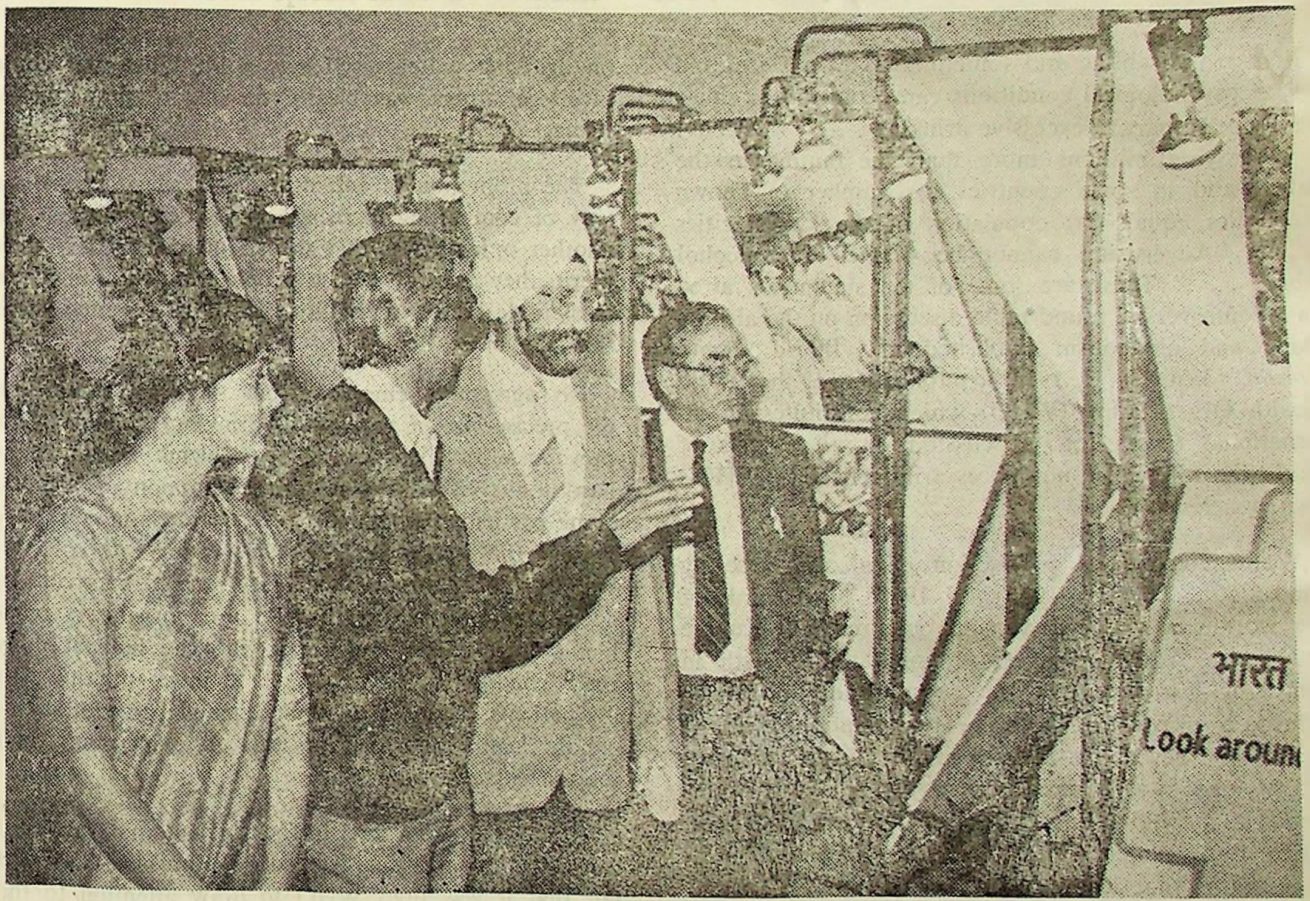
The promotion of soft drinks was suggested as one way of combatting increased alcohol consumption but another opinion was that whilst soft drinks have their merit, they did not release people from the sometimes intolerable clutch of reality, which is a human need that cannot be denied.

No agreement emerged from this round table on the precise size of the world's drinking problem. The prevalence of alcohol-related problems is almost as hard to assess as the real consumption of alcohol. Some participants pointed to rising trends in consumption as the best indicator of increasing rates of problems. Others argued that facts and figures can be deceptive—cirrhosis death rates are not always reliable; alcohol-related traffic accidents are influenced by road conditions; as treatment facilities multiply, so do patients. But all the participants agreed that alcohol-related problems are serious, widespread and require urgent action.

WHO can take a lead in focusing international concern on the increasing size of the problem. It was felt that it was upto WHO to draw attention to the steadily increasing production of and trade in alcoholic beverages and to impress on governments the inevitable public health implications that will have to be faced if this trend continues.

Participants in the round table discussion included Sally Casswell (University of Auckland, New Zealand), John Cavanagh (Institute for Policy Studies, Washington D.C.), Aleck Crichton (International Federation of Wines and Spirits, Paris), Donald Goodwin (University of Kansas, USA); Marcus Grant (WHO), Samuel W. Hynd (National Council on Smoking, Alcohol and Drug Dependence, Swaziland), Robert Kendell (University of Edinburgh, Scotland), Elizabeth Quamina (Ministry of Health and Environment, Trinidad & Tobago), Brendan Walsh (University College, Dublin, Ireland), M. J. Waterson (Advertising Association, London, England). ○

KHUSHAHALI KE RAAH—AN EXHIBITION



Above : *Shri S. S. Dhanoa, Secretary, Ministry of Health and Family Welfare (third from left) on a visit to the Health Pavilion. On his left is Shri R. P. Kapoor, Addl. Secretary, Ministry of Health and Family Welfare.*

Right : *A view of the visitors to the Pavilion.*

THE Ministry of Health and Family Welfare participated in the "India International Trade Fair-1985" held from 14-27 November, 1985, in New Delhi.

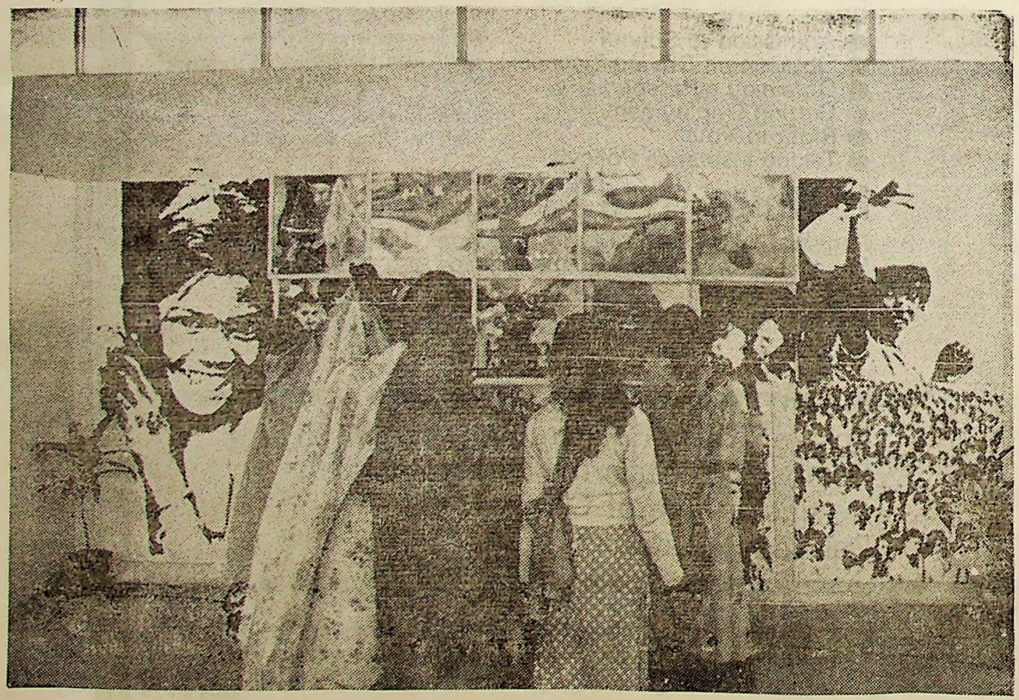
The Ministry had put up a pavilion "Khushahali Ke Raah" at the fair to highlight the role of the Ministry of Health and Family Welfare in promoting health of the people through its various activities.

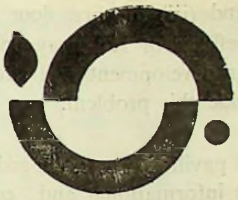
The display served as a pointer to how health and family welfare programmes hold key to good health, nutritional food, health education and other facilities.

The pavilion was divided into three parts:

(i) The basement included an audio-visual room for film-shows on family planning and free services to the visitors for blood pressure check-up, blood group identification and vision check-up; (ii) The ground floor depicted the "Tree of Life" supported by two diorama on child care through immunization and the improvement in quality of life; and (iii) the first floor depicted the adverse effects of run-away population growth on our development and efforts being made to tackle this problem.

The pavilion was adjudged the third best for its informational and educational contents among the pavilions put up by different Central Ministries.





Every Birth/Death must be REGISTERED

because it helps you

A Birth Certificate is proof of age for purposes like :

- Admission to School
- Obtaining a Driving Licence
- Obtaining a Passport
- Getting Employment
- Right to Vote
- Taking Insurance Policy

A Death Certificate is needed :

- To inherit property
- To get insurance money
- To settle property claims

It Helps The Nation

Registration of Births/Deaths provides basic information to forecast and plan for future needs for **BETTER HEALTH** and **BETTER LIFE**

It is compulsory too under the Registration of Births & Deaths Act, 1969

Ensure Timely Registration of Births & Deaths and obtain the Registration Certificate free of Charge.
Delayed Registration is also permissible

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davp 85/25

NEWS

Health Ministers of South-East Asian Countries Meet

The fifth meeting of Health Ministers from WHO's South-East Asia Region was held in Colombo, Sri Lanka, from 5-7 November, 1985.

The agenda for the meeting included a review of the progress in the implementation of the health for all strategies. Ways and means of strengthening development of leadership to accelerate the march towards the goal of health for all was also discussed.

An innovation this year was a field visit organized by the host government to show the guests the implementation of various primary health care programmes. The areas covered included community participation in health development, health infrastructure development and health information systems with particular reference to the expanded programme on immunization and the control of diarrhoeal diseases.

Sponsored by the WHO South-East Asia Regional Office and hosted by the respective Member Governments, the meetings of the health ministers have been held in Jakarta, Dhaka, Kathmandu, and New Delhi respectively during the past four years.

At their first meeting, the Ministers had called for organized steps to establish collaboration amongst countries in the Region, specially with regard to the implementation of the national and regional strategies for achieving the goal of health for all. At subsequent meetings, the Ministers identified common areas for collaborative efforts in health manpower training, diarrhoeal diseases control, immunization, maternal and child health, family planning, nutrition and control of epidemics.

Some initiatives have already been taken in this regard, with particular reference to technical cooperation among developing countries (TDC) activities. A memorandum of understanding has been signed between Thailand and Nepal to further collaborate in mutually identified health development areas. Similar initiatives are envisaged between other countries in the Region.

--U. N. Weekly News letter
9 November, 1985.

Test For Early Detection of Cancer Developed

Researchers at Monash University in Melbourne have developed a test for detecting the early stages of cancer in the stomach and digestive tracts.

The blood test has been patented and is in the process of meeting strict Japanese regulations, one of the last barriers between it and a possibly lucrative initial world market.

Although not a cure for this major form of cancer, the test is regarded as a substantial advance in the long medical battle against cancer. The incidence of colorectal cancer is second to that of lung cancer in men and breast cancer in women. If tumours in the colon or rectum are discovered before they spread out of that part of the intestine—previously difficult to detect as there are few symptoms until the cancer is widespread—they are much easier to cure by surgery.

The director of the Monash Centre for Molecular Biology and Medicine, Professor Anthony Linnane, said it was possible the blood test would become a standard screening procedure for any patient over a certain age.

The test, which took about five years to develop, looks for a particular substance that is generated by the tumours on the walls of the colon, rectum, small intestine and stomach and finds its way into the blood.

—AIS

New Probe into Arthritis

Arthritis in its various forms is one of the world's commonest diseases. Although cold, wet weather often makes the symptoms worse, the underlying disease process is likely to occur in all climates.

It is possible that the worldwide incidence of the disease is in the region of 480 million cases.

Any successful research into the cause and cure of arthritis will benefit the sufferers of this crippling disease in many countries. It is welcome news, therefore, that one of Britain's voluntary organisations, the Arthritis and Rheumatism Council for Research, is to spend £ 23.7 million in the next two years to discover its cause and cure.

The normal function of the immune system of the body is to protect it against foreign substances. The system is mobilised when anything potentially harmful enters the body. However, in certain diseases the forces of the immune system turn inward so that they are mobilised to attack the body's own tissues.

Women Hit Hardest

One of these auto-immune diseases is rheumatoid arthritis, a crippling condition most common in women between the ages of 35 and 50. It is three times more common in women than in men. No age is exempt.

There is a juvenile form that affects children and it can manifest itself in old age. In this condition the cells of the immune system appear to attack the structures of the joints, mainly the smaller ones, so that the tissues of the body are being destroyed rather than protected.

The cause of this abnormal reaction of the immune system is not known, and although an increasing number of drugs is available to relieve the symptoms no cure has yet been discovered.

Biochemical Studies

Research aimed at finding the cause of the other principal form of arthritis, osteo arthritis, will also be intensified. Until recently it has always been thought that this degenerative disease, commonest in old age, was part of the ageing process and due to wear and tear on the cartilage—the cushioning material that protects the moving parts of joints.

In recent years, however, a new concept of degenerative joint disease has begun to evolve as information on the wide variety of causes has become available through research.

Understanding of the degeneration of joints that occurs in osteo arthritis has been greatly helped by biochemical studies of cartilage, carried out at the Mathilda and Terence Kennedy Institute of Rheumatology at Hammersmith in West London, and funded by the Arthritis and Rheumatism Council for Research.

Immunisation Against Miscarriages

Professors James Mowbray and Richard William Beard of St. Mary's Hospital, London, have developed a new immunisation technique for treating women who have recurrent miscarriages.

Some cases of repeated spontaneous abortions (miscarriages) may be due to the fact that the mother's immune system is rejecting the baby as if it were a foreign body—in the same way an organ transplant is rejected. It is as if the woman is allergic to the paternal element in the foetus which, of course, comes from the sperm.

In the research carried out by Professor Beard (a gynaecologist) and Professor Mowbray (an immunologist) and their team at St. Mary's Hospital, washed white blood cells and lymphocytes taken from the husbands' blood were injected into women who experienced repeated miscarriages, to encourage the production of antibodies. In theory, if enough antibodies are circulating in the mother's blood then rejection of the foetus might not occur.

The research team was able to prove that this theory is correct and 78% of women injected with their husbands' white cells had a successful pregnancy. This high rate compares with a success rate of only 37% of women injected with their own white cells. In the case of women who had one live birth before they started having recurrent miscarriages, the success rate was even higher (82%) among those injected with their husbands' white cells.

—BIS

"The most important medical advance in the nineteenth century was the discovery that infectious diseases are largely attributable to environmental conditions and can often be prevented by control of the influences which lead to them; the most significant advance in the twentieth century is the recognition that the same is true of many noncommunicable diseases."

—Report of the First Meeting of the ACMR Subcommittee on Health Research Strategy for HFA/2000

BOOKS

Health for All and Public Health: Vuori, H. Canadian Journal of Public Health 1985 Jan/Feb; 76(1) : 13–6.

The WHO is a major public health agency and its policies could be a guiding star for public health agencies. WHO's two major policies include a world-wide ambitious goal 'health for all' and a means to achieve this goal 'primary health care'. Public health professionals have a very important role to play in this strategy and they should be deeply involved in this movement. They could:

- examine the targets and the evidence on which they are based.
- criticize them and suggest better ones if needed.
- produce the missing scientific evidence to support the targets.
- help the national health authorities to set priorities among the targets.
- assist in adapting the regional targets to fit the national conditions.
- advocate the entire Health for All movement and the targets found to be scientifically sound, technically feasible and politically and socially acceptable.
- support policies aiming at achieving the targets.
- implement activities based on such policies.
- monitor the progress.
- evaluate the outcome.

Health for All is not a task for WHO alone, not even for governments and WHO together; it is everybody's task.

COMMUNICATION RESEARCH FOR FAMILY PLANNING: Jain, SC. Vidura 1985 Apr; 22(2) : 99–101, 103–5.

The use of large-scale publicity and propaganda in extensive programmes like family planning, is increasing in India. Mass media such as the radio, television, newspapers, documentaries, magazines, direct mailing techniques, exhibitions and commercialized family planning campaigns have been playing a significant role in creating awareness in people. But they have a limited potential in actually motivating people. Promotional techniques, such as incentives to the acceptors, family planning and health education help to some extent. Several studies on the role of these techniques have been analysed in this article. These studies show that education is a very important factor in the awareness, trial and adoption processes since the bulk of the people are illiterate, poor and belong to the lower classes, the techniques adopted so far to diffuse the family planning practices have not met with success. Mass medias by themselves cannot help in the diffusion process. Adoption which is the goal of diffusion depends not only on awareness but also on trial. It is at the trial stage that interpersonal process is very important. So in order to bridge the gap between the awareness and acceptance, both the mass media and the agents of change must be used. To be really effective, these agents of change must come from all strata in the society.

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