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Readers Write

I have come across a few issues of **Swasth Hind.** I am impressed at the very first instance. The two main features I found novel are that this is the only magazine that devotes itself exclusively to health education. And the second thing is that it is one of the cheapest (not in contents, of course) magazine available, I understand.

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MENTAL HEALTH
as part of primary health care

R. Srinivasa Murthy

The new development in mental health services has been the setting up of General Hospital Psychiatry Units (GHPUs). These GHPUs are indeed a unique development. They share very few similarities with the western counterparts and operate with greater degree of flexibility, and limited mental hospital support and provide a wide range of services.

The internationally accepted definition of health includes positive mental health as one of its major components. However, health programmes in India have largely focussed on physical aspects of health namely cure of the physical illnesses and problems.

There are a number of factors responsible for this situation : *Firstly*, until about two decades there was very little reliable epidemiological data available relating to the prevalence and distribution of mental disorders in the community. *Secondly*, in the past major efforts in planning services were directed towards establishing mental hospitals and psychiatric clinics. The mental hospitals were largely custodial than therapeutic and the psychiatric clinics were located in big urban centres. *Thirdly*, there has been severe shortage of trained mental health professionals in the country. For example, the number of psychiatrists in India is about the same as that in Denmark which has less than one per cent of the population of India. Further, this limited number of professionals is working in urban areas where less than a quarter of our population live. *Fourthly*, the general public often view mental disorders from religious, superstitious and magical stand-point and thus consider medical help only as a last resort. This has limited the effective utilization of the available modern psychiatric facilities. *Fifthly*, till recently, there were no meaningful and practical approaches for the provision of services at Primary Health Centre (PHC) levels, to meet the needs of the rural communities utilizing alternative approaches other than through trained psychiatrists. Another important factor has been the limited organized type of welfare and rehabilitative services in the country. In view of these factors, 'mental health' till recently, has not been a part of primary health care in practice.

One of the very significant milestone in the organization of primary health care throughout the world is the ALMA ATA Conference organized by the World Health Organization in 1978. This forum provided an opportunity to examine the issues in primary health care and develop an international commitment to the concept.

It is important to note the recommendations on the components of primary health care. The Conference stressing that primary health care should focus on the main health problems in the community but recognizing that these problems and ways of solving them would vary from one country to another, recommended that primary health care should include at least: "Education concerning prevailing health problems and the methods of identifying, preventing and controlling them; promotion of food supply and proper nutrition and adequate supply of safe water and basic sanitation; maternal and child health care including family planning; immunization against major

infectious diseases: prevention and control of locally endemic diseases, appropriate treatment of common diseases and injuries; *promotion of mental health* (emphasis added) and provision of essential drugs." It is to be noted that promotion of mental health forms one of the eight components of primary health care.

SITUATION IN INDIA

India is committed to the Alma Ata declaration. Therefore it is important to see how this commitment to mental health as part of primary health care has been reflected in the Indian situation. This can be done best by examining the mental health facilities in the country, the experiments in basic mental health in the community and lastly suggesting the future avenues for development.

Mental health professional have developed alternative approaches to reach more than what would be possible through a western pychiatric team approach or through the emphasis on the individual. The most important of the initial efforts has been the inclusion of the family members in the treatment.

Existing Mental Health Services

Presently available mental health facilities in India include about 20,000 beds in 42 mental hospitals and 2000 to 3000 psychiatric beds in general and teaching hospitals. For the present population of about 683 million, there is one psychiatric bed per 32,500 population. Moreover, it is safe to assume that atleast one half of these beds are occupied by long-stay patients adding to the shortage of 'active' treatment beds. The psychiatric hospitals and psychiatric units provide out-patient ambulant care services which form the main source of mental health care system in the urban areas. It can be safely said that there are no meaningful services for the rural population. The available specialized in-patient and out-patient special facilities for children, adolescents, elderly persons and other special groups is negligible. The total existing service system is estimated to be providing care to not more than 10 per cent of those requiring urgent mental health care.

Manpower position

In India there are about 900 qualified psychiatrists working in hospitals and in private practice, 400—500 clinical psychologists, 200—300 psychiatric social workers and about 600 psychiatric nurses. Of the 108 medical colleges only half have an academic department of psychiatry. There are only two dozen centres of postgraduate training in psychiatry with a total training capacity of 100 psychiatrists annually. The centre for training psychiatric nurses and social workers is only one and the position of centres for clinical psychologists training is no better.

The above brief review of the existing mental health resources and training facilities offers little hope of organizing basic mental health services to majority of the population through trained professionals only. It is unrealistic to expect and wait for a simple process of the extension of current system of care and hope that the services will reach majority of the population in the forseeable future.

Alternative approaches

It is interesting to note that during the last 30 years, the mental health professionals have become aware of this limitation and have developed alternative approaches to reach more than what would be possible through a western psychiatric team approach or through the emphasis on the individual. The most important of the initial efforts has been the inclusion of the family members in the treatment. This innovation, initiated by Dr Vidya Sagar in Punjab in the 1950's, brought about a big change. The involvement of the family not only decreased the need to depend on close door hospitals and specialized nursing personnel but also decreased the stigma of hospitalization and possibilities of chronicity. These initial experiments in Amritsar (Punjab) have come to become a part of mental health care programme around the country.

The other important development in the area of organization of services has been the setting up of General Hospital Psychiatry Units (GHPU). These GHPUs are indeed a unique development. They share very few similarities with the western counterparts and operate with greater degree of flexibility, limited mental hospital support and provide a wide range of services with a limited psychiatric team.

EXPERIMENTS IN BASIC MENTAL HEALTH CARE

The major experiments in organizing basic mental health care programmes have been at Chandigarh and Bangalore.

In the Chandigarh programme carried at the Raipur Rani Block of Ambala District of Haryana State

Community approach in Mental Health

In the last two decades there has been a major shift in the organization of health services all over the World. There have been efforts to "deprofessionalize" many health activities, to decentralize services and to place increasing emphasis on providing services for "priority prolems" for everyone. This shift can be viewed as a "public health" or "community" approach as compared with the earlier emphasis on individual health care.

It is estimated that about one-fifth of all the disability in a community is due to mental disorders, and these cause a still greater degree of social disruption.

Mental health care is not just the care of psychotics. Health services are burdened in their routine work with a significant proportion or patients with emotional disorders. These cases are most often mis-diagnosed, leading to costly and time-consuming investigations and treatments. This mal-utilization of the limited health services can be avoided if primary physicians and health workers are trained in mental health care.

From an article " Reaching the Unreached by R. Srinivasa murthy, WORLD HEALTH Dec. 1977.

(1975—1982), efforts were directed to develop a system of priorities to train the existing primary health care personnel to carry out basic mental care tasks and to involve the community through public education and formation of mental health associations. Details of this experiment have been the subject of a number of scientific reports. The results of the work have demonstrated that there are significant number of mentally ill living in the rural areas needing urgent treatment. Further, it was possible for the health workers to carry out a limited range of mental health activities. It was also possible to involve the community in a meaningful manner.

A simultaneous project was carried out with similar aims at Bangalore by the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. In a series of planned studies and training programmes it was noted that it was possible to define tasks for doctors and health workers working under the PHC system and to train them. At present such training in mental health is going on regularly every month at NIMHANS for the health workers and doctors of Karnataka. Thus, the experiments are moving out from the pilot stage to that of general application.

Another set of centres located at Patiala, Baroda and Calcutta along with Bangalore have been, studying this issue, under the auspices of the Indian Council of Medical Research (ICMR), New Delhi.

Thus, the developments in the last few years have been positive. And that we have a practical approach to make mental health a part of primary health care. What is needed for its wider application is the professional commitment to make this plan possible, political and administrative support to apply it widely and public involvement to guide and support the movement. △

STRESS AND HEART ATTACK

* The high rate of heart disease in modern, industrialized countries parallels the increasing complexity (and stress) of day to day living.
* Prolonged emotional stress, changing lifestyle, and particular behaviour patterns are implicated in the progression of heart disease and in the incidence of fatal heart attack.
* Stress initiates the release of hormones which affect the heart by increasing heart rate and blood pressure. The heart must work harder. In addition, the likelihood of heart attack may be increased by a disturbance of heart rhythm in susceptible people.
* The emotional and physiological responses to stress are difficult to measure and assess. For this reason the precise role of stress in heart disease is a controversial topic.

Heart News, October 1982.

STRATEGIES FOR RESEARCH IN MENTAL HEALTH

An expanded programme on Mental Health research has been undertaken by the Indian Council of Medical Research (ICMR) in priority areas identified by experts. In its new strategies for research on mental health, the ICMR has adopted a broad approach of regarding mental health as a composite not only of psychiatry and neurological science in the traditional sense but also of bio-behavioural and psychosocial aspects of health and development in the current national context. Emphasis has been laid on translating the fruits of hard-core research, at various stages, into operational research programmes, so that service and research are blended to reinforce each other. Mental health components of primary health care are being investigated and strengthened by providing basic mental health skills to rural health care personnel.

The emphasis in the new strategy of the ICMR in Mental Health research has been throughout to incorporate research with existing health services. Most of these research efforts have in-built intervention programmes to promote extension of mental health care in the country. Another distinct feature of this programme is to involve non-psychiatrist specialists, so as to draw the expertise from the related disciplines. The research programmes on severe mental morbidity, training of non-psychiatrist primary health care doctors, and training of mental health personnel in extension of mental health services are primarily aimed at developing modules for providing mental health services at the primary care level. These modules developed on a smaller scale can be adopted for use in the proposed National Mental Health Programme. The projects on acute psychosis and schizophrenia are likely to make significant contributions in understanding the phenomenology, course and outcome of major psychiatric disorders.

MODERN psychiatry in India dates back to some time in the early 1950s with the creation of Departments of Psychiatry in certain teaching hospitals and also with the use of phenothiazine medication for the mentally ill. During the past three decades, considerable research has been done in India in almost all areas of psychiatry, particularly psychiatric epidemiology, pharmacotherapy, psychometry and clinical psychiatry. A large number of these studies on such areas as adjustment problems, alcohol and drug dependence, biological psychiatry, child psychiatry, experimental and clinical psychology, family studies, psychopharmacology, rehabilitation and pharmacotherapy, were carried out under the auspices of the Indian Council of Medical Research (ICMR). Wig and Akhtar[1] reviewed the trends in psychiatric research in India during 25 years (from 1947 to 1972) and have observed that the researches conducted during the first phase, *i.e.*, upto 1960, were primarily theoretical in nature with a bias towards psychoanalysis. Most of the projects on clinical psychiatry involved small samples of patients without adequate controls. However, during the second phase, *i.e.*, from 1961 to 1972, significant research contributions were made in the fields of psychiatric epidemiology, phenomenology and therapeutics, with a welcome shift in research interests from individual problems to community problems. The deficient areas of research as identified by Wig and Akhtar are biochemical and psychophysiological aspects of psychiatric disorders, natural history and phenomenology of mental disorders, psychotherapy, psychiatric education and delivery of mental health services in India In a review on research in mental health in India, Neki[2] has outlined the lacunae in psychiatric research and has highlighted the need for undertaking research in the fields of phenomenology of psychiatric disorders, forensic psychiatry, community psychiatry and neuro-psychiatry.

Expanded programme of research on mental health

Realising the need and importance of augmenting research in the field of mental health, the ICMR has recently initiated an expanded programme for research in mental health. The Advisory Committee on Mental Health of the ICMR comprising leading mental health experts and specialists from the related biomedical and bio-behavioural areas met in July 1979 to identify the priority areas for future research in the field. On the recommendation of the Advisory Committee, five Task Forces and two Working Groups were constituted: Task Forces on (i) Phenomenology and natural history of mental illness; (ii) Psychological problems of children; (iii) Biological psychiatry and psychopharmacology; (iv) Illness behaviour; and (v) Clinical psychology; and Working Groups on (vi) Alcohol and drug dependence and (vii) Delivery of mental health services.

All the Task Forces and Working Groups met during 1980 and reviewed, in detail, the major areas of research in their respective fields. Working papers were presented and discussed by 67 senior scientists of the country drawn from such diverse disciplines as Psychiatry, Clinical Psychology, Social and Experimental Psychology, Biochemistry, Medicine, Neurological Sciences, Social Anthropology, Paediatrics, Management and Industrial Psychology, Health Administration, Family Planning, Biostatistics and Research Administration. Several problems were identified and research plans formulated for collaborative multicentric research in the field of mental health. The recommendations of the Task Forces and the Working Groups were reviewed by the Advisory Committee on Mental Health in the later part of 1980. The Advisory Committee finally recommended 10 multicentric collaborative research projects under selected investigators/coordinators/consultants.

Proposed national mental health programme

Another significant development in the field of mental health at the national level has been the consideration of the proposal for a national mental health programme, by the Government of India. Several meetings of the mental health experts have been convened during the years 1981 and 1982 and a draft proposal for the national mental health programme has been drawn up. The objectives of this proposed programme are: (i) to ensure availability and accessibility of minimum mental health care for all, particularly to the most vulnerable and underprivileged sections of population: (ii) to encourage application

To bridge the gap between mental health needs of the community and the available services, it was decided to adopt the strategy of integrating mental health services with the existing health infrastructure at the primary health care level.

of mental health knowledge in general health care and in social development; and (ii) to promote community participation in the mental health service development and to stimulate efforts towards self-help in the community.

The approaches to the attainment of programme objectives will include diffusion of mental health skills to the periphery and integration of basic mental health care into general health services with appropriate linkages with the community development programmes.

Some of the Council's research programmes which were developed before the proposed national mental health programme was envisaged, have objectives and approaches similar to the proposed national programme. In the project on "Severe mental morbidity", the emphasis is on transfer of skills by training Primary Health Centre (PHC) staff in identification and management of selected psychiatric conditions. The Council's programme on training of primary health care doctors is directed towards development of a training manual and the methodology of enhancing skills of general physicians to diagnose and independently manage common psychiatric problems. In another programme on extension of mental health services, the objective has been to provide an opportunity to mental health professionals to learn recent advances in the delivery of mental health services in the rural areas. The above programmes of the Council are primarily devoted to research and development of modules which can be adopted for use on a larger scale when the National Mental Health Programme is initiated.

Collaborative projects on mental health

National collaborative multicentric projects are ongoing, at present, at 17 centres in the country. The

aims, objectives and scope of the projects are briefly outlined as follows:—

Severe mental morbidity:

Epidemiological surveys conducted in India during the past two decades have brought forth convincing evidence that the prevalence of mental disorders is as high in India as in the advanced countries. Nearly 10 to 20 persons per 1000 population are affected by severe mental ilness at any given time, the corresponding figures for neuroses and psychosomatic disorders being about three times higher. The available mental health services and trained manpower are quite inadequate to provide mental health care to 40 to 60 million people who require psychiatric help at any given time. In order to bridge the gap between mental health needs of the community and the available services, it was decided to adopt the strategy of integrating mental health services with the existing health infrastructure at the primary health care level at 4 centres — Bangalore, Baroda, Calcutta and Patiala. This project has been designed keeping in view the tenets of secondary prevention, *viz.*, early detection and management of the illness. The approach adopted is operational research in delivery of mental health services to the rural community through the existing staff of primary health centres in the respective study areas.

Following standardization and translation of the study instruments, training of multipurpose workers and the doctors at the four selected primary health centres has now been completed. The results reveal that it is possible to train the multipurpose workers to identify individuals in the community suffering from psychosis and epilepsy and also to provide follow up care to the patients, in consultation with the PHC doctors. By training, it has also been found feasible to enhance the skill of the PHC doctors in the management and treatment of selected conditions like psychosis and epilepsy. In the final phase, a a complete survey of the selected populations will be made to find out the actual prevalence of these psychiatric disorders in the community. Evaluation of the training programmes will be made, keeping in view the cost effectiveness and linkages with the planned National Mental Health Programme.

Training programme for non-psychiatrist primary health care doctors:

Operational research in health services has been identified by the Council as a priority area. It is estimated that 15 to 20 per cent of all patients seeking the service of primary health care facilities or general hospital outpatient departments, suffer from psychiatric problems. Such patients have to be managed, at present, by the primary health care doctors whose training in psychiatry is inadequate. A training programme has been initiated by the Council for the primary health care doctors at Bangalore, Hyderabad and Vellore in order to enable them to have diagnostic skills to identify common psychiatric problems in general practice and also to independently manage these problems. A training manual and curriculum content have been developed and assessment procedures for pre-and post-training evaluation have been finalised. Batches of 25 to 32 doctors have been attending the training courses at the centres from June-July, 1982.

Training in extension of mental health services in the community:

A collaborative training programme on delivery of mental health services was undertaken by the Council for mental health professionals with the aim to expose these professionals to the ongoing experiences on extension of mental health services in rural areas at Chandigarh, New Delhi and Bangalore. A six weeks training programme was organized (between 18th July to 28th August, 1981) which was attended by seven mental health personnel selected from different parts of India. Evaluation of the training was carried out at each of the centres as well as at the end of the training. The final week was devoted to developing specific project proposals for further work. Three of these mental health personnel have been able to organize extension services in their respective centres.

Problems of the aged seeking psychiatric help:

Rapid social changes due to urbanization and westernization have contributed to emergence of new kinds of psychological problems in the aged. In this hospital-based study on going at Madurai, evaluation is also being made of family jointness and social integration. The main objectives are to develop a model for providing total health care to the aged people in the community; to develop suitable methods of providing medical care to the aged at the PHC level; and to evaluate strategies for strengthening the social support systems prevailing in the family and the community.

Patterns of child and adolescent psychiatric disorders:

The child and adolescent population has increased steadily in India, and constitutes little more than one

third of the present population. The available studies on the phenomenology and associated abnormal psycho-social factors in the child and adolescent psychiatric disorders are retrospective in nature. A prospective study has, therefore, been undertaken in four centres, *viz.* Bangalore, Lucknow, New Delhi and Vishakapatnam in order to determine the prevalence and pattern of psychiatric disorders in children and to compare the relative prevalence of associated abnormal psycho-social factors. Care has been taken to ensure uniformity in diagnosis and classification. Case intake is in progress and the results are expected by September, 1983. In addition, instruments will be developed for undertaking community based epidemiological surveys.

Phenomenology and natural history of acute psychosis:

A profile of functional psychosis which does not quite fit into schizophrenia or affective disorders has been variously described as reactive psychosis, good prognosis schizophrenia, schizophreniform psychosis, benign schizophrenia, hysterical psychosis and acute psychosis. The characteristic features are acute onset, often precipitated by stress; presence of affective and hysterionic features; and absence of cardinal features of schizophrenia, like autistic behaviour or formal thought disorders. However, no clear-cut answers are available, whether this form of psychosis popularly referred to as acute psychosis is a separate entity or if such cases followed up over a long period of time will eventually turn out to be schizophrenia or affective disorders. This study has been undertaken at Bikaner, Goa, Patiala and Vellore with the aim to study the phenomenology, natural history, demographic correlates, family history, response to treatment and prognostic indicators of acute psychosis on a longitudinal basis. After case registration, patients are followed up weekly during the initial phase and subsequent assessment is being made at intervals of three months, six months and one year after onset. The major contribution of this study will be to identify the factors which contribute to good or bad outcome of acute psychosis.

> The rapid social change in a developing country like India has not only affected the attitudes of the people, but has also made a discernible impact on the treatment seeking behaviour of the population as a whole.

Course and outcome of schizophrenia:

Schizophrenia is the commonest major psychiatric illness. The estimated prevalence is about 2 to 3 per 1000 population and the condition is seen in all communities. It is reported that some schizophrenic patients have a good prognosis and some have bad prognosis. It has been suggested that schizophrenia has a better outcome in developing countries. There is also evidence to suggest that variables in the family and community contribute significantly to the outcome of this illness. It is important to identify the various correlates which are associated with the course and outcome of schizophrenic illness in our country. Hence, a study has been undertaken by the ICMR with the main objective of identifying factors which influence the course and outcome of schizoprenia. The specific areas to be looked into will be the presenting symptomatology, age at onset, duration of symptoms, nature of onset of the illness, presence or absence of precipitating factors, premorbid personality, family history and other sociodemographic variables which can be associated with the outcome or course of the illness.

This ongoing study is expected to throw light on the natural history, course and short term outcome of this major mental illness.

Illness behaviour in patients presenting with pain:

Pain is an experience of universal interest and it is the most common symptom encountered in everyday life and in routine medical practice. Patients with chronic and intractable pain with no clear organic basis pose an important problem in medical practice. Relationship between manifestation and reaction to pain, illness behaviour, and response to treatment on one hand; and socio-cultural, psychological factors on the other have been suggested. The present knowledge is inadequate regarding the nature and manifestation of pain behaviour and its relationship with sociodemographic, psychometric and diagnostic variables.

A pilot study on this aspect has been completed, research instruments have been finalised and the concerned staff have been trained to use these instruments reliably. This study, which is ongoing at Chandigarh, is likely to yield data useful towards understanding the phenomenon of chronic pain and planning effective management of such patients.

Intervention programme on non-medical use of drugs in the community:

The problem of drug abuse in India has been well recognized. Changing trends across cultures in terms of drug usage and appearance of new drugs have been observed. It has, therefore, become necessary to develop programmes which could keep the abuse within social control. This study was undertaken with the aims to investigate the health hazards related to drug use, to find out the pattern and prevalence of drugs abuse, and to develop intervention programmes. In this ongoing project, samples of rural, urban and industrial communities have been selected. *Phase I* of this programme on collection of baseline data has been completed. Educational intervention materials designed to reduce usage of alcohol and tobacco is in the process of being developed. The pilot test results of the educational intervention material have indicated need for certain modifications in the educational material on alcohol and tobacco. The results of this study will be evaluated by observing the changes in knowledge, attitude and use of tobacco and alcohol in the selected communities.

Development of modernity scale:

The rapid social change in a developing country like India has not only affected the attitudes of the people, but has also made a discernible impact on the treatment seeking behaviour of the population as a whole. Modernity has been known to be an important background variable in acceptance of family planning and modern medicine. The measurement of individual modernity assumes importance because psychological modernity is a syndrome of attitudes which enables the individual to adjust better, predisposes him to accept change and increases his receptivity to innovations.

Data obtained by the pilot study have been examined and changes suggested in health modernity items. The relationship of modernity with social stratification variables will also be examined. The major thrust will be to enhance personal hygiene and remove misconceptions about health and disease in the community. During this phase, educational material will be developed and the feasibility of introducing educational intervention on attitudes towards personal hygiene will be examined.

A training programme has been initiated by the Indian Council of Medical Research (ICMR) for the primary health care doctors at Bangalore, Hyderabad and Vellore in order to enable them to have diagnostic skills to identify common psychiatric problems in general practice and also to independently manage these problems.

Advanced centres

In order to encourage long-term continued research in the field of mental health, the Council made a beginning by establishing an advanced centre for research in the priority area of community psychiatry. This advanced centre has been instituted at the Community Psychiatry Unit, National Institute of Mental Health and Neurosciences, Bangalore, and would investigate the long-term impact of training PHC doctors and health workers in detection and management of psychotics and epileptics in the community. This Centre would also examine simple counselling and therapeutic strategies which would be implemented at the PHC level. It is proposed to initiate a case register of psychiatric patients for a population of 1,00,000 which will provide epidemiological, phenomenological and prognostic information necessary for developing mental health services in the community. The Centre will also undertake research to find out the factors which facilitate or retard the efforts to provide total health delivery at PHC.

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—*Courtesy* : ICMR Bulletin Feb 1983

PRAYER HASTENS RECOVERY

"From my experience, I feel that prayer and recitation from the religious scriptures can form a very useful and effective part of psychotherapy." Dr (Colonel) Kirpal Singh stated in the D.L.N. Murti Rao oration he delivered at the annual conference of the Indian Psychiatric Society at Bombay.

Prayer had a healing effect in almost 600 neurotic patients treated by him over the last 10 years, and incorporating it in the treatment of emotionally disturbed persons proved therapeutically useful, Dr Kirpal Singh told his audience.

"The important role of a psychiatrist in the prevention and treatment of psychiatric illnesses is to ensure happiness and it is justifiable to use any rightful means to achieve this objective". According to the speaker, the factors that play an important role in the aetiology of most neurotic conditions are: fear, frustration, feeling of inferiority, interpersonal maladjustment, jealousy, guilt, helplessness in securing a job or promotion, inability to provide for basic needs, chronic ill health, social ostracism and abuse of alcohol and drugs.

"In the modern times the achievement of one's lawful goals is extremely uncertain, especially when it is believed that corruption and nepotism being so rampant, an individual without the support of a powerful person cannot make much headway. It is, therefore, abundantly clear that at least for psychological reasons a firm belief in the existence of an Almighty Father, depicted as loving and protecting his creation at all times, is necessary as a morale-boosting measure," Dr Kirpal Singh observed. "Prayer to such an omnipotent Creator is, therefore, an exeremely effective measure to combat many of the causes of nervous breakdown and to restore mental health in those who are already affected."

In the beginning of his career, Dr Kirpal Singh said, he was careful not to include religion in psychotherapy but realised later on that the average Indian patient (unlike his Western counterpart) expects his doctor to tell him clearly what to do and what not to do. Since then, he has developed a method to expedite the recovery of patients with neurotic symptoms. After listening to the history (which includes attitude to religion) and carrying out a detailed examination, he prescribes medication and a suitable form of psychotherapy in once-weekly sessions, beginning with a prayer.

"I am starting this treatment, my Almighty Father, with the confidence that with your help and kindness I will soon get better and will ultimately be cured of my illness. The doctor who is treating me has assured me that I will be better soon and I find no reason why with your kindness I should not recover. Kindly help me, my Lord".

The patient is advised to repeat the prayer every day, modified in accordance with the progress he makes such as "I thank you for my improvement and am confident that with your continued help I will be cured soon". If the patient is a non-believer, he is not asked to pray.

"My clinical impression is that the patients who have a strong faith in God and who pray regularly recover more quickly than those who do not believe in the efficacy of prayer and depend solely on medicines," Dr Kirpal Singh said.

—Medical Times, Feb, 1983.

HEALING POWER OF FAITH

Since the dawn of history, human beings have been challenged by their susceptibility to emotional instability and mental suffering. To relieve this agony, humans have resorted to many means and have invoked the help of a variety of powers, both natural and supernatural. Across the wide range of cultures and irrespective of local beliefs and traditional practices, religion has enjoyed a central place in the promotion of mental well-being and in the alleviation of mental disorders.

Fundamentally, man seeks guidance from religion and hopes to find truth there. Within religious systems, ethical values and inherited doctrines constitute the framework for accepted codes of behaviour, for personality formation and for moral development. In time of mental stress, beliefs, customs, traditions and religious institutions constitute basic resources for help and rescue.

Regular religious meetings and congregations in churches, mosques and temples have their promotive mental health role as well as providing an opportunity for collective social interactions. In some countries these meetings have been utilised for health education, or for community involvement in specific mental health problems.

—From the article "The Healing Power of faith" by Taha Baasher—WORLD HEALTH, Oct. 1982

IS STRESS BENEFICIAL FOR LIFE ?

P. BHATTACHARYYA

ROLE of negative emotions as contributory factors to diseases like hypertension, bronchial asthma, allergy, ulcer of the stomach and the duodenum, heart failures and others were noticed by the doctors long ago. The most simple conclusion, therefore, seems to be that one should always avoid negative emotions if he does not want to fall sick. In fact, the psychosomatic ('soma' means body in Greek) trend in medicine is based on the conclusion that negative emotions cause disease. But in reality doctors have also noticed that this theory does not explain everything.

It is an amazing but universally accepted fact that many psychosomatic illnesses disappear even under conditions of stress, if a person quickly and energetically comes up against an enemy or tries to overcome difficulties. These also become much less during the most dreadful periods of life such as war, siege, etc., which are conducive to the growth of many negative emotions. During the Second World War Leningrad was under siege by the Nazis for a very long period. Medical experts have studied thoroughly the phenomenon known as the "blockade hypertension". It was found out that there was hardly any one among the Leningraders suffering from hypertension during the inhumanely tense living conditions of the siege. But the hypertension reappeared after the blockade was lifted and life become easier.

It has also been known for a long time that arduous work and serious responsibilities make the human organism more resistant to infectious diseases. For example, the doctors, nurses and orderlies who selflessly fought epidemics of plague or cholera rarely caught those diseases.

Does it mean then that stress is not to be avoided as it does not contribute to disease? Not at all. Stress, on the one hand, is a normal and necessary part of life, but on the other it is the preliminary warning before an organism succumbs to a disease or even perishes altogether. Where then is the borderline between the reaction to stress being a necessary component of adaptation and grave pathological symptoms?

Soviet theory

Two Soviet scientists Vadim Rotenberg and Viktor Arshavsky have offered an explanation for the genesis of psychosomatic illnesses. According to their hypothesis, the reason for the occurrence and development of a whole number of such diseases lie not so much with emotions (whether negative or positive) as with the behaviour of the person concerned and the degree of his activities.

After studying various types of behaviour and working out which patterns influence the development of disease, they established that active defensive behaviour stimulates the adaptation mechanism and tends to prevent the development of disease. On the other hand, passive defensive behaviour tends to intensify the disease and inhibits the defence system of the organism. The authors thus classify patterns of human behaviour on the presence or the lack of the struggle to overcome the obstacle. They claim that these are a more essential factor behind psychosomatic diseases than the type of mere emotional stress (negative or positive).

The Soviet scientists declare: "A negative emotion, followed by activity and a search for a way out of the situation, is better for the organism than a relatively calm emotional state with a low level of quests."

The scientists say that the wounds of a victor heal faster than those of the vanquished. If, for example, a man awaits operation paralysed with fear, then he goes through the operation badly and subsequent healing is slower. This theory of questing activity helps to explain why there are such a small number of psychosomatic illnesses in wartime, blockades and even in concentration camps.

Perennial quests

If a man achieves his own goal and is pleased with the situation, two possibilities are open to him: either he sets himself higher goals and achieves them whatever the efforts, losses and failures (such behaviour is characteristic of most creative personalities) or he sits on his achievements and rejects further quests. In the former case the active stand in a negative situation helps keep him healthy. In the latter—when everything has been achieved and new goals are lacking—he quite often succumbs to the so-called achievement disease.

Although the prerequisites for the development of such an important quality as the questing activity is already built into the genes, it can still be fostered in man from birth and throughout life. If all activities fail or produce disillusionment at a very early age, the urge for quest is killed. But quest itself can become senseless also if everything comes easily to a person from the very beginning, and there are no problems or difficulties to overcome. ^

BEHAVIOUR MODIFICATION

—Laboratory experiments to treatment of mental sickness

Dr K.G. Agrawal & Upinder Dhar

Sometime back a report appeared in the national press that a large hospital in Delhi did not have the facility of behaviour therapy for the psychiatric patients. Letters from the readers that followed tried to explain that behaviour therapy did not need any special facility. The matter ended there. For a lay reader this was some kind of puzzle. On the one hand, therapists were sour about not having enough facilities for specialized treatment and on the other hand certain other specialists were trying to explain away by saying that no such elaborate facilities were needed to conduct behaviour therapy. If one knows about behaviour therapy one would realize that it does not necessarily need facilities other than those which could be provided within the normal budget of the psychiatry department of a large hospital.

When we scold our children for behaving in a particular manner, we are trying to motivate his or her behaviour. This is a form of behaviour therapy. When a boss is trying to reward the good performance of his subordinate he is trying to encourage further improvement in his performance by doing so. He is conducting some sort of behaviour therapy. When we reward our children for good report cards we are trying to make them perform better in the future. Any kind of reward or punishment which improves or modifies the behaviour, is a sort of behaviour therapy and results in the modification of behaviour of the recipient. Behaviour modification is the goal of any behaviour therapy.

Typist's cramp

Nammaval and his colleagues in 1978 reported a case of typist's cramp which they corrected by using behaviour therapy. The case related to a senior stenotypist, 34, who was employed in an industrial concern in Madurai. He had problems at home as well as at work. As a result he started feeling pain in his fingers of right hand. Although he was able to attend to his duties in the beginning, three years later he started having flexion of fingers into the palm of right hand. He could type continuously for 15 minutes in the beginning but later, even when he typed for shorter duration, he started getting cramps. He had difficulty in taking notes from his manager. He was treated at a general hospital in the beginning but later on brought to the mental health clinic. He was given tranquilisers for four months but there was no improvement. By this time, he had become totally handicapped on work. No sooner than he put his fingers on the key board, he would start having cramp in his right hand. He felt depressed since he was afraid that he would lose his job. He even thought of committing suicide. At this stage, besides drugs he was given Behavioural Therapy. The treatment helped him a lot. Within a month he was again able to work peacefully.

Any kind of reward or punishment which improves or modifies the behaviour is a sort of behaviour therapy and results in the modification of behaviour of the recipient. Behaviour modification is the goal of any behaviour therapy.

Fear of contamination

Ahuja has reported a case of 26 years old woman teacher who had fear of contamination accompanied with compulsive washing and compulsive checking ritual. She was treated by exposure in vivo technique. Gupta and Pinto have reported cases of disruptive behaviour of boys which they treated through operant conditioning. The boys belonged to a Lucknow public school. They were punished for disruptive behaviour. Gradually the disruptive behaviour was eliminated and subsequent withdrawal of punishment did not produce any relapse of disruptive behaviour.

Reward and punishment

Reward and punishment can change human behaviour. This is known to the humanity since very long. The same concept of reward and punishment is basically adopted in various techniques used for behaviour modification. Pavlov in 1897 published his work on digestive system which contributed the principle of conditioned reflex to the science of psychology. This concept was gradually used as a learning principle. Laboratory experiments were conducted on animals and humans trying to modify behaviour through the use of conditioned reflex. In conditioning experiments the natural stimulus is substituted through association by another stimulus. The subject starts responding to the substituted stimulus in the same manner as he reacts to the natural stimulus. For example, at the sight of food, dog starts salivating. If food is accompanied by a buzzer, gradually it gets associated with food. As a result the mere sound of buzzer will evoke the same response in the dog as evoked by the sight of food. As soon as the dog hears a buzzer, he starts expecting food and thus starts salivating. Thus buzzer has replaced the food. In a similar manner punishment can be accompanied by a natural stimulus which will prohibit reaction on the sight of such unpleasant stimulus. Using the principle of reward and punishment the behaviour of animals and humans can be altered. Sometimes a positive or a pleasant stimulus can accompany certain behaviours and thus strengthening such behaviours. In other cases an unpleasant experience might result from a certain act which will be punished and ultimately resulting in avoidance or unlearning of such behaviour. In the case of cramps, discussed above, mild electric shock was applied to learn to avoid cramps. This mild electric shock being unpleasant to the individual ultimately resulted in unlearning of cramps and thus the stenotypist started avoiding cramps to avoid electric shock. This was repeated till such time when it was assured that this individual will not have cramps any more while typing.

Experimental research

As already mentioned, behaviour modification principles are based on the broad foundation of experimental research by Pavlov published in Russian in 1897.

To be specific it is based on principles of learning derived from the experimental research in Psychology. These techniques are used to eliminate human suffering and enhance human functioning. These are used for facilitating the self-control and expanding skill, ability and independence of the individuals. Although some work was done on behaviour modification as early as the 1920's and 1930's reports in the scientific literature about the application and use of behaviour modification have appeared mainly within the past 30 years. During the late fifties, Wolpe developed the systematic desensitization, a technique for treating neurotic behaviour patterns. Psychologists and Psychiatrists like Skinner, Shapiro and Eysenck have also contributed to the growth of behaviour modification.

With the demonstration by several scientists that the principles of learning could be applied to help the severely disturbed persons, the development of behaviour modification began to accelerate. Clinical researches todate have invariably confirmed that the principles developed in laboratory research can be applied effectively to many behavioural problems in the real world.

Adaptive behaviour

Behaviour treatment interventions were first used with regressed psychotic and neurotic adults. Experience has shown that behaviour techniques can be effective in eliminating many incapacitating neurotic fears, such as fear of flying in planes, fear of closed spaces, etc. Behaviour therapists working with regressed psychotics have been able to develop a variety of adaptive behaviour in these patients so that the patients' lives were enriched by the availability of many new choices. From these beginnings, the field of behaviour modification has expanded and we are able to help delinquents, retarded, preschool and deaf children, and drug addicts.

Behaviour modification research has been used for improving the **classroom management**, teaching methods and parent-child relations also. Children whose behaviour is only mildly maladaptive can be treated even by their parents or teachers, because behaviour modification lends itself to use even by persons not professionally trained in therapy.

Behaviour modification is a family of techniques. The diverse methods included under the general label have in common the goal of enhancing persons' lives by altering specific aspects of their behaviour. The service recipient or his representative has to be kept fully informed of the results of the treatment as it progresses.

Behaviour therapy for mental illness

Behaviour therapy is rapidly gaining ground in curing mental illness, especially the neurosis. Time and human energy involved in this type of therapy is far less than in analytically oriented psychotherapies. Percentage of recovery of the cases is also much higher than in conventional forms of psychotherapy. Thus, the technique of behaviour therapy is becoming increasingly popular. Some of the techniques that come under behaviour therapy are: reciprocal inhibition therapy; conditioned reflex therapy; aversion relief therapy and operant conditioning. In India psycholo-

Behaviour modification is a family of techniques. The diverse methods included under the general label have in common the goal of enhancing persons' lives by altering specific aspects of thier behaviour.

gists have used relaxation in the treatment of tension headache, systematic desensitization for treatment of examination phobia, aversion therapy for treatment of cramps, etc. In 1975 Majumdar reported a case of pedagophobia which related to shifting of a student from one educational institution to the other. A 14 year old boy who was shifted from one school to the other had this type of anxiety alongwith examination anxiety. He was treated with reciprocal inhibition. The outcome was reported to be good. Kuruvilla has reported treatment of psychogenic impotence by behaviour therapy techniques. He has treated a number of patients with the sexual response technique. Some of these patients completely got rid of their symptoms, others showed much improvement, only a few did not show any improvement. A follow-up of the improved cases for two to six months showed the maintenance of improvement. △

MAN'S INNER LIFE

DR. T. ADEOYE LAMBO

Mental health problems remain world-wide and intractable, and are increasing both in the developing and developed countries.

While prevention and treatment of mental and neurological diseases and problems related to alcohol and drug abuse still constitute an important component of the programme, new areas of work now feature prominently. These areas encompass psychosocial aspects of health care in general and of socio-economic development in particular. They also draw strength from stimulation and coordination of a wide variety of research endeavours in mental health and behavioural science. Recent research findings in, for example, neuro-psycho-endocrinology, psycho-biology and psycho-pharmacology, have widened our understanding of man and his ecology, his emotion, mood and affect, and the phenomenology of his perception. Also our attempts to better understand man and his spiritual and metaphysical needs are bound to assist us in our determined efforts, not only to prevent or control many of these problems, but also to enrich man's total life and enhance his self-actualisation.

It certainly would not be possible to achieve our objective of Health for All by the Year 2000 if the totality of man's needs—his inner life, his cosmos, his total reactions to his physical and emotional world—are not viewed with great concern and objectified in our programme of health and development. This is so both because the human mind will make or break progress on the road to this objective, and because there is no health without its mental and/or spiritual component. We need to intensify our multi-disciplinary research as well as to extend and expand the scope of our observation beyond the traditional narrow confines of our disciplines of psychiatry and neurology.

—WORLD HEALTH Oct. 1982.

ROLE OF MEDICAL SOCIOLOGIST IN HEALTH CARE

KUM. R. K. MANELKAR

The insights provided by the social sciences into the nature of social process, into the structure of society and the relationships between individuals are a necessary foundation to the effective practice of medicine, whether curative or preventive.

THE medical significance of sociological studies has not been so universally accepted. At present such studies tend to be neglected in the training of doctors. The insights provided by the social sciences into the nature of social process and into the structure of society and the relationship between individuals are a necessary foundation to the effective practice of medicine, whether curative or preventive. The concepts of the social sciences enable the doctors to analyze social relationships in the practice of medicine, and to trace in the patient those social experiences which most affect his behaviour, symptoms and perception of illness and the form of illness itself. However, sociological insight assists the clinician to discover those social influences which affect his own behaviour, his interpretation of illness and his care of the patient.

The field of medical sociology is vast. It studies the demographical, ethnographic and ethnological and epidemiological aspects with various variables like cultural, traditional, modern, industrial, urban, stratification, occupation; institutions and their influence on behavioural pattern of the patient. Once the stress factor is diagnosed, half of the battle of treating the patient is won.

A trained medical sociologist equipped with the knowledge on different cultures, traditions, value system and communities on one hand and knowledge on health education on the other and research aptitude could no doubt assist the medical personnel to bring about better results. The medical sociologist thus can help to establish the better relationship between the doctor and the patient or the paramedical personnel and the patient. They can participate in Health Education:

(a) Organizing a massive programme of non-formal health education for the poor and the underprivileged social groups.

"To improve the quality and effectiveness of health education health workers should be given appropriate training in their subject preferably as part of their 'basic' professional preparation. To make this possible health education curriculum must be strengthened or modified. Teachers must be prepared and training courses materials be developed. Care must be taken not to initiate and impart irrelevant and inappropriate concepts, methods and materials. Relevance and appropriateness should be our watch words. These remarks apply equally to learning aids and mass communication media which must be integrated in support of health and health education at all times to prevent duplication of effort. For maximum effect it must be integrated with or related to educational programme in support of school health, nutrition, health aspects of community development and the like. Only such a concerted and combined thrust could bring us closer to the goal— "Health for all by the year 2000".

Dr. F. T. H. Gunaratne

(b) Health education/Family life education of mothers, their children and the members of their family, study the prevailing concepts, beliefs, customs about health and disease. This means that existing good

(Continued on page 177)

MAN AND BIORHYTHMS

FEDOR I. KOMAROV

Everything in nature and in the life of man is subject to rhythms which often measure time better than a chronometer, but those "timepieces of vitality," apparently ticking on their own, can be fast or slow, and one should know fully well how to set them right. Biologists and medical workers can do this if they understand the rhythms of man's physiology.

BIORHYTHMS are present in all living organisms. Already more than a hundred of them have been described, with their periods ranging from fractions of a second to dozens of years. Synchronism of rhythms in an organism makes for man's painless adaptation to the changes occurring in his environment. A similar device has already arisen from the evolution of all living organisms when only those of them survived whose functions were rhythmic.

Important role of rhythms

Rhythms are vitally important. Just as an untuned piano usually leads to a bad performance, a disturbed biorhythm is a disease. It is indicative of an oncoming disease and even helps assess the degree of recovery since there are cases in which the conventional indicators of health point towards recovery, but biorhythms testify to the aftermath of disease.

While distorting natural biorhythms, a disease sets its own instead. For example, in the case of pneumonia a man breaths more frequently and, thus, consumes more energy and violates the oxygenation of blood and the excretion from his organism of carbonic acid and other wastematter. All this results in the retardation of the vital activities of cells. Discord in biorhythms we call desynchronism. If we repeatedly disrupt the change from light to darkness or decrease the day to 21 hours increase it to 27 hours we will shorten our life span. This has been proved by experiments on animals. The mere violation of the state in which sleeping alternates with being awake causes insomnia, diseases of the nervous system and others. Alcohol and smoking are also conducive to desynchronism because they violate the fine functional regulation of man's organs. Certainly, life *per se* involves constant adjustments to changes in the environment, but the ability of man to restore his strength is not limitless. For each change, for each exertion made to adjust himself to a new environment, he must pay with the deterioration of his physical or mental mechanisms.

It is very tempting to check up on a man's health by using his biorhythms. The study of biorhythms has substantially improved diagnostic methods, enriching them with data hitherto unknown. Let us look at the following case. A patient is brought to a hospital at night. His blood test shows a steep increase in leucocytes. Apart from clinical symptoms, this may prompt a surgeon to operate. But such tests may delude a doctor since they do not represent the fluctuations of leucocytes over the whole day. As it turns out, their number is constantly changing all day long, reaching its peak at night and in early morning. This case deals with the fluctuations over a day but account should also be taken of seasonal (annual) and other rhythms which naturally have an impact on a man's organism as well.

According to F. Harberg, the President of the World Association of Chronobiologists, biorhythms are the process which provides the "necessary" receptacle with the "necessary" amount of substances in the "necessary" time. This fully applies to chronotherapy. In the "era of biorhythms" medicine should be given to a person in accordance with that principle, since the efficiency of treatment often depends on the time when a person takes his pills.

Effect of seasonal changes

The medical workers, when prescribing drugs, must take into account

the data on a person's physiological rhythms. Chronotherapy has already proved its value. Chronoprophylaxis, which completely complies with the basic principles underlying Soviet health protection, is also worthy of mention.

A thorough study of seasonal changes occurring in the functions of various organs and systems has been made by the Soviet scientists A. Slonim, A. Golikov and P. Golikov. There are grounds to believe that such changes in an organism are related not only to environmental but also to endogenic factors. For instance, a man's hormonal activity reaches its peak in autumn. This corresponds to the opinion of the American scientist Smolenski, who has recorded the higher viability of children conceived at that time of the year.

Chronoprophylaxis is accumulatting more and more data on seasonal fluctuations which influence an organism. The data show that man is more resistant to diseases in December and January and less resistant in August; he is more vulnerable to

"Life involves constant adjustments to changes in the environment, but the ability of man to restore his strength is not limitless. For each change, for each exertion made to adjust himself to a new environment, he must pay with the deterioration of his physical or mental mechanisms."

stress in autumn and least of all in spring. Studying the seasonal growth in the number of diseases, our scientists have recorded rises in May, July and September in the frequency of hypertonia crises, in January, February, May, August and September of cerebral accidents, in autumn of heart attacks, in autumn and spring of duodenum ulcers, and in autumn of rheumatics. Physical fitness exercises for treating cardiovascular diseases are most effective in March, April and May, mud-baths treatments in winter and autumn; this reasonable effectiveness is closely related to the place where a health resort is located. Data obtained in a polyclinic show that prophylactic measures undertaken on the basis of biorhythms reduced the number of crises over a period of four years from 25.1 to 8.7, the number of patients from 23.5 to 5.3, the number of disability days from 236.8 to 94.1 per 100 workers suffering from hypertonia.

Knowledge of the deep-rooted processes under the seasonal acute conditions of diseases, provides for purposeful prophylactic therapy.

Major tasks of chronohygiene

Some rhythms are inherent in man and it is hard to modify them. For instance, a lark wakes up at sunrise and an owl at sunset, but man is usually awakened by an alarmclock at the beginning of his working day. In fact, every step we make obeys the laws of chronobiology.

Drawing up an accurate time-table and distributing work so as to make the greater load correspond to the time of day when man's capacities are greater is one of the major tasks of chronohygiene. It is advisable, whenever possible, to take into account man's own biological clock, whether it resembles that of a "lark", an "owl" or is arhythmic as well as general physiological norms.

Some of our findings show that capacity to work is highest between 9 a.m. and 1 p.m. and between 4 pm. and 6p.m. During these periods, man hears better and also can distinguish colours better. This capacity is low at night and lowest between 1:00 a.m. and 3:00 a.m. This time accounts for the most accidents and industrial injuries. Now great importance is attached to chronohygiene, many works are devoted to it, most of which deal with work

"There are data to the effect that the efficiency of dietotherapy is different for each month and season."

shifts. I assume that medicine will introduce in the future a sort of certificate for people describing their biological clocks and the preferable work time-table.

The time when we eat is also important. Let us cite this example. A group of people ate 200 Kcal of food for five days in the morning only, and grew thin, but when they ate that amount of food in the evening only, they put on weight. There are data to the effect that the efficiency of dietotherapy is different for each month and season.

There are also other issues relating to chronobiology and chronomedicine. The cosmonauts' work and rest is arranged and man's adaptation to other climatic regions during long-distance trips by air or rail.

Biorhythmology overlaps with many scientific disciplines where research is very promising these days. A joint session of the General Meeting of the USSR Academy of Sciences and Academy of Medical Sciences devoted to "the further development of fundamental studies in medicine" has done much to advance this field of study. It was after this session in 1981 that the Chronobiology and Chronomedicine Problems Commission was set up by the decision of the AMS Presidium: which consists of prominent Soviet scientists. Last November, the Commission sponsored the first All-Union Conference on Chronobiology and Chronomedicine. Thus, the science of biorhythms is on the upswing: it faces important tasks the fulfilment of which will certainly contribute to an advance in biology and medicine.

—Soviet Feature

INSOMNIA AND BIOLOGICAL RHYTHMS

AUSTRALIAN psychologists are testing circumstantial evidence which suggests that biological rhythms hold the key to what causes insomnia.

The scientists, working at Flinders University in Adelaide, the South Australian capital, believe that body temperature is a vital factor in the frustrations of those who want to sleep but cannot.

Dr Leon Lack, a senior lecturer in psychology at the university and leader of the research team, said investigations of insomnia throughout the world had so far failed to look at the biological rhythms of the body as a possible solution to the problem.

He said indications were that disturbed body rhythms (disrupted, for example, by so-called jet-lag, the rapid movement through different time zones) affected the capacity to sleep. One of the pointers to disturbed body rhythms was a higher than normal night-time body temperature, common in insomniacs.

Dr Lack said this was because body temperature worked on a 24-hour cycle (known as the circadian rhythm), which varied from a low of about 36.5°C (97.7°F) at night to a high of 37.5°C (99.5°F) at about mid-afternoon.

He said a graph showing this rhythm would feature in upward curve towards a plateau in the morning before another rise to the afternoon peak, which was followed by a gradual decline.

The effect of jet-lag was to raise the night temperature slightly and round off the peaks, thus leading to a disruption of the normal pattern which could take several days to restore itself.

"I believe that the typical insomniac could well suffer from the same rounding off, in that the body of such a person would have a higher temperature at night than that of a good sleeper," Dr Lack said.

He said body rhythms were also governed by secretion of a hormone, melatonin, from the pineal gland. This was secreted in the dark and was, therefore, more active at night than during the day.

Dr Lack's team is measuring the amount of melatonin secreted by insomniacs against that secreted by sound sleepers.

"Our expectation is that insomnaics will have less melatonin in their urine than people who sleep well," Dr Lack said.

His team would also measure the production of other hormones to see if various volunteer subjects were under stress—which could in itself be enough to deprive them of sleep. The issue was further complicated by the fact that many people who believed they were insomniacs, were not.

Volunteers who had agreed to keep a sleep diary at home for the staff of the university, found often that when they slept in the laboratory they slept better than they did at home.

"This is possibly due to the fact that they are angry at their home environment, or because restlessness at home, promoted by a number of factors, was aggravated by the belief that they felt they were not getting enough sleep" Dr Lack said.

He said a by-product of the research had been to acquaint people with their real sleep needs as against their imagined ones.

To help determine sleep periods more actively, Dr Lack's volunteers, as well as keeping a sleep diary, will wear for five nights at home a computer which will record at one-minute intervals body temperature and movement.

The movement indicator has proved 96 per cent accurate as a sleep indicator when tested against an electroencephalograph the reason being that people invariably move when they are awake.

After their five nights at home volunteers will spend two nights in the university sleep laboratory connected to an electroencephalograph.

"In this way we hope to get closer to a real appreciation of insomnia and how best to combat it," Dr Lack said.

—AIS

LACK OF SLEEP MAY LEAD TO FIBROSITIS

FIBROSITIS, one of the most common forms of rheumatic disorders, may be caused by an increase of the body's normal pain threshold from lack of sleep.

The theory being pursued in studies at Prince Henry's Hospital Rheumatology Unit in Melbourne is that fibrositis sufferers experience aches and pains common to most people, but exaggerated by their bodies' increased pain threshold from disturbed sleep patterns.

The theory was outlined to medical and para-medical pain specialists at a recent seminar at the hospital.

According to the head of the Rheumatology Unit, Dr G. Littlejohn, the link between fibrositis and disturbed sleep has been established since it was first documented at the University of Toronto's sleep laboratories in Canada in 1979. Then, a group of volunteer medical students developed fibrositis after being subjected to three days' deliberate interference with their sleep.

Dr Littlejohn said that link had been further documented in separate research in other parts of the world.

In the Melbourne studies-involving fibrositis patients referred from other hospitals—researchers have established a significantly higher incidence of endorphins, the body's naturally produced pain-relieving hormones, in the blood of fibrositis sufferers.

Though this data has not been finally analysed, it may provide strong support for the theory that fibrositis is actually an "amplification syndrome" in which the body's naturally occurring "tender spots" become sites for real, amplified pain.

"We don't really know yet what it means," Dr Littlejohn said, "but we know that disturbed sleep patterns are involved. We're looking at the possibility that this may increase the pain threshold, which then results in diffuse aches and pains, and probably also the release of endorphins." He said most people had tender spots in particular parts of their bodies—spots which, if pressured, registered tenderness or mild pain. In fibrositis patients, it was possible these spots were just amplified. Disturbed sleep patterns were common to most fibrositis patients, as were several other features of the syndrome, the main symptoms being generalized pain.

It most commonly occurred in middle life, frequently after some form of stress or trauma such as a motor vehicle or industrial accident. This might not have resulted in any major physical trauma, but did contribute to emotional stress and sleep disturbance.

Dr Littlejohn said that many so-called malingerers dismissed by doctors as having "nothing wrong with them" after industrial accidents might in fact be suffering from fibrositis, or amplified, hard-to-define pain resulting from psychological stress and disturbed sleep.

It was well established that stress played a highly significant role in the syndrome, and that people suffering from it tended to be perfectionists, demanding or themselves and others, and successful in their jobs. Many of the patients in the Prince Henry's Hospital study and suffered fibrositis for many years, even, in the case of several survivors of World War II concentration camps, for more than 30 years.

If the indications were proved, Dr Littlejohn said, and fibrositis was in fact an "amplified pain syndrome", its treatment would become much more rational.

Doctors encountering the complaint should concentrate on controlling sleep disturbance, supported by relaxation therapy and modification of life stresses. If relaxation therapy was inappropriate or unsuccessful, low-dose trycyclic antidepressant drugs were also effective. Dr Littlejohn's research team is also working on developing a skin test as a means of simple diagnosis.

— AIS

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Development of health delivery system at PHC level
— A WORKSHOP

A WHO Workshop on Sexually Transmitted Diseases sponsored by the Government of India was held from 26—30 December, 1982, at S.V. Medical Colleg. Tirupati. Dr I.D. Bajaj. Director General of Health Services, presided over the inaugural function.

The medical officers working in the Primary Health Centres of the States of Kerala, Andhra Pradesh and Karnataka attended this Workshop.

Welcoming the faculty members, guests and the participants, the Principal of S.V. Medical College expressed his gratefulness for organizing this group educational activity at their institute.

In this Inaugural Address, Dr P.S.R.K. Harnath, Director of Medical Education, Andhra Pradesh, touched upon various aspects of sexually transmitted diseases and suggested that the STD clinics should be redesignated as Skin and STD clinics. This will facilitate the proper utilization of treatment services by the STD patients. Since venereal diseases are coming up and some departments alone cannot give sex education or any type of health education to people, he suggested that every school and college should have a doctor on their teaching staff to impart sex education including that of sexually transmitted diseases to children. Dr Harnath also suggested the preparation of slides on STD for both educated and uneducated people. He was happy that various district hospital laboratories were being adequately equipped by the Government of India for proper diagnosis and treatment of sexually transmitted diseases.

Delivering the Presidential Address Dr. I. D. Bajaj. Director General of Health Services, made a special mention of the steps taken by the Central Government for the control of STD. He remarked that in order to make some dent in the control of STD contact tracing and case finding was needed to be further improved. He told that such Workshops were being conducted as part of the STD Control Programme to provide enough training to medical officers and technicians and to ensure proper treatment of the patients suffering from sexually transmitted diseases. He hoped that this educative step would go a long way in reducing the deformities and their sequelae caused by syphilis and gonorrhoea.

Dr Dharam Pal, Adviser, STD, explained the aims and objectives of organising such a group educational activity in general and of this Workshop in particular. He said that sexually transmitted diseases should be considered in the same manner as malaria, tuberculosis, or any other disease. He said that the purpose of the Workshop was to develop the health delivery system in connection with the sexually transmitted diseases at the PHC levels. It would intensify the working knowledge of medical officers regarding STD and enable them to diagnose and treat the patients in a proper manner at the PHC itself instead of referring them to a far off district hospital. Keeping this in view, the teaching programme, talks, have been arranged in such a way that the participants could get a comprehensive view of sexually transmitted diseases in its various aspects, namely clinical, laboratory, epidemiological, social and educational aspects. Shri Dharam Pal said that the participants, after attending this Workshop, would be able to handle STD cases with more courage and confidence.

Dr Bimala Bai, Superintendent, S.V.R.R. Hospital, Tirupati proposed a vote of thanks.

The valedictory function, held on 30 December, 1982 was presided over by Dr Sita Ramiah, Vice-Principal, S.V. Medical College, Tirupati.

An evaluation report on the basis of the post-evaluation test showed considerable improvement in the working knowledge of the participants with regard to sexually transmitted diseases. △

NEWER INFECTIONS IN STD

NEWER infections have displaced gonorrhoea, syphilis and chancroid as the most prevalent sexually transmitted diseases in the world, Dr R.D. Catterall, President of the International Union against Venereal Diseases and Treponematoses, said in Bombay recently.

The "second generation" of sexually transmitted diseases including chlamydia, ureaplasma and gardnerella, account for the majority of cases seen in STD clinics in industrialized countries. Quoting statistics from the UK, where he is an advisor to the department of health, Dr Catterall said that only 16 per cent of patients reporting to STD clinics in 1981 suffered from the 'first generation' of diseases, *i.e.*, gonorrhoea, syphilis and chancroid.

Globally there has been a "substantial increase" in the incidence of sexually transmitted diseases. In the UK alone, more than half a million cases have been diagnozed since 1960. While the incidence of gonorrhoea and syphilis has remained steady, non-specific urethritis has shot up in a "spectacular way", a trend that is causing great concern to public health authorities.

Sexually Transmissible Agents

Dr Catterall told the seventh national conference of the Indian Association for the Study of Sexually Transmitted Diseases that there are at least 32 different agents that can be spread by the sexual route. In addition to the newer bacteria—chlamydia, ureaplasma and mycoplasma—several viruses and protozoa are becoming important, among them hepatitis B virus, cytomegalus virus, Epstein-Barr Virus, Papilloma Virus, *Entamoeba histolytica* and Giardia Lamblia.

Responsible factors

According to Dr Catterall, factors contributing to the rising incidence of STD are:

1. *Population changes*: there is an increase in the total number of people growing up, and in the rate of urbanization.

2. *Attitude to sex or the "sexual revolution"*: in some countries premarital sex is the norm.

3. *Change in sexual practices*: oro-genital and ano-rectal sex is quite common, and a doctor examining a case of STD has to look at several sites in addition to the genitalia, such as the oro-pharynx and the ano-rectal regions.

4. *Symptomless infection*: this is particularly true of chlamydial infection.

5. Increased travel, and the spread of resistant strains.

6. Antibiotic resistance.

7. *Modern contraception*: the Pill, the most popular form of contraception, does not prevent passage of infection during sex, and intra-uterine contraceptive devices are being increasingly associated with pelvic inflammatory disease.

8. Ignorance of sexually transmitted diseases among doctors and the public.

Syphilis in the UK is rapidly becoming a problem of homosexuals. The decline in late syphilis is probably the result of enough broad spectrum antibiotics being consumed by a person in his lifetime.

In Europe and the UK, chancroid has been appearing episodically in the last 6 months but advances in culturing the causative organism have led to more accurate diagnosis.

"I believe there will continue to be a high incidence of sexually transmitted diseases in this country." Dr Caterall declared. This is because the majority of STD do not provide protective immunity (some patients have contracted gonorrhoea eight times in a single year), the infection is symptomless in a significant number, high-risk groups (teenages, homosexuals) form the nucleus of infection in the community, and resistance to antibiotics is likely to grow.

"Since the number of STD patients is going to increase, there is a need for the medical profession to organize itself to face this challenge." Dr Caterall said in conclusion.

— Medical Times, March, '83

GENITAL HERPES INFECTION

Lack of effective therapy

THE media have grossly exaggerated the prevalence of Genital Herpes virus infection, one of the newer sexually transmitted diseases, Dr William Harrison (USA) and Dr R.D. Caterall (UK) stated in their guest lectures at the seventh national conference of the Indian Association for the Study of Sexually Transmitted Diseases held in Bombay.

Among a group of young Americans on naval duty only 2.8 per cent said they had Herpes infection at some time or the other. Thus Herpes is not a serious problem among sexually-active young men, Dr. Harrison said.

In the UK, statistics from STD clinics show only a gradual increase in the incidence of Genital Herpes virus infection, from 6,762 cases in 1975 to 10,800 in 1980, Dr Catterall told the delegates.

By over-reacting, the press and television have spread alarm among the people, and many doctors spend hours every day reassuring their patients, he added.

If infection occurs, there is likely to be a life-long association between the virus and the host. At first the patient experiences itching and discomfort, then develops pustules which rupture, leaving shallow ulcers. Primary attacks, particularly in women, can be very severe, with fever, pelvic pain and severe itching around the lesions.

Men with Genital Herpes infection usually complain of severe ano-rectal pain, difficulty in walking and constipation lasting up to 10 days.

Herpes simplex causes cancer of the cervix, although the statistical evidence is "very seductive", Dr Catterall said. Primary infection in the cervix is usually followed by recurrent attacks.

Diagnosis, often self-evident, is established by growing the virus in tissue culture using human-embryo cell lines.

"Treatment of Herpes infection is still not very good", Dr Catterall remarked. In Britain, acyclovir has proved useful in limiting severe primary infection; it does not prevent recurrence. Vaccines are being tested but none has been licensed so far.

Both topical and intravenous preparations of asyclovir are available in the United States. Dr Harrison told his audience. The intravenous form has been successful in the treatment of primary Herpes genitalia, disseminated Herpes and Herpes encephalitis, but has failed to prevent recurrences.

— Medical Times, March '83

Blood test for diagnosis

A new blood test for genital herpes has been developed at an Australian university.

The simple procedure, which will complement existing tests, provides a rapid and reliable diagnosis and was developed at La Trobe University in Melbourne by microbiologists Dr John May and Mr Minas Arsenakis.

The test has been under evaluation for two years and more than 100 patients have been tested. The researchers believe the test could have a significant impact on limiting the spread of genital herpes.

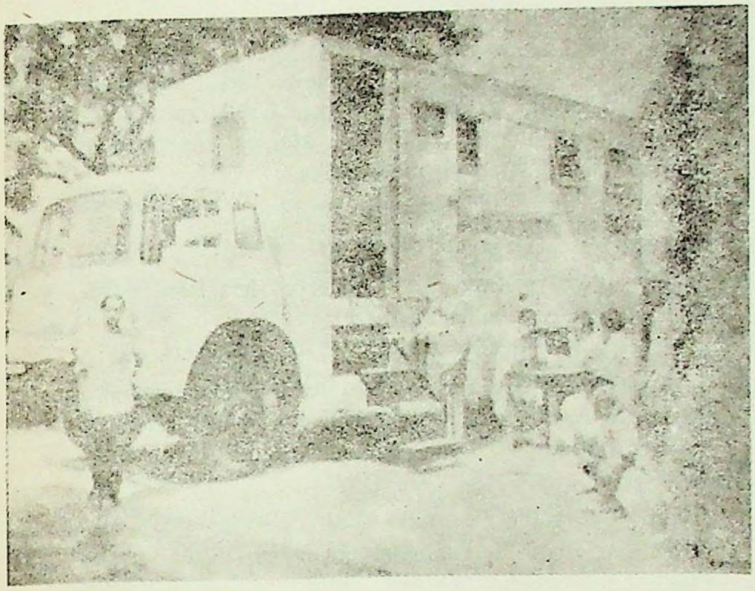
Dr May and Mr Arsenakis originally began research into the development of a test for the detection of early-stage cervical cancer. But they realized three years ago that the test they had developed had immediate potential for the diagnosis of genital herpes in both sexes.

Before the development of the La Trobe test laboratory, diagnosis of herps depended largely on the ability to grow the herps virus recovered on swabs from infected areas. Disadvantages of this method included its complexity and the time (up to several weeks) needed to obtain results. Swab specimens can also die during transport to the laboratory, leading to a false negative result being obtained.

Effects of the disease can reach beyond the discomfort and distress caused by attacks of the virus. The disease can be passed to offspring during childbirth, and women suffering from it may have a greater risk of developing cervical cancer later in their lives. There is no known cure to the disease.

An antigen (a protein which serves to identify intruder organisms in the body and which provokes the immune system to produce defensive antibodies) developed at La Trobe University is used in the test. The specific antigen preparation, AG-4, is obtained during the early multiplication of herpes genital virus in the laboratory. Because the AG-4 antigen does not cross-react with the herpes virus which causes mouth sores, it overcomes the problems associated with previous blood tests for genital herpes.

—AIS



Medical Services in Rural Community through Mobile Clinics

SURESH CHANDRA J. S. MATHUR & R. R. GUPTA

MEDICAL care in rural community at three primary health centres, viz., Chaubepur. Sheorajpur and Kalyanpur is being looked after by G.S.V.M. Medical College, Kanpur. Besides, specialist services to rural and slum community is provided by mobile clinics under ROME Scheme.

Presently three mobile vans were provided to G.S.V.M. Medical college, Kanpur in March 1979. These mobile vans are mobile hospitals and clinics on wheels with well equipped minor operation instruments, injection trolly, single operation table, operating spot light, examination light, drug and storage cabinet, sterilizer, refrigerator, pharmacist compartment, medical and diagnostic equipments, adult emergency kits baby emergency kits, midwifery kits, oxygen cylinder and dental table. All the lights and fans are generator operated. Besides, there is also provision of battery operated emergency light.

BENEFITS

* Patients who cannot attend primary health centre or urban placed hospital may be benefited through the mobile clinics.
* Involvement of local people in medical care programme.
* Effective use of scarce resources and inputs while minimizing the cost in general.
* Specialist services of medical college can be provided to remote placed people.
* Medical students, interns and junior doctors are exposed to rural health problems.
* Exposing of faculty staff to rural health problems.
* Upgrading the quality of health care services in the rural and peripheral areas by providing meaningful referral services linking between remotest peripheral health care unit with medical college.

The Government of Rajasthan startea door to door medical services through mobile clinics, in 1958. *This has helped the persons is remote areas and those who cannot reach even to the nearest primary health centre or hospital for their health needs. They are much benefited by such type of health services. Meetings of Deans and Principals of medical colleges* (1976) *and Medical Council of India has brought in some drastic changes to make the teaching and training of yong doctors " community need based" and stressed for close cooperation between Social and Preventive Medicine and other clinical departments. For the effective implementation of health services the Sub-committee and Conference of Dean and Principals of the medical colleges in India has drawn a uniform plan of action to be operated in all medical colleges. The three mobile clinics or hospital on wheels were provided to each medical college for medical care of rural community under the Re-orinentation of Medical Education Scheme. Now the trend in medical education and health services have shifted from hospital based to community oriented with emphasis to extra-mural teching, training and service in real situation adopting "community as a ward". Now the majority of the faculties have left the four walls of the hospital providing specialist services to rural community through mobile clinics. Yet their approach is treatment oriented which has to be basically oriented* to preventive and promotive services otherwise *the benefits of Re-orientation of Medical Education scheme (ROME) will not be availed of by the community for whom the scheme has been launched.*

Action Taken

The scheme is being implemented in G.S.V.M. Medical College, Kanpur since 1979. The plan of action involves various clinical departments in the scheme. The guidelines of Government of India were taken into consideration in the implementation of the scheme:

1. Medical college has taken the total responsibilities of preventive, promotive, curative and administrative care of three PHC's viz. Chaubepur, Sheorajpur and Kalyanpur.

2. Four weeks community posting has been arranged for the students of final year M.B.B.S. The students of final year are posted in batches of 15 to 20 in the community medicine.

3. Health services, drug distribution, health education, M.C.H. and Family Welfare Planning services alongwith specialist services are provided by students, interns and senior teaching staff of the medical College.

4. The referral services of the following two types have been evolved in the community health.

(a) *By Students.*—Undergraduate students under the supervision of senior teachers of the Department of Social and Preventive Medicine personally bring the cases in the hospital to provide the services of specialists.

(b) *By Doctors.*—The interns, doctors of the Primary Health Centres and the specialist team directly refer the cases to the medical college for hospitalization and treatment.

5. Doctors and staff of Primary health centres have been utilized in undergraduate and interns training programmes.

6. The specialists of medicine, surgery, paediatrics, obstetrics and Gynaecology, ophthalmology and Orthopaedics are providing their services to the rural community of these three primary health centres by mobile clinics.

Achievements:

SPECIALIST SERVICES TO RURAL COMMUNITY THROUGH MOBILE CLINICS FROM APRIL 1981 TO MARCH 1982.

Department participated	No. Visits	Cases Attended
Medicine	66	1071
Paediatrics	68	382
Orthopaedic	8	58
Ophthalmology	42	207
Obstetrics & Gynaecology	56	737
Surgery	18	492
Social & Preventive Medicine	68	Immunization, MCH and Family Welfare Services were provided.

MOTHER & CHILD HEALTH AND FAMILY WELFARE SERVICES

Teaching staff with assistance of para medical workers of Social and Preventive Medicine are organizing well baby clinics and providing M.C.H. and Family Welfare Planning Services to the rural community.

M.C.H. AND FAMILY WELFARE SERVICES PROVIDED DURING 1981—1982

Particulars	Achievements
MCH clinics held	59
Mothers attended the clinic	253
Children attended the clinic	461
Mothers given Iron & Folic Acid	217
Children distributed Vit. A. Sol.	253
Vasectomy done	7
Tubectomy done	193
Coppter—T Inserted	145
Sterility cases seen and referred	19

IMMUNIZATION AND INOCULATION DONE UNDER THE SCHEME DURING APRIL 1981 to MARCH 1982

IMMUNIZATION	No. of Cases
Smallpox	1653
D.P.T.	1429
D.T.	502
Tetanus Toxoid	1175
Polio	1207
Cholera	730
B.C.G.	67

Practical difficulties in use of mobile vans.—The mobile vans under the scheme are not utilized to the extent it is required. The following discrepancies are being observed in providing the services to the rural masses by these vans.

Size of the mobile van is so big that it cannot go on most of the roads of the rural areas.

The vehicle cannot move in Kachha or semi-pucca roads of remote village areas.

Adequate budget for diesel and repairing is not provided for the regular services of these vans.

Skilled technicians and the mechanics are not available in most of the cities for repairing and maintenance of vans.

Major surgical operation cannot be performed inside these vans.

These large vehicles cannot transfer the emergency cases to the hospital referred by specialists.

If these drawbacks are removed the working capacity and efficiency of mobile clinics can be much improved. △

Women opt for Laparoscopic way of birth control

G. VENKATARAMAN

THERE was a time when the people used to run away and even bolted homes at the mere sight of a van or a jeep bearing the red triangle mark entering the village with the fear that they would be picked-up for birth control operations. Now things have changed. In fact, rural population, especially women, welcome family planning camps but with a change—sterilization through *LAPAROSCOPY*.

Women in Dharmapuri district of Tamil Nadu needed a lot of motivation and persuation in the beginning to undergo sterilization—popularly known as 'operation' for limiting family size. But the big turnout of young mothers, including *LAMBADI* tribals, at Dharmapuri Headquarters Hospital during last week of November, 1982 for undergoing Laparoscopic sterilization was a clear indication of a change in attitude of rural women in the district towards a planned family. The women opted for sterilization the laparoscopic way which clearly showed that this much publicised new technique of birth control would relieve them of the attributed difficulties of tubectomy. As one mother put it "We wanted a device that could be less painful and free from possible complications and perhaps this was it."

Women acceptors from far off places in Pennagaram, Palacode, Dharmapuri, Nallampalli blocks of Dharmapuri tehsil area thronged the Dharmapuri Government Hospital in large numbers.

The family members who accompanied the young mothers took shelter under trees and any other place they could find and were seen lulling the last-born infants to sleep while their mothers were away in the ward, for Laparoscopy. The camp site wore a festive look.

Lambadi tribals accept family planning

A dozen *LAMBADI* tribals from Masakkal forest area in Pennagaram block of Dharmapuri district came all the way to undergo sterilization by the new technique. Twenty-four women from Athimarathur, Seelainaickanoor, Mudugampatti, Kuttumaradhalli, Thinnakuthahalli hamlets in Masakkal reserve forest area either travelled on the back of donkeys or trecked the 16 Kms to reach block headquarters at Pennagaram and from there they went by bus to Dharmapuri to avail of this facility.

Onnuki wife of Kuppusamy, a *lambadi* tribal woman from Madhanda hamlet, and a mother of five children, was asked why she had not opted for tubectomy earlier. Her spontaneous reply to the question was that 'operation' scared her and she could not stay on for days in the hospital after tubectomy as her family needed her so much. Onnuki said "I was informed that this method was painless and I could go home same day". This view was endorsed by many mothers.

Mothers' meeting

The modren laparoscopic sterilization camp was preceded by a week-long women mobilization campaign mounted by the Directorate of Field Publicity, Ministry of Information and Broadcasting, Salem and

Dharmapuri units. Mothers' meetings were conducted in the villages to enlighten the mothers on salient features of sterilization the "laparoscopic way". They were informed that triggering of 'Falope-ring' was painless and completed in less than three minutes. Further, they could return home the same day and do their house-hold work. No scar or mark would be left after the treatment. Beneficiaries would be paid Rs. 125 as incentive, etc. Besides this, they were explained the benefits of a small family and what the new 20-point programme had in store for the women.

Publicity campaign

As many as 10,000 posters and banners were put up in almost all the villages in Dharmapuri tehsil area. The attractive posters with catchy slogans were displayed at prominent places on the walls of buildings and on the public transport. Announcements were also made from mike-fitted jeeps, auto rickshaws, bullockcarts, etc. The message reached the far flung areas. The dreaded word 'operation' disappeared from the minds of village folks, who now referred to sterilization through laparoscopy as a "Treatment by injection".

The impact of the publicity was gauged by the large turnout at the camp site. Women gathered in large numbers to undergo this painless and easy method of sterilization. In fact at Laligam—a village twenty kilometres away from Dharmapuri—there was a popular demand that similar camp should be sponsored for the "benefit of men". Humorous though the demand sounded, it spoke for the popularity of this new method of sterilization.

A new record was created in the Dharmapuri laparoscopic camp where 1,008 sterilizations were done at a single camp which lasted for three days. The earlier record was 1,002 sterilizations in a five day camp held in Gujarat State. In November, 1982 alone (November was observed as National Family Welfare Month) a record number of targets, 776 and 1,008 were achieved in Krishnagiri and Dharmapuri camps respectively. There are indications that the major breakthrough made by Dharmapuri district in Tamil Nadu will be followed elsewhere to carry the message of small family to rural population. △

(*Continued from page 166*)

health practices should be encouraged and the bad ones should be discouraged.

(c) Educating people about the availability of health services, and their utilization.

(d) A deep sympathetic attitude of health educator is a must for good result.

For improving the condition of women following measures should be encouraged:

I. Education and training of women to help them increase their knowledge self-esteem and status, to become self-sufficient, through employment.

II. Development of community creches, *bal-wadis*, pre-school nutrition, immunization.

III. Raising the age of marriage.

IV. Educating women on the health aspects of puberty, menstruation, role of wife/mother, pre-natal, post-natal health-services and importance of small family norms with special emphasis on family planning methods such as spacing, including breast feeding and post-partum absenteeism as cultural factors.

V. Education of women on home making, proper cooking, awareness of their role and value in the society.

Other measures should include—

1. Community organization and its participation.

2. Education with special stress on nutrition and health.

3. Awareness of public health and personal hygiene.

4. Education with special stress on women education, in reducing fertility by use of Family Planning methods. Nutritional deficiency and diet; immunization and nutrition for children.

5. Close and continuous studies in the area of information and support, community involvement to ensure the benefits of health services by co-ordinating medical and sociological knowledge.

It may be mentioned here that doctors and hospitals alone cannot achieve this end. The para-medical staff like nurses, public health engineers and social scientists, who in turn should educate the community leaders and members making them aware of social changes in all the aspects, should participate in achieving this end, to achieve the goal of health for all.

—Excerpts from a paper "Teaching and Research in Medical Sociology in India".

HEALTH IN PARLIAMENT

LOK SABHA—3 March 1983

Infant Mortality in Rural and Urban Areas

ACCORDING to the latest figures compiled by the Registrar General of India through Sample Registration System (SRS), the infant mortality rate per 1000 live births for rural and urban areas of the country are:

Year	Rural	Urban	Total
1976	139	80	129
1977	140	81	130
1978	137	74	127

The infant mortality rates for the subsequent years have not yet been compiled.

The infant mortality rate in the rural areas is more than that of urban areas.

The infant mortality rates in some of the advanced countries are given below:—

Country	Infant mortality rate 1976	1977	1978
Canada	13·5	12·4	12·0
U.S.A.	15·2	14·0	13·6
Japan	9·3	8·9	8·4
France	12·5	11·4	10·6
Germany (DR)	14·0	13·1	13·1
Germany (FR)	17·4	15·5	14·7
U.K.	14·5	14·1	13·3
Australia	13·8	12·5	
Sweden	8·3	8·0	7·8

In the advanced countries, the level of infant mortality is lower than that of India.

Measures taken or proposed to be taken to bring down the infant mortality are:

1. The infrastructure for the delivery of maternal and child health services has been and is being expanded both in rural and urban areas by the setting up of Primary Health Centres and sub-centres, Urban Family Welfare Centres, and Post-Partum Centres. Presently, about 6000 Primary Health Centres, 60,000 sub-centres, 2,500 Urban Family Welfare Centres and 550 Post-Partum Centres are functioning in the country.

2. The Health Guides Scheme introduced in the last few years with the aim of providing one worker for every one thousand population will provide further primary health care in the promotive, preventive and curative aspects in a large measure. About 2.33 lakh village health guides have been trained so far.

3. The training of Traditional Birth Attendants (Dais), who assist at the time of child-birth in villages, has been intensified so that there would be a trained *dai* also for a village of 1000 population to provide for hygienic deliveries. About four lakh indigenous *dais* have been trained so far.

4. Special clinics to attend to pregnant mothers and small children are organized in all types of medical and health institutions. Besides keeping pregnant mothers and small children under regular health supervision, these clinics provide the preventive services as well as undertake health and nutrition education.

5. Preventive immunization against tetanus is given to pregnant mothers in order that puerperal tetanus and neo-natal tetanus which is a cause of infant deaths in many parts of the country is prevented. Facilities are provided for the protection of infants from tuberculosis, diphtheria, whooping cough and tetanus. Arrangements for immunizing children against measles, typhoid and polio have also been made. The programme of immunization for all these categories is being intensified from year to year. During 1980-81 and 1981-82, 10.5 million mothers have been covered with T.T. Immunization. Among children covered are 13.8 million with D.P.T.; 20.8 million with D.T.; 3.7 million with Polio and 3.8 million with typhoid.

6. Nutritional anaemia is widely prevalent among pregnant and nursing mothers. A scheme is in operation to prevent nutritional anaemia among mothers and children. During 1980-81 and 1981-82, 20.80 million mothers and 19.25 million children have been covered under the scheme.

7. A programme to combat dehydration due to diarrhoeal diseases among children through use of oral electrolyte solution has also been initiated.

8. Doctors in Primary Health Centres are being given inservice training in maternal and child health in selected district headquarter hospitals. About 450 doctors have been trained so far.

9. Educational material/guidelines on all components of MCH Schemes, including nutrition, are being produced and distributed to medical and paramedical staff.

10. Nutritional education to mothers is sought to be imparted through all the Auxiliary Nurse Midwives in sub-centres.

11. Intensive steps have been taken to provide adequate care to the newborn in the form of training of traditional birth attendants, midwives, nurses etc., defining minimum perinatal care, imparting training to teams of doctors in newborn care and providing specialized equipments for care of sick newborns.

12. Paediatric Units have been established in 321 district hospitals and 20 sub-division hospitals and specialized equipments have been given to these units.

13. Besides, for promotion of breast feeding among the population, a curriculum has been developed for providing inservice training to doctors in management of problems in breast feeding and infant weaning. This is also being augmented by appropriate health education for infant nutrition.

14. A special integrated child development service project has been introduced in about 300 development blocks by the Ministry of Social Welfare. These projects, implemented in the tribal areas, backward rural areas and urban slums aim at providing intensive health care for pregnant mothers and children below six years of age. The project is gradually being extended to about 1000 blocks during Sixth Five Year Plan.

15. The National Family Welfare Programme also plays an important role in improving the health of mothers and children, and reducing the rate of infant mortality. The couple protection rate under one or the other methods of contraception is likely to go up 25.5 per cent by the end of March 1983, as against 23.7 per cent in April 1982.

This information was given by Smt. Mohsina Kidwai, Minister of State for Health and Family Welfare, in Lok Sabha, on 3 March 1983.

CHILD MORTALITY RATE IN INDIA AS COMPARED TO UK AND FRANCE

Smt. Mohsina Kidwai informed the Lok Sabha that according to information available the age specific child mortality rate in India during 1978 is 48.3 in the age-group of 0-4, 4.2 in the age group of 5-9 and 2.0 in the age-group of 10-14 per thousand live births. The same in Great Britain was 12.8 per thousand live births during 1979 and in France 10.1 per thousand live births during 1979.

(b) Child mortality is caused by malnutrition, as well as by unsatisfactory living conditions; gastro-intestinal diseases; respiratory infections; other communicable diseases and poor immunity status.

Immunization against T.B., Diphtheria, Polio & Tetanus

Shri B. Shankaranand, Minister of Health and Family Welfare, informed the Lok Sabha that twenty-one vaccination coverage surveys have been conducted in 1982 to get objective data on the immunization coverage of the eligible population.

A number of steps have already been initiated to ensure better immunization coverage to the target groups. These include expansion of the health educational activities by training *Dais* and Health Guides, extending the service facilities by establishing additional sub-centres, upgrading rural dispensaries and opening additional primary health centres to reduce the population coverage by the existing primary health centres. The cold chain facilities in the rural areas for the stocking and preservation of vaccines are being extended and expanded. Steps are also being taken to increase the production capacity of various vaccines in the country.

Medical facilities for all villages

Smt. Mohsina Kidwai told the Lok Sabha that to provide medical facilities to every village in the country, under 100 per cent Centrally Sponsored Schemes, a Health Guide and a trained *Dai* is proposed to be made available. In the village where population is more than 1,000, two or more Health Guides can be selected. In addition, sub-centres are being established for a rural population of every 5,000 which provide first aid for accidents and emergencies, treatment of

minor ailments, health education, immunization services, antenatal, natal and post-natal care, etc. Establishment of sub-centres is also a 100 per cent centrally sponsored scheme since 1 April, 1981.

According to the information available from the State Governments 24 Primary Health Centres, 898 sub-centres and 19 upgraded Primary Health Centres (rural hospitals) have been established in Bihar during 1980-81 and 1981-82. It is expected that additional 76 Primary Health Centres, 300 Sub-Centres and 5 upgraded Primary Health Centres (rural hospitals) would be established during 1982-83.

Rs. 13.80 lakh and Rs. 61.20 lakh were allocated during 1981-82 and 1982-83 respectively for setting up the sub-centres in Bihar. Establishment of Primary Health Centres and Upgradation of Primary Health Centres is under State Sector's Minimum Needs Programme.

Medical facilities provided in rural and urban areas

Smt. Mohsina Kidwai informed the Lok Sabha that in order to correct the imbalances in the existing health facilities between urban and rural areas, the Government has adopted the following stategy during the Sixth Five Year Plan:—

(i) A proportionately higher plan allocation has been made under the Minimum Needs Programme and for control of communicable diseases.

(ii) Funds are being earmarked under the Minimum Needs Programme (which covers only the rural areas) so that they cannot be diverted to non-Minimum Needs Programme components.

(iii) A new scheme for converting the existing rural dispensaries into Subsidiary Health Centres has been introduced during the Sixth Plan. This Scheme provides for additional inputs in the existing dispensaries so that they can Provide a package of preventive, promotive and curative services in the rural areas.

(iv) Funds are not being provided by Government of India to State Governments for establishing dispensaries and general hospitals in urban areas.

(v) One rural hospital with common speciaiities for every one lakh population, one primary health centre for every 30 thousand population and one sub-centre for every 5,000 population, besides a trained *dai* and a health guide in every village are to be provided in a phased manner during the next 20 years.

Setting up of cancer research institutes

Kum. Kumud Joshi, Deputy Minister for Health and Family Welfare, said in Lok Sabha that the following institutes are already functioning as Regional Cancer Centres under the Cancer Research and Treatment Programme of the Ministry of Health & Family Welfare:

1. Regional Cancer Centre at Gujarat Cancer and Research Institute, Ahmedabad.
2. Regional Cancer Centre at Kidwai Memorial Institute of Oncology, Bangalore.
3. Regional Cancer Centre at Chittaranjan National Cancer Research Centre, Calcutta.
4. Regional Cancer Centre at S.C.B. Medical College, Cuttack.
5. Regional Concer Centre at the Institute-Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi.
6. Regional Cancer Centre at Dr B. B. Cancer Institute, Gauhati.
7. Regional Cancer Centre at Cancer Hospital and Research Institute, Gwalior.
8. Regional Cancer Centre at Cancer Institute, Madras.
9. Regional Cancer Centre at Cancer Wing of the Medical College, Trivandrum.

The Meherbai Tata Memorial Hospital, Jamshedpur (Bihar) have also approached the Government of India for recognition of their hospital as Regional Cancer Centre.

While no assistance from International Agencies/Foreign Governments has been received/obtained for setting up of Regional Cancer Centres, the Government of U.K. have provided a 'Linear Accelerator' costing about Rs. 67.42 lakh during 1981-82 to the Regional Cancer Centre at the Gujarat Cancer and Research Institute, Ahmedabad, under their Technical Cooperation Programme. Another equipment called "Simulator" costing about Rs. 25.00 lakh is also likely to be received from the Government of U.K. during the current financial year.

BOOKS

Behavioural studies related to care of the aged: Report on a WHO Working Group, Copenhagen, WHO Regional Office for Europe, 1982 (EURO Reports and Studies, No. 71: ISBN 92 890 1237 4). 39 pages. Price: Sw. fr. 4.—.

Lack of knowledge about attitudes towards the elderly is a major factor contributing to many of the difficulties associated with the care of elderly people. The subject of behavioural studies related to the care of the aged is therefore of great importance to the WHO programme on health care of the elderly conducted in collaboration with Member States.

A working group representing 12 countries was convened by the WHO Regional Office for Europe in Lübeck, Federal Republic of Germany, in July 1981 with the aim of formulating recommendations relating to future research, and action for improvement of education of professionals, the general public and the elderly themselves.

Using background material from the United Kingdom and Sweden in particular, the group explored and discussed the attitudes of some care providers (physicians, nurses and auxiliaries) and identified motivation as a major factor responsible for the present attitudes of these professions. The attitudes of the elderly themselves and family attitudes towards old people were recognized as constituting an important factor in the breakdown in health of the aged.

It was concluded that both the general public and health care professionals lack relevant information on the aged and on the aging process. There is also a need for standardized research methods which would increase the value of future international studies. In cases where recommendations are already based on sound research findings, however, the group concluded that there is a need to develop strategies for their implementation.

Action-research programmes directed towards (a) maintaining the integration of older people in their home environment for as long as possible and (b) the development of planning for health and social care programmes for the elderly are among the recommendations for studies. A list of topics for studies is included.

Educational programmes for health professionals should be reviewed to ensure an adequate gerontological content at both pre- and postgraduate levels as a means to change unfavourable attitudes.

This publication will be valuable reading for all professionals with a concern for the care of the elderly, not only in the health sector but also in other related sectors at national and local levels.

W.H.O.

Policies towards indigenous healers in independent India. Jeffery, R. Social Science and Medicine 1982 16(21): 1835-41.

Policies towards indigenous healers in independent India show considerable continuties with policies followed in the British period, varying according to the sex of the healer. Traditional birth attendants (dais) have been offered short periods of training by the State whereas until recently male healers (vaids and hakims, and later homoeopaths) have been treated with official hostility. Current plans include the training of religious healers in psychiatric services as well as the employment of indigenous healers in new community health schemes. These changes are assessed in the context of political economy of health services. (AA).

—National Medical Library
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