The Foundation for Research in Community Health

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NEWSLETTER

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Professional Competence vs. Local Health Care Needs

# The (Il)legality of Cross-Practice

Dr. Anant Phadke

There has been a hue and cry by non-allopaths and others over the circular by Mr. A.K. Lakhina, Commissioner, Food and Drugs Administration, Maharashtra, instructing drug shops not to honour prescriptions of allopathic drugs by non-allopaths. This circular is an attempt by Mr. Lakhina to implement the Supreme Court verdict declaring the prescription of allopathic drugs by non-allopathic doctors as illegal. In a landmark judgement on 22nd April'92, the Supreme Court, in response to an appeal by Dr. A.K. Subhapathy, struck down the legality of the Kerala Government's permission to allow persons not qualified in modern medicine to practice allopathy. Again, in the Pramod vs. Dr. Ashwin Patel case, the Supreme Court ruled that the homeopathic doctor was guilty of negligence per se because section 15 (3) of the Indian Medical Council Act prohibited any person without the requisite qualification in the allopathic system of medicine to practice that system.

**A Happy New Year to all our readers**

### Illegal Cross-Practice

Technically, there should be no reason for any confusion about the illegal nature of cross-practice (use of allopathic drugs by non-allopaths and vice a versa). Graduates of allopathic, ayurvedic, homeopathic and unani systems of medicine have to register themselves with their respective councils. These councils are statutory bodies formed to regulate the practitioners of their particular pathies and there is no provision in their statutes for cross-practice. Secondly, the medical colleges set up under the respective acts are meant to train doctors in their respective disciplines. Ayurvedic and homeopathic medical colleges have been encouraged to foster these systems of medicine.

Since allopathic treatment gives quick relief in a majority of cases and has been developed in a professional manner, it is has become a popular and remunerative profession. Hence, there has been an increasing tendency among non-allopaths to do allopathic practice. Presently, almost all non-allopaths indulge in such cross-practice. Very few non-allopaths seriously study or do research in their own discipline and develop it further. Instead of acting as a means to develop and popularise non-allopathic disciplines, these colleges have become conduits for back-door entry into the lucrative allopathic medical profession. Though such entry has been illegal, organisations of allopathic doctors like the Indian Medical Association have surprisingly, not taken any legal action on this issue.

This inaction may be partly due to the fact that while the allopaths have mainly confined themselves to the cities, a majority of the non-allopaths, barring a few exceptions, settle in rural areas. Thus, the former do not constitute a big threat to the

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allopathic practitioners as competitors and there has not been much direct clash of interests between the two. On the contrary, for post-graduate allopathic doctors, non-allopaths constitute a source of referred cases and fresh non-allopathic graduate doctors as cheaper night-duty trainees in their private hospitals.

In recent years however, competition amongst doctors has increased a great deal and allopaths are now more resentful of cross-practice by non-allopaths. Even post-graduate allopaths now feel the pinch because some ayurvedic post-graduates have started posing as 'consulting gynecologist', 'consulting physician' etc. with their ayurvedic training indicated in small print.

**Grossly Inadequate Training**

As regards the quality of allopathic medical care given by non-allopaths, it is generally of a poorer quality than that given by qualified allopaths. In our study of prescriptions in Satara district, we found that the average score per prescription for MBBS, post-graduate allopaths and non-allopaths was 15.34, 15.64, 11.28 respectively out of a possible maximum of 30. This poor score by non-allopaths is not surprising since non-allopaths do not get any systematic training in allopathic pharmacology. Though homeopaths are taught all other subjects, the clinical subjects, especially surgical, are taught far less intensively than in the MBBS course; they are more in the nature of an introduction to allopathic diagnostics. Homeopathic students have to appear for examination in gyneacology, obstetrics etc. but here again, the expectations are much less as compared to those in the MBBS course. In the ayurvedic medical colleges such introduction is even less intensive. Prior to 1970, an integrated course was taught at the ayurvedic medical colleges which included some training in allopathic pharmacology. Since 1970, the pure ayurvedic course has been introduced in which there is no systematic training in allopathic pharmacology and no examination for it. Students are to be introduced to modern concepts of pharmacology but the aim is not to teach modern pharmacology as such or to train them systematically to use allopathic drugs. This introduction to concepts in modern pharmacology is not given by allopathic experts but by ayurvedic doctors and there is no examination for this subject. The knowledge is not sufficient for ayurvedic doctors to diagnose and confidently treat patients with allopathic drugs. Ayurvedic graduates therefore, try to get some practical training by working under willing allopathic practitioners for a few months and by going through the propaganda literature of the drug companies. But such ad hoc, somewhat perfunctory exposure, is not sufficient to practice allopathy scientifically. The claim by some spokepersons of non-allopaths that they have been trained to use allopathic drugs is thus misleading. Moreover, given their very limited exposure to allopathic science, especially allopathic pharmacology, they are far more vulnerable to the misleading propaganda of the drug companis, and hence, more likely to do irrational practice.

**The Impasse and the Way Out**

Almost all non-allopaths in rural areas practice allopathy and most practitioners in rural areas are non-allopaths. The mere implementation of the Supreme Court judgement as such would create a social dysfunction because rural people would be deprived of whatever allopathic care they are getting today. State health-services are for too inadequate, especially for curative symptomatic care. However, continuation of the state of affairs would amount to perpetuation of low quality and often wasteful and sometimes hazardous health care for rural areas.

Fortunately, there is a way out of this impasse through training of non-allopaths in rural areas in a systematic manner to use say about 50 allopathic drugs routinely required for the treatment of common illnesses in rural areas (table 1). Though the table contains a list of 85 drugs required for OPD level general practice in rural areas, a few of these drugs will have to be ignored because non-allopaths would either not be able to or not really need to use them. For example, the BCG vaccine is administered by a paramedic and hence need not be used by a non-allopath. Secondly, in diseases like tuberculosis, proper diagnosis, especially of sputum negative cases or perediastic cases, is often difficult. Hence, anti-tubercular drugs may not be included in the training of non-allopaths, given the fact that anti-tubercular therapy is costly and is to be continued for a long period which makes it worth while for the patient to approach an allopathic graduate/post-graduate before starting this therapy. On the other hand, anti-venom and neostigmine injections may be included in the curriculum of this licentiate course, as they are life-saving drugs in the rural situation. This list may be finalised by a concerned team of experts.

The training should also include detailed diagnostics required for the use of these drugs. Since these doctors have received some exposure to allopathic science, this detailed training would be easier to impart. Medical colleges should start such a course consisting of both distance and contact training. This course can be recognised under section-28 of the Maharashtra Medical Council Act as a licentiate course.

## Drugs Required in Out-Patient General Practice in Rural Areas

(Category as per WHO's essential drug list)

| NO. | NAME OF THE DRUG |
|---|---|
| | **Local anaesthetics** |
| 1. | Lidocaine |
| | **Analgesics, antipyretics, NSAID's and antigout and antimigraine agents** |
| 2. | Acetylsalicylic acid |
| 3. | Ibuprofen |
| 4. | Paracetamol |
| 5. | Ergotamine |
| 6. | Inj. Diclofenac |
| 7. | Pyrimidine (urinary analgesics) |
| | **Antiallergics** |
| 8. | Chlorpheniramine |
| 9. | Inj. Epinephrine |
| 10. | Inj. Hydrocortisone |
| 11. | Prednisolone |
| | **Antidotes and other drugs used in poisoning** |
| 12. | Activated charcoal |
| | **Anti-infective drugs** |
| 13. | Mebendazole |
| 14. | Diethylcarbamazine |
| 15. | Amoxycillin |
| 16. | Inj. Procaine Penicillin |
| 17. | Chloramphenicol |
| 18. | Erythromycin |
| 19. | Metronidazole |
| 20. | Contrimoxazole (Sulfamethoxazole + Trimethoprim) |
| 21. | Doxycycline |
| 22. | Ciprofloxacin |
| 23. | Norfloxacin |
| 24. | Furazolidone |
| 25. | Gentian violet |
| 26. | Neomycin + Bacitracin oint. |
| 27. | Gentamicin |
| 28. | Clofazimine |
| 29. | Dapsone |
| 30. | Rifampicin |
| 31. | Ethambutol |
| 32. | Isoniazid |
| 33. | Pyrazinamide |
| 34. | Streptomycin |
| 35. | Thioacetazone |
| 36. | Griseofulvin |
| 37. | Miconazole oint, Pessary. |
| 38. | Diloxamide |
| 39. | Chloroquine |
| 40. | Primaquine |
| 41. | Sulphadoxine + Pyrimethamine |
| 42. | Gamma BHC |
| | **Drugs affecting the blood** |
| 43. | Ferrous salt + Folic acid |
| 44. | Glyceryl Trinitrate |
| | **Dermatological and Opthalmic drugs** |
| 45. | Betamethasone |
| 46. | Calamine |
| 47. | Tetracycline eye oint. |
| 48. | Chloramphenicol eye oint. |
| | **Disinfectants and antiseptics** |
| 49. | Chlorhexidine |
| 50. | Iodine |
| | **Gastrointestinal drugs** |
| 51. | Dried Aluminium hydroxide gel + Magnesium hydroxide |
| 52. | Ranitidine/ Famotidine |
| 53. | Metoclopramide |
| 54. | Anti-haemorrhoidal Compound topical preparation |
| 55. | Atropine |
| 56. | Bisacodyl |
| 57. | Oral rehydration salts (for glucose-electrolyte solution) |
| | **Contraceptives** |
| 58. | Ethinylstradiol + Levenorgestrel |
| | **Vaccines and sera** |
| 59. | Anti-venom sera |
| 60. | BCG vaccine |
| 61. | DPT vaccine |
| 62. | DT vaccine |
| 63. | MMR vaccine |
| 64. | Measles vaccine |
| 65. | Oral polio vaccine |
| 66. | Tetanus vaccine |
| 67. | Rabies vaccine (human diploid) |
| 68. | Typhoid vaccine |
| | **Oxytocics and tocolytics** |
| 69. | Ergometrine |
| 70. | Oxytocin |
| | **Drugs acting on the respiratory tract** |
| 71. | Inj. Aminophylline |
| 72. | Beclomethasone inhaler |
| 73. | Inj. Epinephrine |
| 74. | Salbutamol |
| 75. | Codeine |
| | **Solution for correcting water, electrolyte and acid-base imbalance** |
| 76. | I. V. Normal Saline |
| 77. | I. V. Glucose (I. V. 5%, 20%) |
| 78. | I. V. Ringer Lactate |
| 79. | ORS Powder |
| | **Vitamins and minerals** |
| 80. | Ergocalciferol (Vit. D) |
| 81. | Retinol (Vit. A) |
| 82. | Vitamin B Compound |
| 83. | Calcium carbonate |
| | **Neurotropics** |
| 84. | Diazepam |
| 85. | Inj. Neostigmine (Snakebite) |

Non-allopathic doctors undergoing this course can use these 50 drugs legally. If they prescribe drugs beyond the list covered in their training, it should be considered as a legal offence.

This course should be open only to those non-allopaths who have opted to settle down in rural areas. This is to stop the use of non-allopathic colleges as conduits for back door entry into lucrative allopathic practice in urban areas. If putting such restriction is not possible legally, these licentiates should be required to work in rural areas for a fixed period of say five years. (A similar condition had been instituted upon allopathic doctors, requiring them to do compulsory

Contd. on page 8

Inter-Linkages Between Socio-Economic Aspects and Access to Health Care

# Maternal and Child Health - II

Anuradha Gupte

*This is the concluding part of the article under the same title that appeared in the Nov.-Dec.'96 issue of FRCH Newsletter.*

## Dynamics of SES and Child Health

The social conditions of life are major determinants of child survival. These determinants make a biological impact through a set of Intervening processes that can be decomposed analytically.

Many studies show that on an average, each one year increment in the mother's education corresponds with a seven to nine percent decline in the mortality of under-fives. However, education exercises a stronger influence in post-infancy childhood.

In one study, mothers attending an out-patients' department in a programme of primary health care in rural West Bengal were interviewed and anthropometric measurements made on them and their accompanying children. The uneducated group was found to have experienced a greater rate of child loss at 130/1000 births as compared to 58/1000 births in the educated group.

***Under the Demographic and Health Surveys Program [DHS]***, child health was measured through indicators such as infant and child mortality, diarrhoeal disease and treatment, immunization coverage, birth spacing, breast feeding and child nutrition. ***The findings showed high risk factors for infant mortality to be : maternal age under 18 or over 35, parity of 4 or more, birth intervals of less than 24 months and uneducated mothers.*** Rural immunization lagged behind the urban and overall, immunization increased with mother's education. Rural children were more likely to drop out without getting second and third doses of vaccines. The paper concluded that the success of child survival programmes depended more than anything else on the strength of their health education activities.

A study carried out in Nicaragua has identified the factors affecting child mortality. The study showed that while income is not an important factor, there was an inverse relation with the number of siblings and simultaneously, a positive association with calorie intake, schooling, availability of refrigeration and quality of sewage systems. It was also observed that the strategies used by the educated mothers were significantly more appropriate than those of their non-educated counterparts with regard to pregnancy and childbirth, diarrhoea, immunization, family planning, and source of treatment in illness.

During illness, significantly more educated women chose to consult a medically-qualified person instead of the traditional healer. There was also a greater trend for educated women to be able to exercise autonomy in decision making on health related matters.

The intermediate factors which explain how a mother's education influences the health and survival of her children include reproductive health patterns, more equitable treatment of sons and daughters and economic advantages associated with education like sanitation, income, water, housing quality etc.

Comparing experiences in Kerala and Manipur (states with lowest IMRs) with the rest of India, it has been found that infant survival is crucially dependent on maternal capabilities and women's freedom to act in ways that are beneficial to their children. Hence, literacy and occupational and marital choices influence child survival. This calls for public action for women's empowerment, for improved access to and improved techno-managerial efficiency of health care systems.

## Access to Health Care and MCH

With regard to access to health care the basic question is, how much of the increase in health status is attributable to health care delivery systems ?

Trends in several different factors which might have led to a fall in child mortality have been examined in one more study carried out in Nicaragua. The factors studied included income, nutrition, breast-feeding practices, maternal education, immunization, access to health services, provision of water supplies and sanitation

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and anti-malarial programmes. Of these, improved access to health services appeared to have been the most important factor.

Where maternal mortality is concerned, apart from early marriages and low health services utilization, poor quality of health care received during pregnancy contributes to higher neo-natal and maternal mortality. Reproductive morbidity profiles indicate high incidence of gynecological, obstetrical and contraceptive morbidities. High mortality rates amongst women, as revealed by maternal deaths due to sepsis, anaemia, toxemia, hemorrhage and abortions indicate that reproductive health in particular is largely neglected. Hemorrhage, sepsis and obstructed labour are the leading causes of mortality world-wide. ***A number of studies have shown that 30 to 80 per cent of women die before they reach any health care facility.***

In Africa, improved nutrition and health care is expected to result in increasing the rate of fetopelvic disproportion for a generation or more, before it falls. Thus, if there was a failure to provide safe operative delivery, there would actually be an increase in the incidence of obstructed labour, uterine rupture, obstetric fistula and still birth with improvement in socio-economic status.

Statistics show that increased literacy (U.S.A. and U.K.) does not seem to have had any effect on maternal mortality. The decline in maternal mortality in these countries has in fact coincided with the discovery of antibiotics for the effective treatment of obstetric complications. In this case ***maternal mortality haas been more sensitive to the standards of obstetric care than changes in the levels of socio-economic deprivation as seen in Britain over the last 150 years.***

## Conclusion

The above information reveals the equal importance simultaneous effect of maternal education and accessibility to, variety of and quality of health care delivery sytems upon maternal and child health and the intermediate factors through which the impact is felt. Linkages between deprivation and poor health shows that dimensions like education, social freedom etc, apart from the purely medical, need to be addressed for improving health status.

This information is especially useful for health planners in deciding upon where to concentrate the limited resources to get optimum results regarding the health status of the community. These findings would be useful in designing interventions by government, voluntary organisations, health educators etc. for improving the community health status through the following means :

* Improving health through education by demystifying knowledge, endorsing certain health behaviour like breast-feeding, well informed timing and spacing of births, equal treatment of boys and girls, regular immunisation, maintaining proper sanitation and hygiene and correcting faulty eating habits, improving methods of food processing and preparation, supplementing food/diets with nutrients found to be low in the food consumed etc.

* Improving health by giving economic, social or medical aid wherever needed.

***Most important, in the long run, the good health of the community will depend upon sustainable development for which equity oriented economic growth strategies are essential*** as have been effectively used in Japan. On the other hand, economic growth strategies linked to great and perhaps ever increasing economic inequities are "unhealthy" and result in a level of health far below what could be expected considering available economic resources. ❑

*( With inputs from Vaijayanti Aphale )*

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# इण्डिया और भारत

देवराज चौहान व डॉ. एन. एच. आंटिया

अपनी अर्थव्यवस्था के स्वरूप को देखने से उसके दो पहलू स्पष्ट रूप से सामने आते हैं : पारम्पारिक व आधुनिक; विकसित व अल्पविकसित अथवा अविकसित; ग्रामीण व शहरी; जिनके पास सब कुछ है व जिनके पास कुछ भी नही हैं, इत्यादि। अतः एक ओर तो 'इण्डिया' है, जिसमें आधुनिक विकास व सुख-सुविधाएँ हैं और दूसरी ओर, 'भारत' है, जो कि आमतौर पर उपेक्षित किए हुए ग्रामीण स्वरूप को प्रदर्शित करता है। हमें लगभग इसी प्रकार का द्वैतवाद जीवन के प्रत्येक पहलू में नज़र आता है। महानगर व आदिवासी क्षेत्र एक दूसरे के एकदम विपरीत हैं। ऊँची-ऊँची इमारतों के नीचे मलिन बस्तियों व फुटपाथ पर जीवन बिताने वाले लोगों की भीड़ तेज़ी से बढ़ रही है। अतः हमें बहुलता के बीच ग़रीबी दिखाई देती है। इसका विपरीत भी उतना ही सत्य है। औद्योगिक देशों, जैसे, अमरीका, इग्लैण्ड, जर्मनी व जापान में भी इस प्रकार की विसंगतियाँ पाई जाती हैं, हालाँकि इनका स्वरूप भिन्न होता है।

भारत जैसे विशाल व बहुवादी-समाज वाले देश, जिसमें मिश्रित अर्थव्यवस्था लागू है, का आर्थिक विकास आमतौर पर, संसाधनपूर्ण अगीरों और विकसित क्षेत्रों को ही अधिक लाभ पहुँचाता है, जबकि देश के ग़रीबों व पिछड़े हुए इलाकों को शायद ही कोई लाभ पहुँचाता है। इसके फलस्वरूप 'इण्डिया' और 'भारत' के बीच की विषमताएँ दिन प्रतिदिन बढ़ रही हैं। 'उदारीकरण' व 'निजीकरण' के कार्यक्रमों से यह प्रक्रिया और भी अधिक तीव्र हो गई है। ग्रामीण व शहरी क्षेत्रों के बीच बढ़ती हुई विसंगतियों के कुछ संकेतक नीचे दी गई सारणी में प्रस्तुत किए गए हैं।

**भारत में ग्रामीण-शहरी विषमताएँ**

| | ग्रामीण | शहरी | संयुक्त रुप से |
|---|---|---|---|
| १. जनसंख्या : १९९१ (करोड़ में) | ६३ | २२ | ८५ |
| २. जनसंख्या : १९९१ (प्रतिशत) | ७४ | २६ | १०० |
| ३. गाँव (१९८१) / शहरी क्षेत्र (१९९१) : संख्या | ५,५७,१३७ | ३,६०९ | |
| ४. पुरूष साक्षरता : १९९१ (प्रतिशत) | ५८ | ८१ | ६४ |
| ५. महिला साक्षरता : १९९१ (प्रतिशत) | ३० | ६४ | ३९ |
| ६. संयुक्त रुप से साक्षरता : १९९१ (प्रतिशत) | ४५ | ७३ | ५२ |
| ७. शिक्षा का स्तर : १९९२-९३ | | | |
| (६ व उससे अधिक उम्र के समूहों में) प्रतिशत | | | |
| i) अशिक्षित पुरुष | ३७ | १६ | ३१ |
| महिलाएँ | ६६ | ३३ | ५७ |
| ii) शिक्षित पुरुष | २१ | १८ | २० |
| (प्राथमिक शिक्ष पूर्ण) महिलाएँ | १४ | १७ | १५ |
| प्राथमिक स्कूल पूर्ण पुरुष | १७ | १७ | १७ |
| महिलाएँ | १० | १७ | १२ |
| माध्यमिक स्कूल पूर्ण पुरूष | ११ | १४ | १२ |
| महिलाएँ | ५ | ११ | ७ |
| हाईस्कूल पूर्ण पुरुष | १४ | ३५ | २० |
| महिलाएँ | ४ | २२ | ९ |
| ८. बेरोज़गारी : १९८७-८८ (श्रमशक्ति के प्रतिशत के रुप में) | ३.१ | ६.६ | ३.८ |
| ९. ग़रीबी की रेखा के नीचे रहने वाली जनसंख्या : १९९४-९५ (प्रतिशत) | ३७.३ | ३३.६ | ४० |
| १०. वर्तमान मूल्यों पर प्रति व्यक्ति : १९८१ (रू.) राष्ट्रीय आय (एन.डी.पी.) | १,२४५/- | २,८८८/- | १,६२५/- |
| ११. बिजली, सुरक्षित पेयजल व शौचालयों की सुविधा प्राप्त परिवार : १९९१ (प्रतिशत) | ३.९० | ५०.४६ | १६.० |
| १२. अस्पतालों की संख्या : १९९३ | ४,३१० | ९,३८२ | १३,६९३ |
| १३. अस्पतालों में बिस्तरों की संख्या : १९९३ (प्रति लाख जनसंख्या पर) | १९.४ | २१७.९ | ७०.४ |
| १४. दवाखानों की संख्या | ११,०८० | १६,३२३ | २७,४०३ |
| १५. दवाखानों में बिस्तरों की संख्या : १९९३ (प्रति लाख व्यक्तियों पर) | २.१ | ५.६ | ३.० |

*डा. एन.एच.आंटिआ, निदेशक व ट्रस्टी, एफ .एम.आर.व एफ.आर.सी.एच. ने प्लास्टिक सर्जरी, कुष्टरोग व सामुदायिक स्वास्थ्य के क्षेत्र में सराहनीय कार्य किए हैं व श्री देवराज चौहान, जो कि एक अर्थशास्त्री हैं और "हेल्थ केअर इन इण्डिया : ए प्रोफाइल" नामक पुस्तक, जिसे एफ.आर.सी.एच. द्वारा प्रकाशित किया गया है, के डॉ. आंटिया के साथ सह-लेखक भी हैं। यह लेख इसी पुस्तक से लिया गया है।*

आज भी भारत की, लगभग तीन-चौथाई जनसंख्या गाँवों में रहती है और अपने जीविकोपार्जन के लिए कृषि, ग्रामीण उद्योगों व अन्य कृषि सम्बन्धी गतिविधियों पर आश्रित है। कृषि के क्षेत्र में आधुनिक तकनीकि को अपनाने से और भूमि से दूर होते जाने के कारण श्रमिकों का अस्थाईकरण और अधिक बढ़ गया है। और आज, देश की लगभाग एक तिहाई ग़रीब जनता ग्रामीण क्षेत्रों में रहती है। यह एक चिंताजनक सत्य है। बाकी की एक तिहाई ग़रीब जनता शहरी इलाकों में रहती है। यहाँ पर भी, बड़े शहर व कस्बे, छोटे कस्बों को हड़पते हुए बढ़ रहे हैं।

आमतौर पर, जैसे-जैसे विकास की प्रक्रिया तेज़ होती है, शहरीकरण की प्रक्रिया भी गति पकड़ती है और ग्रामीण क्षेत्रों के अतिरेक श्रमिक, जिविका चलाने या अपने रहन-सहन के स्तर में सुधार की उम्मीदें लिए शहरी इलाकों की ओर चले आते हैं। इस प्रक्रिया में, शहरों की ओर खींचने वाले घटक, जैसे, औद्योगीकरण व बढ़ती हुई आधुनिक सुविधाएँ तथा ग्रामीण क्षेत्रों से ढकेलने वाले घटक, जैसे, बेरोज़गारी व ग़रीबी, गहन रूप से हिस्सेदार होते

हैं। दुर्भाग्यवश, शहरी क्षेत्रों में भी, रोज़गार बढ़ाने की प्रक्रिया बहुत धीमी व अपर्याप्त है, अतः स्थान परिवर्तन करके गाँवों से शहरों में आए हुए अधिकांश लोग, असंगठित क्षेत्र में अस्थाई रूप से कार्य करने लगते हैं।

यदि हम अपने रोज़गार के दृश्य की जाँच करें, तो हम पाएँगे कि हमारी अधिकतर जनसंख्या अपने जीविकोपार्जन के लिए अनौपचारिक क्षेत्र में कार्य करती है, जबकि कुल जनसंख्या के केवल दसवें हिस्से को ही संगठित क्षेत्र में कार्य करने का अवसर प्राप्त हो पाता है। इस संगठित क्षेत्र में सार्वजनिक व निजी दोनों क्षेत्र शामिल हैं। संगठित क्षेत्र, सशक्त होने के नाते, भारतीय अर्थव्यवस्था का केन्द्रविन्दु है। दूसरी ओर 'असंगठित क्षेत्र', जिसमें अधिकतर निजी क्षेत्र का बाहुल्य है व जिसमें लगभग ९० प्रतिशत श्रमिक कार्य करते हैं. शोषण, अपेक्षाकृत कम मज़दूरी, कार्य के अधिक घंटे व कार्य करने की अनिश्चित शर्तों का दृश्य प्रस्तुत करता है।

अवसंरचनात्मक मूलभूत सुविधाओं, जैसे, यातायात, संचार माध्यम, सड़कों, आवास, बिजली, स्वास्थ्य सुविधाएँ, शिक्षा, इत्यादि की दृष्टि से ग्रामीण क्षेत्रों की अपेक्षा शहरी क्षेत्र बेहतर हैं। इन क्षेत्रों में संसाधनपूर्ण व्यक्तियों को, संसाधनरहित व्यक्तियों की अपेक्षा अधिक लाभ पहुँचता है।

साक्षरता के क्षेत्र में भी, शहरों में रहने वाली जनसंख्या के मुकाबले, गाँवों की जनसंख्या पिछड़ी हुई है। इनमें से सामाजिक रूप से कमजोर तबके जैसे, महिलाएँ, अनुसूचित जातियाँ व अनुसूचित जनजातियाँ तो और भी अधिक पिछड़ी हुई हैं।

इसी प्रकार ग्रामीण क्षेत्रों में, १९८१ में, प्रति व्यक्ति राष्ट्रीय आय, शहरी क्षेत्रों की प्रति व्यक्ति राष्ट्रीय आय की तुलना में आधी से भी कम थी।

यद्यपि ग्रामीण क्षेत्रों में, वर्ष १९८७-८८ में, बेरोज़गारी की दर भी शहरी क्षेत्रों की बेरोज़गारी की दर की आधी थी, परन्तु गाँवों में, छिपा हुआ बेरोज़गार, बहुत अधिक व्याप्त था।

ये सभी घटक सीधे या परोक्ष रूप से जनता के स्वास्थ्य पर असर डालते हैं। यहाँ पर एक 'स्वस्थ' समाज के बहुत से सूचकाँक यह बताते हैं कि शहरों के मुकाबले ग्रामीण क्षेत्र बहुत अधिक पिछड़े हुए हैं, जैसा कि नीचे दी गई तालिका से स्पष्ट है।

**भारत में ग्रामीण-शहरी विषमताएँ**

| | ग्रामीण | शहरी | संयुक्त रूप से |
|---|---|---|---|
| १. अशोधित जन्म दर : १९९३ (दर, प्रति १००० जनसंख्या पर, प्रतिवर्ष) | ३०.३ | २३.५ | २८.५ |
| २. अशोधित मृत्यु दर : १९९३ (दर, प्रति १००० जनसंख्या पर, प्रतिवर्ष) | १०.५ | ५.७ | ९.२ |
| ३. प्राकृतिक वृध्दि पर : १९९३ (दर, प्रति १००० जनसंख्या पर, प्रतिवर्ष) | २०.० | १७.३ | १९.३ |
| ४. शिशु- मृत्यु दर : १९९३ (प्रति १००० जीवित जन्मों पर) | ८२ | ४५ | ७४ |
| ५. प्रसव-पूर्व मृत्यु दर : १९९० | ५७.४ | ३०.९ | ५२.५ |
| ६. प्रसव-पश्चात मृत्यु दर : १९९० | २८.९ | १९.५ | २७.२ |
| ७. प्रसव के दौरान मृत्यु दर : १९९० | ५१.७ | ३४.० | ४८.४ |
| ८. आयु के अनुसार मृत्यु दर : १९८८ (आयु ०-४ वर्ष) | | | |
| बालक | ३५.१ | १८.८ | ३१.८ |
| बालिका | ३९.१ | १८.७ | ३४.९ |
| कुल मिलाकर | ३५.७ | १८.७ | ३३.३ |
| ९. विकलाँग लोगों की जनसंख्या (१००० में) : १९८० | ९६९ | १५० | १,११९ |

नोट : १९९१ की जनसंख्या का प्रयोग करते हुए

स्रोत : विभिन्न सरकारी स्रोत

यह देखा जा सकता है कि शिशु-मृत्यु दर, जो कि जीवन के स्तर का एक सूचकाँक है, शहरी इलाकों की तुलना में ग्रामीण क्षेत्रों में बहुत अधिक है। वास्तव में, ग्रामीण क्षेत्रों में यह लगभग दो गुना अधिक है। जैसा कि अनुमान लगाया जा सकता है, शहरी तथा ग्रामीण क्षेत्रों में मृत्यु दरों के बीच का अंन्तर, पुरूषों की तुलना में, महिलाओं के लिए अधिक है।

उच्च मृत्यु दर के बावजूद, ग्रामीण भारत में जनसंख्या की वृध्दि, शहरों की वृध्दि दर की तुलना में अभी भी अधिक है।

ग्रामीण क्षेत्रों में विकलांग लोगों की संख्या, शहरी क्षेत्रों की तुलना में, अप्रत्याशित रूप से छह गुनी अधिक है।

ये सभी आँकड़े, स्वास्थ्य की एकीकृत प्रकृति और इण्डिया व भारत के मध्य आर्थिक स्तर व स्वास्थ्य देखरेख की सुविधाओं के बीच बढ़ती हुई विसंगतियों को शीघ्रातिशीघ्र दूर करने की आवश्यकता, जिससे कि स्वास्थ्य देखरेख की सुविधाएँ सबको समान रूप से उपलब्ध हो सकें, को स्पष्ट रूप से सिध्द करते हैं।

*(हिन्दी अनुवाद : **मीता श्रीवास्तव**)*

**FREE ABSTRACTING**

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**The views expressed in the articles are those of the authors and not necessarily those of FRCH**

**Contd. from page 3**

service in rural areas). It must be borne in mind that training non-allopaths in rural areas in the use of a limited list of allopathic drugs is only a compromise measure to overcome the social impasse created today.

Lastly, it may be pointed out that even non-allopathic doctors do not reside in smaller villages especially in economically backward areas. In such villages, the best way to provide first contact care for common diseases is through well-trained Village Health Workers (VHWs). Many innovative experiments in rural areas have shown that VHWs can diagnose and treat simple common ailments competently. Secondly, they can be very good health educators, being far more accessible, physically and culturally. There is therefore, the need to start standardised courses for VHWs to train them to use about 10-15 drugs for the most common and simple ailments in rural areas, and to educate the community in basic health issues. This is the only way to provide first contact care to such areas, under the prevailing socio-economic situation.

Simultaneous efforts have to be made to reduce the concentration of qualified allopathic doctors in cities and increase their availability in rural areas through a series of incentives and disincentives. But till such a situation arises, and qualified doctors are available in adequate numbers in rural areas, trained VHWs and non-allopaths turned licentiate allopaths seems to be the answer to the problem of unavailability of first contact care of reasonable quality in rural areas. ❑

Perhaps, a better means of taking care of basic health problems at the grassroots level is to train the village people themselves in integrated medicine, including simple local treatments, so that the community can address its own basic health problems without depending on formally trained doctors - competent or otherwise. Of course, simultaneously, they have also to be trained to recognise when a particular case requires referral to formal health practitioners so that the danger of inadequate care is minimised. As we have already written in detail in the previous FRCH Newsletters, the FRCH is implementing such a project at the Parinche village in Pune district, where some interested local women are being trained in basic medicine and other related subjects so as to make basic health care accessible in the rural areas.

*- Editor.*

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NEWSLETTER

Vol. XI, No.2 March - April 1997

### A Perspective Beyond 2000 A.D.

# Cancer Control in India

**Dr. Indraneel Mittra**

The average life expectancy of an Indian male for the period 1991-1996 was 60.6 years and that of a female was 61.7 years. It is estimated that by the years 2021-2026 the average life expectancy would increase to 69.6 years for males and 71.0 years for females. This works out to an increase of about nine years for both sexes. Assuming that the currently available prevention, detection and treatment facilities remain unchanged, death rate from cancer will rise by 284.5% between the years 1991 - 2026, simply, as a function of aging of the population.

Rechard Peto, the Oxford epidemiologist and his colleagues, in their projection of the annual increase in cancer deaths attributable to the use of tobacco, have calculated that while tobacco related deaths would increase by only 50% between the years 1995 - 2025 in developed countries, this increase would be a staggering seven-fold in the developing world. This is because, while large scale cigarette smoking became prevalent in the West during the early part of this century, cigarette smoking became fashionable in the developing world only 40 to 50 years later. Since there is a latent period of several decades before tobacco kills the abuser, the full impact of tobacco use in the developing countries is yet to be realised. In the developed world death rate from lung cancer peaked in the 1950s and 1960s for males and is still rising for females (the latter having started smoking about 3 to 4 decades later).

Dr. Indraneel Mittra, MBBS., PhD. FRCS, is a practising surgeon at the Tata Memorial Hospital, Mumbai

It is not clear whether such a seven-fold increase in tobacco related deaths estimated by Peto et al for the developing world applies strictly to India. However, if it does, and given the fact that approximately 34% of all cancers in India are related to tobacco use, a seven-fold increase would lead to an approximately 200% increase in overall cancer deaths by the year 2025. Although it may not be appropriate to calculate the overall increase in cancer deaths by simply adding up the increase in cancer death rate due to population aging (about 300%) and that due to increase in tobacco use (about 200%), such an estimate would suggest that there would be combined increase of about 500% in cancer deaths by the year 2025. This estimate is supported to some extent by figures from WHO which suggest that the current mortality from cancer in the developing world which is approximately 2.5 million is likely to rise to 6.5 million by the year 2015.

The crude incidence for cancer in India is between 70 and 80 per 100,000. Given a population of more than 900 million, this works out to about 750,000 new cases in advanced stages when a cure is not possible - there are approximately 350,000 deaths from cancer each year. To put these figures in a different perspective, while the age adjusted incidence of cancer is 125 per 100,000 in India, it is approximately 300 per 100,000 in the United States (figures for the year 1989). However, because the population of India is nearly four

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times that of the United States, the total number of cancer cases occuring in India every year exceeds that in the U.S. Unfortunately, the available resources to face the challenge of cancer are vastly disparate; the developing world, including India, carries 50% of the world's cancer load but has only 5% of the world's resources to fight the disease.

For any programme for the control of cancer to succeed in India the priorities must be clearly defined both in terms of the types of cancers to be tackled (depending on their prevalence) and the methods to be adopted to do so. Thirty-five percent of all cancers prevalent in Indian males are those of the head and neck which is almost entirely related to tobaco use. In females, nearly 50% of cancers are of the breast and the cervix. Any cancer control programme must, therefore, focus on these three cancer sites.

> *" My mother had a long and difficult illness which she bore bravely and patiently for many years. The last two weeks were particularly painful. Ventilator, catheter and all manner and sizes of tubes ran all over her frail form as she lay battling with life in the ICU. I had never felt more acutely the senselessness of the medical profession to which, ironically, I belong. As a practitioner there was nothing I could do to relieve her, and as a daughter, very little.*
>
> *.....A Doctor*

With regard to primary prevention, control of tobacco use is clearly the first priority. Unfortunately, tobacco in our country is classified as a food product and the farmer gets a subsidy of 400% on tobacco compared to 250% for sugarcane and 135% for wheat. This unacceptable situation needs to be changed through an unrelenting campaign to bring about legislative changes. Cigarette advertising in the form of sports sponsorships needs to be challenged as research has shown that tobacco sponsorship of sports influences children much more than adults. Anti-tobacco campaigns must target the citizens of tomorrow rather than adults who are already addicted to the drug.

The potential effectiveness of public education leading to greater awareness about cancer and consequent clinical presentation at earlier stages of the disease has been demonstrated in a pilot study conducted in the district of Barshi in Maharashtra with respect to cervical cancer. The study showed that intense public education can lead to an increase from 26.6% to 44.% in three year survival in cervical cancer within a span of 4 years.

Chemoprevention of cancer is an area which needs to be researched. There is evidence that *haldi* (turmeric), a standard ingredient of Indian cuisine, can prevent cancer in animals and reverse oral leukoplakia when given in pharmacological doses.

With respect to secondary prevention, i.e. early detection, simple and inexpensive methods need to be defined for the control of oral, cervical and breast cancer.. Although prohibition of tobacco use remains the most direct approach to the prevention of oral cancer, studies conducted in Kerala suggest that, visual inspection of the mouth can lead to earlier detection of oral cancer at stages in which standard treatment methods are likely to be more successful. The economic and social realities of our country are such that apparently simple tests, such as PAP smear for screening for cervical cancer, are not viable propositions. It has been estimated that even if the available resources were to be increased 12-fold it would be possible to give only 25% of women above the age of 50 one PAP smear test in their entire life time. Initial studies conducted by the ICMR which suggest that visual inspection of the cervix may lead to detection of cancers in the early stages when the disease is curable need to be pursued further. Mammography for early detection of breast cancer is inapplicable in the Indian situation for obvious reasons. Instead, physical examination of the breast conducted by trained health workers may be a viable alternative. A random trial involving 70,000 women, to test the effectiveness of visual inspection of the cervix by health workers, is soon to be launched at the Tata Memorial Hospital in Mumbai.

With regard to tertiary prevention, i.e. treatment of cancer, worldwide experience over the years has indicated that while this is the most expensive form of cancer control from which the public has the greatest expectation, tertiary prevention of cancer is likely to bring the smallest return. Although there have been dramatic improvements in the survival figures for leukodaemial, lymphomatic and childhood cancers with the use of modern multi-drug chemotherapy, these cancers form only six to seven percent of the overall cancer load. It is now clear that improvements in survival figures for common cancers are likely to come in small increments and the imaginary "magic bullets" are unlikely to materialise. Nonetheless, small increments in survival figures can be important if the cancer is a common one as they can translate into thousands of lives saved worldwide. One such example is a modest 8-10% improvement in 10 year survival from breast cancer with the use of adjuvant systemic therapy which is having a global impact on the reduction of deaths from this disease. Treatment has, however, led to very little improvement in the overall control of common cancers worldwide. Nevertheless, on humanitarian and medical grounds

**(Contd. on pg. 5)**

# Involving Voluntary Organisations in TB Control

**A. K. Chakraborty**

The existing National Tuberculosis Programme does not leave much scope for Non Governmental Organisation (NGO) involvement in the scheme of things. With a revision currently being envisaged for the National Tuberculosis Programme (NTP) in India, there was increasing expectation among NGOs about an enhancement in their role in the formal TB control programme. As part of the deliberations preceding the Revised National Tuberculosis Control Programme (RNTCP) Pilot Phase I, a workshop was held at Delhi in September 1993 on the role and involvement of voluntary organisations in NTP, followed by a second one in September 1995. This was welcomed as a step in the right direction.

However, the RNTCP is currently developing in a manner as if nothing at all had transpired at these workshops. Save for the initial flutter and the good intentions proclaimed from time to time by both the Government and the NGOs, nothing concrete has so far emerged with regard to involvement of NGOs in RNTCP. Though all the principal stake holders are no doubt aware of the scope for NGOs in policy making, the old mindset persists when it comes to actual policy formulation. In fact, the term NGO itself is so negatively couched an expression, that the organisations covered by it, immediately position themselves subservient to the Government. In other words, Government is the key player and others are its dispensable units, looking upto the Government for financial support on the one hand, and for jobs to be entrusted by the Government to them, on the other. The NGOs fail to assert their rightful place under the National Programme, when in actual fact the very nature of such programmes calls for participation of voluntary organisations in it, the Government willing or not!

The Action-Aid, India had held a national level workshop in 1995 at Bangalore as a further effort to force the pace of development. A situation analysis was prepared, followed by a set of recommendations, which were forwarded to the Government of India in a booklet form, namely, "Tuberculosis Control in India: Developing Role of NGOs" (1996, Ed. Chakraborty AK, Daniel TD, and Chaturvedi Gunjan, Action-Aid, Bangalore). The summary of the analysis as well as conclusions are presented here for wider dissemination of the ideas generated and the work plan chalked out.

The author, an international expert in TB control is a retired Additional Director of the National Tuberculosis Institute, Bangalore.

**NGOs working in TB**

Amongst those NGOs working in the field of health are some who specialse in TB control and others who include TB control as part of their activities in general health. In terms of area covered, some NGOs work more at the macro level, i.e., the national and state levels while others operate at the grassroots level. Those functioning at the macro level are by and large more specialised than those at the grassroots level.

At the top of the list of macro level institutions is the TB Association of India, which specialises in the field of information dissemination (both scientific as well as social) as well as research and advocacy regarding TB. It also carries out research funding and lends technical support, if necessary, to other institutions. It works at the national as well as state levels through its branches in various states, performing more or less similar functions. The Voluntary Health Association of India (VHAI) is another institution which operates both at the national and state level. Though its activities include health in general, they also work in TB control, focusing on advocacy and information dissemination.

A large number of grassroots level workers operate in this field. By and large, they are multi-sectoral workers working on integrated programmes with health as one component (as in Action Aid, India). Even within health, not all of them are addressing the TB problem. Further, of those who are involved in TB, the majority concentrate on case finding activity; very few are involved in treatment.

**Deficiencies in Performance**

The main deficiencies in the performance of NGOs are :

1. Collaboration and integration between Government and NGOs remains very weak. Even where it exists, such a collaboration is more at the individual level. A formal systematic approach to collaboration is lacking.
2. The NGOs working at the district and sometimes, even the state level, lack networking and coordination.
3. Most organisations are not focused on TB. Among those NGOs, who are involved in TB control or those who have TB as one component of health, there is no common understanding on the approach to be adopted for TB control in their areas.

## Basic Concepts in Epidemiology

Epidemiology is a science which provides an understanding of the distribution and determinants of disease and its natural history. Epidemiological expertise is necessary for the diagnosis and measurement of the health needs, both present and future, for determining priorities and for monitoring and evaluation of prevention and control programmes.

To study extensively how and why diseases are caused, epidemiology uses the concept of triad. This concept takes into consideration that an interaction between three factors - agent, host and environment - determines the occurrence of a condition, disease, disability or death. The component 'agent' refers to the agent(s) responsible for the causation of a disease and may be classified as physical, chemical or biological. Host factors describe the characteristics of the persons who are affected or not affected and include factors like genetic characteristics and predispositions, age, sex, caste, religion, marital status, nutritional status and immunity status. The environmental factor refers to the external environment which can be divided into physical, biological, social, cultural and other components and is an important determinant of health of an individual and community. The interaction between the agent, host and environmental factors needs to be studied to understand the causation of a disease, both of communicable and non-communicable type, so that measures can be taken for preventing its recurrence/ occurrence.

## Uses of Epidemiology

Epidemiology has made a very substantial contribution to medical sciences and public health practice. The principal uses of epidemiology are:

1. To study the rise and fall of diseases in a population. Estimates of future expectations about the disease can be made based on past and present information.
2. It enables a diagnosis of the health problems of the community by studying the presence, nature and distribution of health and disease among the population and their dimensions in morbidity and mortality. The nature and relative size of the problems can thus be described.
3. It helps in the study of functioning of health services. It assists in determination of needs and resources, in the analysis of services and in evaluation.

## Incorporating NGOs in TB Control

1. There should be an **action forum at all levels,** right from the district to the state level, involving both the Government as well as NGOs **to chalk out common action plans.**
2. It is possible that the Governmental authorities are not aware of the NGOs operating in their area. On the other hand, NGOs may not be fully aware of the functions of Government institutions or the facilities available to the NGOs at the District TB Centres (DTCs). To start the collaborative approach a directory of NGOs should be made available to all concerned and simultaneously, NGOs be made aware of the functions and facilities available under the NTP.
3. Respective areas of responsibility need to be identified for NGOs and Governmental organisations prior to collaboration. There could be four areas to start with :

* Augmenting the use of existing facilities and mobilising local resources.
* Improving case finding : NGOs can help in this regard in two ways - firstly, the field workers can identify and refer symptomatic patients to the nearest clinic or centre where adequate services are available. Secondly, they can take the help of Government facilities to see that adequate services are provided with a humane face. The Government, on its part, should tone up the facilities for diagnosis and treatment.
* Ensuring treatment adherence. NGOs could assist in the following manner : a) doing follow-up of cases at the community level and b) ensuring treatment regularity. The NGOs could be provided with a list of TB patients in their respective areas and be given the responsibility of monitoring the drug intake by patients. Also, the NGOs can mobilise the community towards treatment completion and help build up social pressure in the community for treatment seeking and completion. At the same time the government has to ensure a regular and adequate drug supply. Wherever possible, the NGOs can be of help to Public Health Institutions (PHIs) in tiding over shortages in drug supply.

4. Enhancing information, education and communication (IEC) activity and organising the community. Since a majority of the NGOs operate at the grassroots level and are involved in organising the community, they should be able to motivate the community towards TB control. This will be greatly facilated with the advent of Panchayati Raj wherein, the Panchayats are made responsible for village health care. The NGOs can also work as catalysts for improvement of service facilities at the existing clinics. There is a lot of training activity that NGOs are already undertaking at the grassroots level, both for the members of the community as well as for NGO personnel who are working for the communities. Training helps the NGOs to achieve long-term sustainability

4. It enables to estimate the probability of disease occurrence for an individual from community experience. This is useful in bringing about a modification in health behaviour, e.g. in those with high risk of coronary heart disease.
5. It is useful in the search for causes of diseases, starting with the discovery of groups with high and low incidence and attempting to find the origin of disease. The "cause" may be discovered even before the exact nature of the disease in understood. The search for cause also enables identification of certain risk factors in order to take preventive measures.

The measurement of disease frequency of cases occurring in a population is often necessary and has the following dimensions :

* Prevalence denotes the number of cases of a disease or of a certain condition, both old and new, in a given population at a given time.
* Incidence denotes the number of instances of illness commencing, or of persons falling ill, during a given period in a specified population. Thus, it denotes the number of new events.
* Outbreak and Epidemic : An outbreak is defined as a localized occurrence of increased disease incidence. An epidemic denotes the occurrence in a community/ population of a specified geographic area, of cases of an illness(s) similar in nature or other health-related events clearly in excess of normal expectancy.

## Steps in the Investigation and Control of An Epidemic

The following steps are involved in the investigation of an epidemic :

1. Confirmation of the occurrence of an outbreak or epidemic.
2. Rapid preliminary collection and analysis of data to evaluate the epidemic with reference to place, person and time. For endemic diseases the magnitude and distribution of the disease has to be known.
3. Collection of other relevant information with reference to factors favouring transmission and favouring epidemics, unusual environmental events etc.
4. Formulation of tentative hypotheses based on collected information
5. Based on tentative hypotheses, planning/taking the action necessary to treat the sick, prevent the spread of and contain the epidemic. The population at risk of suffering has to be identified and protected.
6. Testing the accepted hypothesis further for additional confirmatory evidence, if necessary. ❑

of their programmes. Whether this activity can be formally included into the TB control programme, has to be looked into. On the part of the Government, the activity involves enhancing the expertise and distribution pattern of PHIs as well as improving services at the existing family health care centres. Training of PHI workers as well as community leaders through Government effort also needs to be tried, perhaps with NGO collaboration wherever possible. Also, suitable IEC material could be developed through mutual collaboration.

### Conclusions Regarding NGO-Government Interface

1. The state Government should create a forum for working out a Common Action Plan with NGO representation at all levels.
2. The Government should involve NGOs right from the stage of planning.
3. The NGOs will motivate the community and enhance the role of Panchayats through group organisation in case finding and case holding activities.
4. The NGOs should publish the relevant IEC material for the community.
5. The NGOs should be involved in training of trainers at State TB Centres (STC) in community health aspects.
6. The Government at all levels should undertake training of all NGOs who are addressing the problem of TB.
7. District and state level committees should be formed with NGO representation and control strategies. ❑

**(Contd. from pg. 2)**

cancer treatment facilities must be made available to all those who are afflicted by the disease. Consequently, tertiary prevention of cancer must necessarily form an important component of any cancer control programme. Moreover, early detection of cancer can only be worthwhile if prompt treatment facilities are available.

The major thrust of our national public health policy so far has been the control of communicable diseases. With the current estimate that infectious diseases would be reduced by half by the year 2015 while cancer deaths would increase three fold, a rethinking of our national health priorities is called for. In the past there has been a lack of political commitment for cancer control. The already meager resources allocated for cancer control were mostly concentrated on the least effective stage of cancer control - treatment of cancer. What is now urgently needed is a comprehensive programme which puts sufficient emphasis on primary and secondary prevention through public awareness and simple approaches to early detection of common cancers with the best use of the currently available infrastructure and human resources. ❑

# Malaria : Great Success and Great Failure

**Dr. Vishwas Rane**

**Malaria Control in the Early Phases**

An assessment in 1952 indicated that about 7.5 crore Indians suffered from malaria with a death toll of 8 lakhs. In April 1953, the Government of India launched a comprehensive indoor residual spray programme known as the National Malaria Control Programme (NMCP), in collaboration with some bilateral and international agencies. The Control Programme was a success and it was felt that malaria could be controlled in India by emulating other countries who had attained this objective. The NMCP was, therefore, converted into the broader and more ambitious National Malaria Eradication Programme (NMEP) from April 1958. The NMEP progressed satisfactorily and malaria incidence was brought down to as less as 1 lakh cases in 1965 with complete elimination of deaths due to malaria. The goal of ending the transmission of Malaria by totally eliminating the reservoir of infection and preventing its re-emergence by 1968-69 began to seem feasible.

**Deterioration Sets in**

Unfortunately, after reaching a near vanishing point and coming close to eradication the situation started deteriorating rapidly and there was a resurgence of the disease in the country. Since 1971, focal outbreaks of malaria began to occur and the annual incidence began to increase. New strains of malaria appeared and existing plasmodia strains started developing resistance to the standard drugs - the mosquitoes were no longer afraid of DDT ! The number of malaria cases in the country which stood at 13.2 lakhs in 1971, steadily increased in subsequent years and reached a peak of 64.7 lakhs with 59 reported deaths due to malaria in 1976. As a result of the recommendations of the Consultative Committee of Experts (1974), the government embarked on a Modified Plan of Operation (MPO) for NMEP in 1976, which was implemented with effect from april 1977. Simultaneous to the implementation of the MPO, there was the development of the Primary Health Care System with the introduction of the Multipurpose Worker Scheme (MPE Scheme) and Village Health Guides Scheme. Also, the urban malaria scheme under the NMEP was sanctioned by the government of India, Ministry of Health and Family Welfare, during the third year of the Fourth Plan. To contain the spread of P. falciparum (plasmodium falciparum) incidence, a special scheme called the P. falciparum Containment Programme (PFCP) was launched in October 1977.

With the introduction of all these programmes in 1977, the number of cases came down to 21.82 lakh in 1982 and by 1987 the number of reported cases was 16.63 lakh, of P.falciparum cases, 6.2 lakh and of deaths due to malaria, 188.

The MPO in India during 1977 was a bold step to decentralise and involve the general health services under the primary health care system in NMED operations and to solicit the active voluntary participation of the community in malaria eradication activities. But in the last ten years there has been a major distortion in the public health policy with the result that after 1987 there has been a progressive rise in malaria cases to 28 lakh reported cases, 10.9 lakh P. falciparum cases and 1061 deaths by 1995.

The priorities in terms of manpower and resources have been given to certain vertical programmes eg. Family Planning and AIDS at the cost of other communicable diseases like TB.

In 1991 to 1992, the year of the New Economic Policy, the AIDS budget was increased from 4.5 to 70 crores and the malaria budget actually decreased from 70 to 50 crores. Not surprisingly, the highest number of malaria deaths were recorded that year - economic depressions are known to be associated with worsening malaria outbreaks. The vertical implementation of health programmes virtually destroyed the primary health care system. To top it all, the World Bank recommended the privatisation of curative care which if implemented would have been disastrous for the poor majority which is already highly vulnerable to disease due to poor nutrition and poverty. WHO itself, in its 1995 annual report, recognised the obvious fact that poverty was the greatest cause of disease and government policies worldwide were worsening economic disparities.

**Decentralisation**

The present system is centralised and highly bureaucratic and does not involve participation of the common man. On paper it might appear that health services are fulfilling

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their goal, but in reality our economic resources and administrative structures pose a big hurdle. Health care planning needs to be decentralised at all levels from the centre to the district and grassroots level planning needs to be encouraged. The issue of budget allocations for health and for malaria specifically and its transfer from centre to the state and districts and ultimately to panchayats needs to be encouraged as malaria, or any other illness for that matter, cannot be seen as a vertical health programme but as an issue closely linked to sustainable development of the people.

**Malaria Chemotherapy**

Dr. U.K. Seth, a world renowned clinical pharmacologist who has worked as a Clinical Monitor for the CHEMALRTI (Chemotherapy of Malaria) Malaria Action Programme of TDR, WHO, in one of his essays, has very elaborately discussed the flaws in malaria treatment. He says that we are not far from the situation in Thailand and Vietnam where he has seen malaria cases dying within 24-48 hours of admission in the hospital. The main mortality is due to P.falciparum, causing cerebral malaria, kidney failure, hepatic failure and during pregnancy, death of the mother and the fetus.

In India, resistance to chloroquine by P.falciparum is well accepted, which leaves only two drugs for treating P.facliparum malaris - sulphadoxin + pyrimethamine and quinine. Sulphadoxin + pyrimethamine are only available as tablets, and not for parental (injection) use which is very important for patients who are unconscious. Also, the dose recommended and made available in the market is 2 tablets per packet so as to keep it within the people's budget and increase demand. Whereas, for the treatment to be effective, a single dose has to contain three tablets of the drug (1500 mg sulphadoxin + 75 mg. pyrimethamine). Taking 2 tablets (1000 mg + 50 mg) per dose is not sufficient to kill all the parasites, with the result that the patient improves for some time only to relapse back.

With any anti-malarial drug it takes about 50 hours for the body temperature to reach the normal level, and also the disappearance of the parasites from the blood. This is not known and the practitioners often repeat the drug. This results in severe toxicity due to an over-dose of sulfadoxin+pyrimethamine, leading to bone marrow depression and particularly a marked decrease in platelet count. Initially, the pharmaceutical companies introduced this combination for any malaria leading to its over-exposure. No wonder, resistance to this drug combination has also been reported. That leaves quinine as the main drug for the treatmentof P.falciparum cases as it is believed that as yet P.falciparium in India is sensitive to quinine. Having no published data on the degree of sensitivity to quinine by P.falciparum, it is difficult to gauge whether quinine should be administered alone or with tetracycline.

Six hundred milligrams of quinine each has to be given eight-hourly round the clock for 7 days which would give a total cost of about Rs.147. The cheapest brand available is *Quininings of Inga*, costing Rs.35.00 for 10 tablets of 300 mg. each. Clinically, after treating the patient with quinine for 3 days, the fever disappears, the blood paracetomia

### Role of the Community in Vector Control

The role of the community in vector control programmes can be considered at three levels :

1. Support for national, provincial or municipal projects - This type of support can take several forms depending on the programme and socio-economic level of the community. It can spring from payment of taxes for vector control, self-help contribution, or collaboration with the vector control personnel, e.g., assistance in house spraying or in geographical reconnaissance previously carried out by specialised bodies. House spraying with insectisides has always been carried out by specialised operational staff through a vertical system of administration. Instead, this opertation may gradually be entrusted to the community provided that adequate training, guidance and supervision are given to the individuals responsible. Community participation may take the form of provision of volunteers or subsidised labour or the full recruitment of labour to conduct spraying.Operational activites that require sustained effort, such as larviciding, molluscicide or trapping, could be community based and entrusted to a responsible member of the community who would have access to a vector control specialist.

2. The community, if properly motivated, can contribute actively to the elimination of breeding-places in and around dwellings and villages. Simple engineering methods such as filling, draining, maintenance of the sanitary facilities, and care of water tanks can be undertaken by the community and be supported by legislation as needed.

3. Individual measures. Prevention of man-vector contact by the use of mosquito nets will be much encouraged if the net material is subsidised or produced locally and sold at a low cost which the community can afford. Screening of houses and elimination of wall cracks as also use of commercially available aerosol formulations of insecticides or mosquito coils may also provide useful and affordable measures of preventing contact between man and vector.

*(Abstracted from ''Integrated Vector Control'', 1983, WHO, Geneva.)*

## Laboratory and Statistical Support to Epidemiological Studies

*Laboratory Support*

Laboratory support becomes essential in many epidemiological studies, especially clinical, and may be necessary for arriving at the diagnosis, for obtaining confirmatory evidence supporting a provisional diagnosis or for obtaining certain circumstantial evidence for or against some hypothesis, for eg., examination of sputum for diagnosis of pulmonary tuberculosis or examination of skin by slit and scrape method for diagnosis of leprosy.

*Statistical Support*

Analysis, interpretation and presentation of numerical data has to be done in epidemiological work. Methods by which inferences are drawn; methods of classification and grouping to facilitate data handling; tabulation and graphical presentation of data to help the reader to grasp the data easily etc. all require statistical knowledge.

Also, when observations are made, generally, only a fraction of the group, i.e. a sample, is examined and inferences are drawn for the total group from which the sample has been derived. The process and methods of satisfactory sampling and the determination of an adequate size of the sample also require statistical knowledge.

Vital statistical data including rates, ratios and proportion, have to be very commonly used in epidemiology. Demography heavily leans on statistics. Standardization of rates to compensate for age and sex distribution of populations has to be done while making comparisons. Life-table methods derived from statistics have wide application in epidemiology.

Statistical methods are used to study associations between different variables and a cause and effect relationship is sought for by collection of further evidence. In case of association of a characteristic and a disease, the extra risk of the development of that disease amongst those in whom the characteristic is present, for e.g. the risk that smokers run of lung cancer, is calculated. Again, using statistical methods, it is possible to know much of that disease in the community can be attributed to the influence of that characteristic which permits intervention for control of the disease for e.g. eliminating stagnant water bodies to control malaria. ❑

reduces to an extent that it may be missed microscopically and the patient feels better. Meanwhile, the side effects of quinine like ringing in the ears and partial deafness, become evident. This makes the patient discontinue quinine. Unfortunately, unless quinine is given for 21 doses (i.e. 7 days) a relapse occurs after a period of 3-4 weeks. This is considered a fresh attack of malaria and the inadequate treatment starts again. Unfortunately, the need to continue quinine for 7 days is often not known to family physicians and patient compliance too is very poor.

In serious cases, quinine has to be given by intravenous drip. Quinine can be given intramuscularly but the usual method is to use the quinine solution as available in the ampoule and inject it in the gluteal muscle. This often leads to severe pain, tissue necrosis (death of tissue) and even abscess (localised pus formation). It is hardly known that quinine can be given safely intramuscularly if the solution is diluted 6 times with normal saline and injected into the thigh muscle at 2-3 places. This method is quite painless and without any tissue damage.

Dr. U.K.Seth, from his experience in Thailand, strongly feels that mefloquin should be administered in the treatment. His experience shows that full protection can be given to P.falciparum patients at least for 10-15 years, and later the drug could be used safely in combination with other drugs like artmether.

**Resistance to Insecticides**

Malaria control has been rigidly equated to the spraying of residual insecticides, irrespective of its effectiveness, correct application and totality of coverage keeping the appropriate time for transmission in mind. It is an established fact that vector mosquitoes when under continuous exposure to any insecticide, eventually develop resistance; yet there are no plans for the systematic cycling of different insecticides so as to prevent emergence of resistance.

**Environmental Control**

The major man-made causes for the spread of malaria are neglect of water management in development and construction activities. An important example of this is the construction of the Indira Gandhi Canal which was largely responsible for the outbreak of the malaria epidemic in Rajasthan in 1994 - the major reasons being water leakage, collection of large water bodies, migrant labour, etc. Hence, it becomes equally important to check the creation of an environment conducive to the growth of the malaria parasite and its transmission, especially in view of the fact that in 2000 AD, 50 percent of India will be urban. Taking due cognisance of the bionomics of the vector species at the local level, human

## Stages of Managing Communicable Diseases

1. To control a disease means to exercise restraint or regulation, to correct or restore to normal. Thus it is a planned reduction in the prevalence of a disease to a level which is low but transmission may occur at that level to maintain it in nature. The criterion of what constitutes control of a disease depends upon the level of development, knowledge, technology, will and resources available for the control operations. General Measures for disease control include :

* Measures directed against Reservoir/Source including treatment of infected humans/animals, quarantine, vaccination, health education etc.

* Measures for interrupting transmission include avoidance of close contact, disinfection/disinfestation avoidance of overcrowding, vector control etc.

* Measures to increase host resistance include better health/nutritional status, immunoprophylaxis, chemoprophylaxis etc.

2. Elimination is the second step following control of a communicable disease and has to be defined separately for each specific disease. It denotes eradication of disease, as in the case of measles, from a large geographic region or area of political jurisdiction. In poliomyelitis, elimination may denote the absence of paralytic disease without reference to extermination of poliovirus, if the transmission takes place at such a low level that it is devoid of paralytic disease.

3. Eradication of a disease or infection implies termination of all transmission of infection by extermination of the infectious agent through surveillance and containment. It denotes total, absolute, irrevocable extinction of the biological agent without any possibility of its circulation in animals or human hosts or persistence in the environment. Smallpox is the solitary example of successful eradication.

The actual measures taken for prevention/ control/eradication of a disease will be selected depending upon the understanding of epidemiology of the disease and the available resources.

*( All material on epidemiology in this issue has been abstracted from 'Epidemiology and Management of Health Care for All' by P.V. Sathe and A.P. Sathe, 1991,, Popular Prakashan Pvt. Ltd., Mumbai. )* ❑

activities and environmental conditions, operational research for promoting community participation for appropriate social action could pave the way for a solution through progressive elimination of malariogenic factors in the environment.

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1. All relevant publications by VHAI, Delhi ❑

**(Contd. from pg.12)**

शिक्षा का अभाव, कुष्ठ रोग के प्रति ग़लत धारणाएँ, जैसे कुष्ठ रोग को विकलाँगता के साथ जोड़ना, कुष्ठ रोग के फैलने या संक्रामण तथा बीमारी के ठीक होने से सम्बन्धित ग़लत धारणाएँ, इस सामाजिक कलंक को और भी अधिक बढ़ा देती हैं। इस परिप्रेक्ष्य में, ऐसा सामाजिक-आर्थिक विकास जिससे स्वस्थ पर्यावरण, सूचनाओं के बड़े स्तर पर मुक्त आदान-प्रदान, शिक्षा तथा परामर्श अभियान को बढ़ावा मिलता हो, बहुत अधिक महत्त्वपूर्ण हो जाता है।

### शारीरिक घटकों का नियंत्रण

कुछ ऐसी शारीरिक क्रिया सम्बन्धी परिस्थितियाँ भी हैं, जैसे किशोरावस्था, गर्भावस्था या स्तन- पायन, जो असंक्राम्यता-सम्बन्धी अस्थिरता की स्थिति पैदा कर सकती हैं और इसी कारण, कुष्ठ रोग के संक्रामण का ख़तरा भी बढ़ा सकती हैं। इसलिए ऐसे समूहों को कुष्ठ रोग नियंत्रण के विषय में आगाह कर देना आवश्यक है।

क्योंकि सम्पूर्ण विश्व सन् २००० तक कुष्ठ रोग के निराकरण के लक्ष्य की ओर अग्रसर है, इसलिए यह आवश्यक है कि हम कुष्ठ रोग के उन्मूलन के लिए, अन्तर्राष्ट्रीय सहयोग व आर्थिक सहायता प्राप्त कर, इस अवसर का पूरा लाभ उठाएँ।

### निराकरण-उपरान्त मुद्दे

हालाँकि, कुष्ठ रोग का प्रमाण लक्षणीय रूप से घटा है, क्योंकि कुष्ठ रोग की ऊष्मायन अवधि बहुत लम्बी होती है, इसलिए रोग के जीवाणुओं के भंडार को नष्ट करने व कुष्ठ रोग का अन्ततः निराकरण करने के लिए, निराकरण की कार्य-योजना या रणनीति को वर्ष २००० के बाद भी कुछ वर्षों तक जारी रखना पड़ेगा।

यद्यपि कुष्ठ रोग के कारण होने वाली विकलांगताएँ और विकृतियाँ, कुष्ठ रोग से जुड़ी प्रमुख समस्याएँ हैं, फिर भी वर्तमान कार्यक्रम में विकलाँगताओं को रोकने की दिशा में बहुत कम ध्यान दिया गया है। अगली शताब्दी में, कुष्ठ रोग कार्यक्रम में प्रमुख प्रयास, विकलाँगताओं को रोकने तथा कुष्ठ रोग से विकलाँग हुए व्यक्तियों की देख-रेख व उनके पुर्नस्थापना की दिशा में किए जाने होंगे।

*(हिन्दी अनुवाद : मीता श्रीवास्तव)* ❑

**FREE ABSTRACTING**

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**The views expressed in the articles are those of the authors and not necessarily those of FRCH**

# कुष्ठ रोग निर्मूलन : एक समीक्षा

डा. के. आर. मुटाटकर

## विश्व परिदृश्य

कुष्ठ रोग, माइकोबैक्टीरियम लेप्राए नामक जीवाणु के कारण होता है, जो मुख्य रूप से मनुष्यों को प्रभावित करता है। इसके द्वारा संक्रामित मनुष्य ही इस जीवाणु के प्रमुख भंडार व आगामी संक्रामणों के मुख्य स्रोत हैं। इसके लाक्षणिक स्पेक्ट्रम में त्वचा पर एक छोटे धब्बे से लेकर तंत्रिका तंत्र, अस्थि तंत्र, आँखों व अन्य प्रमुख अंगों को बड़े स्तर पर नुकसान तक हो सकता है तथा विकलाँगता व विकृतियाँ धीरे-धीरे बढ़ते हुए स्थायी रूप धारण कर सकती हैं। इसके साथ-साथ कुष्ठ रोग से पीड़ित व्यक्तियों को आर्थिक हानि, सामाजिक बहिष्कार और मनोवैज्ञानिक आघात होता है। ये सभी इस रोग को एक गम्भीर स्वास्थ्य समस्या का रूप देते हैं।

## बहु-औषधि उपचार

वर्ष 1943 में, कुष्ठ रोग के उपचार के लिए, पहली प्रभावी औषधि, डैपसोन का प्रयोग किया गया। परन्तु उपचार के लिए लम्बी अवधि की आवश्यकता और जीवाणुओं के डैपसोन प्रतिरोधी बनने तथा जीवाणुओं की डैपसोन-प्रतिरोधी नई प्रजातियों के पैदा होने के कारण, रोग पर नियंत्रण पाने की जो आरम्भिक आशाएं पैदा हुई थीं, समाप्त हो गईं।

वर्ष 1981 में, कुष्ठ रोग नियंत्रण में नई आशाओं का उदय हुआ। विश्व स्वास्थ्य संगठन (डब्ल्यू एच ओ) ने कुष्ठ रोग नियंत्रण के लिए तीन औषधियों - डैपसोन, रीफैम्पीसिन व क्लोफ़ैजीमिन के सम्मिश्रण की संस्तुति की। इसे बहु-औषधि उपचार (एमडीटी) के नाम से जाना गया, जिससे न सिर्फ कुष्ठ रोग का उपचार होता है, बल्कि ये काफ़ी सस्ता भी है। एमडीटी उपचार को एक बहुत बड़े स्तर पर कार्यान्वित करने से कुष्ठ रोग का प्रमाण कम होना आरम्भ हो गया और कुष्ठ रोग अब असाध्य रोग या समस्या नहीं रही।

एम डी टी की सफलता को देखते हुए, 1991 में, विश्व स्वास्थ्य परिषद में, विश्व स्वास्थ्य संगठन के सदस्य देशों ने विश्व से सन् 2000 तक, कुष्ठ रोग को एक सार्वजनिक स्वास्थ्य समस्या के रूप में समाप्त करने का प्रस्ताव (डब्ल्यू एच ओ 44.9) पारित किया। यानी कि प्रत्येक 10000 की जनसंख्या पर मात्र १ रोगी के लक्ष्य को शीघ्र ही प्राप्त किया जा सके

कुष्ठ रोग का एक महत्त्वपूर्ण महामारी सम्बन्धी तथ्य यह है कि इस रोग का विस्तार बहुत अनियमित है। ऊपर के उन 25 देशों में, जहाँ पर कुष्ठ रोग के 92% रोगी हैं, उनमें से 65% समस्या का विस्तार केवल 5 देशों में ही सीमित है। अतः अधिक प्रमाण वाले (स्थानिक) रोग-क्षेत्रों को पहचानने, उनके लिए संसाधनों को आवंटित करने, औषधियों की आपूर्ति करने, कुष्ठ रोग नियंत्रण सुविधाओं तक लोगों की पहुँच, कार्यक्रम की देखरेख, इत्यादि को ध्यान में रखते हुए कुष्ठ रोग के निराकरण की रणनीति को विश्व, क्षेत्रीय, देशीय व उप-देशीय स्तरों पर प्राथमिकताओं का निर्धारण करके योजनाबद्ध किया गया है। सामुदायिक स्तर पर सार्वजनिक जागरूकता पैदा करना व कुष्ठ रोग का प्राथमिक अवस्था में पता लगाना इस रणनीति के अनिवार्य घटक हैं। नवम्बर 96 में, कुष्ठ रोग के निराकरण पर दिल्ली, भारत में आयोजित द्वितीय अन्तर्राष्ट्रीय बैठक में, प्रत्येक गाँव में प्रत्येक रोगी के उद्देश्य को अपनाकर इस रणनीति को और अधिक मज़बूत बनाया गया।

1991 के प्रस्ताव के बाद से जो प्रगति हुई है वह प्रभावशाली रही है। पिछले 10 वर्षों में, एमडीटी से, कुष्ठ रोग के प्रसार में 80 % से अधिक की कमी आई है। ऐसा अनुमानित है कि अगस्त 1995 में 13 लाख से कम रोगियों को उपचार की आवश्यकता थी, जबकि इससे पहले यह संख्या 1 करोड़ 20 लाख की थी और इनमें से लगभग दो-तिहाई अर्थात 80 लाख रोगियों का पहले ही एमडीटी के अन्तर्गत उपचार किया जा रहा है। यह उपचार इतना प्रभावी है कि इससे जीवाणुओं की प्रतिरोधी प्रजातियाँ भी पैदा नहीं होतीं और पुनः संक्रामण के प्रमाण भी नगण्य हैं। आज, एम डी टी के उपलब्ध हो जाने से, कुष्ठ रोग का 6 माह से 2 वर्षों में सफलतापूर्वक उपचार सम्भव है। इसके साथ-साथ, एमडीटी के प्रभाव को तेज़ करने में इम्यूनोथेरैपी को भी उपयोगी पाया गया है।

## भारत में कुष्ठ रोग

विश्व के 60 कुष्ठ रोग प्रमाण वाले देशों में, 16 देश ऐसे हैं जितमें कुष्ठ रोग का प्रमाण 1 प्रति 10000 जनसंख्या से अधिक है और जिनमें विश्व के समस्त कुष्ठ रोगियों में से 95 प्रतिशत कुष्ठ रोगी रहते हैं। भारत, ऐसे देशों की सूची में, सबसे ऊपर है। हालाँकि यह सत्य है कि हाल के वर्षों में, भारत में पहचाने गए कुष्ठ रोगियों की संख्या में जो बढ़त हुई है, वह रोगियों की तलाश के लिए किये जाने वालों गहन प्रयासों व अधिक विस्तारित भू-भाग को कार्य क्षेत्र के रूप में लेने के कारण हुई है, न कि रोग के प्रमाण के बढ़ने की वजह से। फिर भी, आराम से बैठने जैसी कोई स्थिति नहीं है क्योंकि भारत में, पंजीकृत कुष्ठ रोगियों की संख्या अभी भी 5,42,511 है, अर्थात 5.9 प्रति 10,000 जनसंख्या (अगस्त 1996), जो कि बहुत अधिक है। पश्चिम बंगाल, उत्तर प्रदेश, बिहार व मध्य प्रदेश में सर्वाधिक कुष्ठ रोगी हैं। इसके बाद उड़ीसा, आंध्र प्रदेश, तमिलनाडु व महाराष्ट्र राज्य हैं। हालाँकि देश के 93 प्रतिशत कुष्ठ रोगियों को एमडीटी उपचार उपलब्ध कराया गया है, फिर भी रोग की दर अभी भी बहुत अधिक है। इससे समाज में सक्रिय संक्रामण की उपस्थिति स्पष्ट होती है।

## राष्ट्रीय कुष्ठ रोग उन्मूलन कार्यक्रम (एन एल ई पी)

प्रथम पंचवर्षीय योजना के दौरान, 1954-55 में भारत सरकार द्वारा राष्ट्रीय कुष्ठ रोग नियंत्रण कार्यक्रम (एन एल सी पी) लागू किया गया। इस कार्यक्रम द्वारा जो रास्ता अपनाया गया वह विश्व-स्तर पर हो रहे प्रयासों के अनुरूप रहा। आरम्भिक उद्देश्य तो यही था कि रोग की शीघ्र पहचान

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डा. के. आर. मुटाटकर, एक प्रसूति रोग विशेषज्ञ हैं और कुष्ठ रोग पर शोध कार्य से संबद्ध हैं। वे एफ. आर. सी. एच. की मैक आर्थर परियोजना पर कार्यरत भी है।

और एकमात्र औषधि, डैपसोन से उपचार कर, कुष्ठ रोग पर नियंत्रण पाया जाए, इस आशा के साथ कि इससे समाज में कुष्ठ रोग के संक्रामण में रूकावट आएगी। इस कार्यक्रम की शुरूआत, एक केन्द्र-पोषित योजना की तरह हुई, जिसका प्रमुख केन्द्रबिन्दु कुष्ठ रोग के, मध्यम से उच्च प्रमाण वाले ग्रामीण क्षेत्र थे। कुष्ठ रोग के अल्प प्रमाण वाले क्षेत्रों में कुष्ठ रोग सम्बन्धी सुविधाएँ, वर्तमान सामान्य स्वास्थ्य सेवाओं द्वारा उपलब्ध कराई गईं। हालाँकि, जैसा कि पहले बताया जा चुका है, एकमात्र औषधि, डैपसोन से उपचार की अपनी सीमाएँ थीं, क्योंकि इसमें इलाज बहुत लम्बी अवधि तक चलता था व इस औषधि के लिए जीवाणु-प्रतिरोध भी विकसित हो गया था। वर्ष 1968-70 में, इस नियंत्रण कार्यक्रम को केन्द्र-पोषित योजना में बदल दिया गया। वर्ष 1982 में, स्वामीनाथन समिति की संस्तुतियों के आधार पर, राष्ट्रीय कुष्ठ रोग नियंत्रण कार्यक्रम को राष्ट्रीय कुष्ठ रोग उन्मूलन कार्यक्रम में बदल दिया गया। यह कार्यक्रम पूर्ण रूप से केन्द्र पोषित है व इसका मुख्य उद्देश्य सन् 2000 तक कुष्ठ रोग का प्रमाण, 1 प्रति 10,000 जनसंख्या तक घटाकर, कुष्ठ रोग का उन्मूलन करना है।

भारत में कुष्ठ रोग बाहुल्य वाले ज़िलों में से, 201 ऐसे ज़िले हैं जिनमें कुष्ठ रोग का प्रमाण, 5 रोगी प्रति 1000 जनसंख्या से भी अधिक है। इसके अतिरिक्त, मध्यम-प्रमाण वाले 77 ऐसे ज़िले हैं जिनमें प्रमाण की दर 3.5 रोगी प्रति 1000 जनसंख्या से अधिक की है तथा अल्प-प्रमाण वाले 176 ज़िले ऐसे हैं जिनमें प्रमाण की दर लगभग 2 रोगी प्रति 1000 जनसंख्या की है।

इन ज़िलों में एम डी टी को कार्यान्वित करने के मुख्य उद्देश्य हैं :

1) कुष्ठ रोग की शीघ्र पहचान करके व उपचार करके, अल्प अवधि में, सभी संक्रामक रोगियों को असंक्रामक बनाना जिससे वर्ष 2000 तक कुष्ठ रोग के निराकरण के लक्ष्य तक पहुँचा जा सके।

2) शीघ्र रोग निदान व उपचार से, कुष्ठ रोग से होने वाली शारीरिक विकृतियों को पैदा होने से रोकना।

3) सामाजिक कलंक को हटाने के लिए, व्यवस्थापरक स्वास्थ्य शिक्षा उपलब्ध कराना।

4) उचित उपचार के माध्यम से कुष्ठ रोग का संक्रामण रोकना।

कुष्ठ रोग के अत्यधिक-प्रमाण वाले जिलों से आरम्भ करके एम डी टी को मध्यम व अल्प-प्रमाण वाले अन्य जिलों में एक क्रमबध्द तरीके से विस्तारित किया गया है। वर्तमान राष्ट्रीय नीति निम्नवत् है :

1) सभी 201 अत्यधिक-प्रमाण वाले जिलों में वर्तमान मूलभूत सुविधाओं के माध्यम से एम डी टी सेवाएँ जारी रखना।

२) शेष 77 मध्यम-प्रमाण वाले व 176 अल्प-प्रमाण वाले जिलों में, चल (मोबाइल) कुष्ठ रोग उपचार इकाइयों (एम एल टी यू) द्वारा, कुष्ठ रोग कार्यकर्ताओं की एक विशेष टोली के माध्यम से एम डी टी सेवाएँ जारी रखना। संशयित रोगियों की पहचान के लिए पीएचसी सेवाओं को भी सम्मिलित किया जाता है।

## शहरी कुष्ठ रोग नियंत्रण तथा एनजीओ योगदान

यद्यपि भारत के संदर्भ में कुष्ठ रोग, मुख्यतया एक ग्रामीण समस्या मानी जाती है, फिर भी, स्वैच्छिक संस्थाओं को शहरों में कुष्ठ रोग के नियंत्रण के लिए कार्य करने को प्रोत्साहित किया गया है। मद्रास, मुम्बई, कलकत्ता, बैंगलोर, हैदराबाद व अन्य कई छोटे शहरों में भी ऐसी कई अन्तर्राष्ट्रीय एजेन्सियाँ हैं, जो कुष्ठ रोग के क्षेत्र में किये जा रहे कार्य में सहायता दे रही है। शहरी क्षेत्रों में जो मुख्य घटक कुष्ठ रोग को बढ़ावा देते हैं, वे हैं : जनसंख्या की उच्च वृध्दि दर व जनसंख्या का घनत्व, अस्थायी व अस्थिर जनसंख्या तथा स्थलान्तरण की उच्च दर, बहुत तरह की चिकित्सा पध्दतियाँ, साफ़-सफ़ाई पर ध्यान न देना, गन्दगी, प्रदूषण तथा सामाजिक कलंक, विशेषकर मध्यम व उच्च या अमीर वर्ग के लोगों में।

शहरी कुष्ठ रोग नियंत्रण की रणनीति या कार्य-योजना, सर्वेक्षण तथा अन्य तरीकों से रोग की शीघ्र पहचान तथा उपचार करने की है। शहरी क्षेत्रों में, कुष्ठ रोग के प्रमाण खोजने के लिए, सम्पूर्ण जनसंख्या का परीक्षण करना व्यवहार्य नहीं है। वर्तमान में, सर्वेक्षण का कार्य मुख्य रूप से शहरी मलिन बस्तियों व स्कूलों में किया जाता है। कुछ विशेष सर्वेक्षण भी आयोजित किये जाते हैं, जैसे, औद्योगिक सर्वेक्षण, पूछताछ (कॉन्टैक्ट) सर्वेक्षण, इत्यादि। बाकी बची हुई जनसंख्या तक पहुँचने के लिए विभिन्न प्रचार-प्रसार माध्यमों जिसमें रेडिओ व अखबार, आदि भी शामिल हैं, के ज़रिये स्वास्थ्य शिक्षा व उससे सम्बन्धित क्रिया-कलापों का इस्तेमाल किया जाता है। इन क्रिया-कलापों द्वारा लोगों को, कुष्ठ रोग की जानकारी स्वैच्छिक रूप से स्वतः देने के लिए प्रोत्साहित किया जाता है और यह तरीका सफल भी रहा है। केन्द्र सरकार द्वारा इतने बड़े स्तर पर चलाए जा रहे एन एल ई पी कार्यक्रम के लिए मूलभूत सुविधाओं में कुष्ठ रोग नियंत्रण इकाइयाँ (एल सी यू) तथा सर्वेक्षण शिक्षा उपचार (एस ई टी) इकाइयाँ सम्मिलित हैं। एक एल टी यू के अन्तर्गत 4-5 लाख जनसंख्या आती है, एक शहरी कुष्ठ रोग नियंत्रण इकाई के अन्तर्गत 50000 जनसंख्या आती है, जबकि एक एस ई टी इकाई 25000 की जनसंख्या के लिए होती है और वह पी एच सी से सम्बध्द रहती है।

कुष्ठ रोग का एक सार्वजनिक स्वास्थ्य समस्या के रूप में निराकरण करने का लक्ष्य, प्रभावी एम डी टी की सहायता से रोग की संक्रामण दर घटा कर, बहुत निम्न स्तर तक लाने से ही प्राप्त हो सकता है। रोग के प्रमाण की दर, रोग के संक्रामण को मापने का एक माध्यम है। क्योंकि इस रोग के जीवाणुओं का मनुष्य ही एकमात्र ज्ञात भंडार है, अतः इस कार्यक्रम के लिए जो रणनीति अपनाई गई है, वह रोगियों, उनके परिवारों व सामाजिक स्तर पर स्वास्थ्य शिक्षा व संबंधित क्रिया-कलापों के साथ-साथ रोग की शीघ्र व आरम्भिक अवस्था में पहचान के लिए गहन प्रयासों व उसके उपचार के क्रिया-कलापों पर केन्द्रित है। सर्वेक्षण, शिक्षा व उपचार (एस ई टी) क्रिया-कलापों के द्वारा हम बहुत अधिक संख्या में कुष्ठ रोगियों को पहचानने व उनका उपचार करने में सफल रहे हैं और इससे कुष्ठ रोग के प्रमाण को लक्षणीय रूप से कम किया जा सका है। स्वैच्छिक संस्थाओं ने भारत में कुष्ठ रोग नियंत्रण में प्रमुख भूमिका निभाई है। लगभग 285 स्वैच्छिक संस्थाएँ, कुष्ठ रोग के क्षेत्र में सक्रिय रूप से कार्यरत हैं। इन संस्थाओं व एन एल ई पी में परस्पर नज़दीकी सहभागिता है। वे आवंटित जनसंख्या में, एन एल ई पी के निर्देशों के अनुसार कुष्ठ रोग से सम्बन्धित कार्य करती हैं। सत्य तो यह है कि ये एनजीओ, उनके लिए निर्धारित लक्ष्यों से कहीं अधिक कार्य करते हैं। कुष्ठ रोगियों के लिए एनजीओ द्वारा किये गए शैक्षणिक पुनर्स्थापना व विकलाँगताओं की रोकथाम के कार्य, समस्या के प्रति उनकी वचनबध्दता के ज्वलंत उदाहरण हैं।

## कुष्ठ रोग के निराकरण में महामारी-विज्ञान संबंधी मुद्दे

यद्यपि हम डब्ल्यू एच ओ के निर्देशानुसार कुष्ठ रोग के निराकरण के लक्ष्य की ओर बढ़ रहे हैं, फिर भी, कुष्ठ रोग के विषय में ऐसा बहुत कुछ बाकी बचा रह जाता हैं जिससे इस लक्ष्य की प्राप्ति में कुछ अनिश्चितता की स्थिति पैदा होती है। इसलिए यह आवश्यक हो जाता है कि कुष्ठ रोग के निराकरण और अन्ततः उसके सम्भावित उन्मूलन को आसान बनाने के लिए हम कुछ और महामारी-विज्ञान सम्बन्धी शोध करें।

### स्रोत व संक्रामण पर नियंत्रण

कुष्ठ रोग की 2-5 वर्ष की लम्बी ऊष्मायन (incubation) अवधि है। माइकोबैक्टीरियम लेप्राए द्वारा संक्रामिक प्रत्येक व्यक्ति में यह रोग विकसित नहीं होता है। लगभग 95 प्रतिशत जनसंख्या कुष्ठ रोग से असंक्राम्य रहती है। बाकी बची हुई जनसंख्या जो रोग से ग्रस्त भी होती है, उनमें से केवल 10 से 15 प्रतिशत जनसंख्या ही संक्रामक होती है। ऐसा सोचा जाता है कि एम. लेप्राए के उप- लक्षणीय स्वतः ठीक हो जाने वाले संक्रामण संभवतः अर्जित असंक्राम्यता के विकास में सहयोग दे रहे हों। अतः उप-लक्षणीय कुष्ठ रोग, उप-लक्षणीय लेप्रोमैटस कुष्ठ रोग, आरम्भिक कुष्ठ रोग तथा host की संवेदनशीलता को पहचानने व उन्हें भली-भाँति समझने के लिए, संवेदनशील असंक्राम्यता सम्बन्धी परीक्षण आवश्यक हैं। हाल के परीक्षणों की रिपोर्टों से ऐसा प्रतीत होता है कि बीसीजी के दोबारा टीकाकरण का 75% सुरक्षा संबंधी महत्त्व है और इसे फील्ड कार्यक्रमों में अपनाया जा सकता है।

कुष्ठ रोग का रोग निदान मुख्यतया लाक्षणिक ही रहता है। अतः एम. लेप्राए के संक्रामण के स्रोत पर नियंत्रण करने के लिए, रोग का आरम्भिक अवस्थाओं में रोग निदान तथा ऐसे रोगियों का एम डी टी से तत्परता से नियमित उपचार ही एकमात्र उपलब्ध साधन हैं। इस उपचार से, जीवाणुओं के नष्ट होने से, रोग की संक्रामणता कम हो जाती है और रोग के द्वितीयक स्रोतों को विकसित होने से रोका जाता है।

फोमाइट्स, खाद्य पदार्थों, कीड़ों के काटने या धूल के द्वारा, अथवा छुआछूत से कुष्ठ रोग के फैलने के सिध्दांत को आज बहुत मान्यता नहीं दी जाती है। इसकी बजाय यह माना जाता है कि एम. लेप्राए, बिना उपचार किये गए रोगियों के मुँह व कान के स्राव द्वारा, वायु के माध्यम से, छींकते या खाँसते समय, वायु में विलय होकर फैलता है। एक स्वस्थ व्यक्ति में ऐसी संक्रामित वायु का, साँस द्वारा शरीर के भीतर जाना ही एम. लेप्राए के फैलने का प्रमुख माध्यम है। अतः मूलभूत आवश्यक साफ़-सफ़ाई रखना, सार्वजनिक स्थानों पर थूकने व नाक के स्राव/श्लेष्मा के छिड़कने आदि को रोकना, तथा कुष्ठ रोग के फैलने के विभिन्न तरीकों के विषय में जागरूकता विकसित करना, कुष्ठ रोग समेत कई तरह के संक्रामणों को रोकने में बहुत सहायक होगा।

### पर्यावरणीय घटकों का नियंत्रण

कुष्ठ रोग के फैलने के प्रमुख पर्यावरणीय घटक हैं, ग़रीबी और ग़रीबी से सम्बन्धित परिस्थितियाँ, जैसे, अत्यधिक भीड़, आवास की अपर्याप्त सुविधाएँ, अस्वास्थ्यप्रद जीवनशैली, व्यक्तिगत साफ़- सफ़ाई का अभाव, प्रदूषण, स्वच्छ हवा व पानी का अभाव तथा कुपोषण। कुष्ठ रोग से जुड़ा हुआ सामाजिक कलंक भी रोगियों द्वारा बीमारी को छुपाने तथा समय पर इलाज न कराने के लिए ज़िम्मेदार है। कुष्ठ रोग के प्रति अनभिज्ञता, उचित

**(Contd. on pg.9)**

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NEWSLETTER

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### Health in the Hills : Then and Now

# Strong Medicine Weak System

*This is the reproduction of a lecture given by* ***Dr. Hallelohim Ghonglah*** *as part of a Special Lecture Series by distinguished social scientists organised by the North-Eastern Centre of ICSSR*

Most people avoid hospitals, which to them are more like "antechambers to the tomb" - a notion borne by history. In earlier times, most hospitals were associated with monasteries run by the church. The nature of hospitals then, was mainly as custodial institutions to keep infectious people off the street. Naturally, crowding, filth and high mortality among both patients and attendants was the rule.

Renaissance and Reformation loosened the church's stronghold on both the hospital and the conduct of medical practice which slowly gave way to general hospitals and medical schools. But the real turning point towards a new understanding of the health of the people (public health) came only in 1821. It was only then that it was realised that cleanliness could prevent infection. Amazing, considering that ideas of cleanliness have been recorded in both the Old Testament as well as the Ayurvedic texts.

***Public health, as opposed to hospital care, is not so much about drugs as it is about people.*** While hospital care is essentially curative, public health involves changing attitudes and motivations, safe water supply, basic sanitation, good nutrition and an improved economy based on high literacy - all what is today known as preventive and promotional medicine. As opposed to this, curative medicine, by its very nature, is a passive system treating whoever comes to its door but seeking no one out. In fact, inspite of the fact that it has come much later than hospitals and doctors, most historians attribute the improvement of health and longevity of the people in developed countries not to curative but to preventive and promotive medicine. ***The conquest of infectious disease, one of the triumphs of medicine in this century, is something for which the hospital as an institution can take no pride.***

The North Eastern hills, especially Shillong, are some of the lucky few places in the country where the medical missionary from Wales opened the first dispensary at Mawphlang in 1878. In fact, Shillong got the advantage of the latest technology and tools to fight against disease and ill health almost at the same time as the West.

During those days health care in these hills was taken care of primarily by two bodies, the Church and the East India Company. Secondly, even though the then Indian Medical Service ran the show, it was clearly demarcated into two distinct areas of operation - curative and preventive. The Inspector General looked after the curative side whereas the Director of Public Health, a person trained both in clinical as well as preventive medicine, looked after the public health aspects.

The achievements of Public Health in these hills included :

* Water Supply and Public Health Engineering - The water supply scheme was fully under the control of the health department since most of the health problems in developing countries are water-borne. There were engineers not only to connect pipe systems but also to see that the water was safe for drinking.

The author belongs to the Directorate of Health Services, Government of Meghalaya and is a Sr. Research Scholar on Community Medicine from JNU.

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They were also trained in the design of malaria-safe nullas and sewage disposal systems.

* Public Health Laboratory - It is hard to visualise this, but during those days, more than a hundred years ago, Shillong had one of the best health analysis systems in Asia where the biochemical and bacteriological reports of Shillong's water system were submitted every week for the knowledge of the public.

* Bylaws for Shillong Town - Unlike today, incinerators were used for destroying waste. They had laws for keeping the town clean, for the number of vehicles allowed to ply on the roads and the maximum speed permissible. The Sanitary Commissioner in the cholera epidemic of 1879 even threatened the then Syiem of Mylliemin, in the name of public health, to taken away the 'Iewduh' from him if he did not bother to clean it up! Inspection of markets and eating places was also a part of public health maintenance.

* Health Research - The importance of basic health surveys and research can never be exaggerated as far as the practice of public health is concerned, and judging by the times in which they lived, the health managers a hundred years ago did well. There were sanitary surveys for kalaazar, spleen index survey for malaria and a host of other studies. In fact, Shillong was selected as a location for the Pasteur Institute mainly because its spleen index then was nil whereas Hatlong, another contender, had a spleen index of 60.

Also, there was a body called the Assam Scientific Research Society which, along with the Indian Tea Association, was instrumental in moving for the establishment of the Pasteur Institute, the Malaria Research Institute and other such projects in Shillong. The Pasteur Institute then not only produced the antirabies vaccine, but also carried out research into local health problems like Naga sores, helminthiasis, kalaazar etc.

* Herbal Products - Much criticism by many health scientists on the neglect of traditional medicines by the British Raj can be found everywhere. But as far as these hills are concerned, the evidence is otherwise. In 1923, a list of medicinal and economic plants of Assam was prepared and sent to the British Empire exhibition at Wembley.

The words quoted below of ***Rai Bahadur KL Barua***, then Minister of Local-Self Government, give an idea of public health involvement then : ***"Nothing is more certain than the fact that physical advancement and health of mankind is dependent, not upon a doctor's stunt here or a sanitary institution there, but upon the whole social evolution of the people."*** Continuing, he said, "if the people want to know their birth rate, their death rate and their infantile death rate, should not their be some expenditure and staff to collect such statistics and see that the figures collected are correct?"

Sadly, after independence, the destruction of all that was laid by these public health men was carried on slowly and gradually, and today it is almost complete. We no longer have competent men or women even at the national level who understand the basic concepts of public health. This is unfortunate, for even though health is a state subject, ninety percent of its programmes are planned and directed as well as financed from Delhi. Whereas, as far as health is concerned, there was complete decentralisation during the British raj, today there is almost complete centralisation!

We had a terrific national health policy in 1946 (Bhore Committee) which talks of the "managerial physician" and the role of the community, but all that remained only on paper and did not get translated into reality. The whole training of doctors is geared towards making them hospital based clinicians, not managerial ones.

It is interesting to note that just three years after independence, the Assam Government adhoc decided that the health department was too big, so the Public Health Engineering Department was created as a separate ministry. The source of your polluted water can perhaps be traced to that year!

Secondly, the Indian Medical Service has given way to the IAS wherein any generalist without any knowledge of basic public health can head a health system covering 900 million people. Even those who are essentially medical persons, rarely have any extra degree in public health. So the rot in the system starts right from the top and percolates downwards.

The Pasture Institute today is a mere ghost of its former self, its library being stacked with ancient outdated material. The Malaria Institute has nearly been destroyed. The Public Health Laboratory is gone, and if you want to know the chemical composition of the water you drink, you would be lucky to get it without much running about. Even if one gets it and the result is unsatisfactory, it would be a miracle to get the PHE Department to clean it up. Health research too is conspicuous by its absence; whatever data are collected by rural health workers are at best unreliable statistics.

All is not lost though. There is an increasing awareness about public health throughout the country. Health is now going more and more interdisciplinary. Literacy, economic status, accessibility to health care are all seen as vital ingredients of good health care, besides a good research department. Academicians too cannot absolve themselves of their responsibility. To end by quoting John Kenneth Galbraith, "Those who do not foresee change are bound to become victims of change." Let us not be victims for a change. ❑

# The Rockefeller Foundation and Nursing in India (1930-1950)

**Shirish N. Kavadi**

The success of the Rockefeller Foundation's (RF) public health programme worldwide, depended on the availability of skilled public health personnel (of which nurses formed an important component) trained in the RF's own philosophy. Establishment of public health/medical teaching centers and the institution of fellowships to train such personnel was therefore, an important component of the RF's international health programme.

During the 1930s, the Government of India extended an invitation to the RF for assistance in training female health visitors and public health nurses. This was in response to a growing realisation among the Indian officials and nursing leaders that it was vitally necessary for Indian nurses to receive better and higher training in hospital administration, greater responsibilities and higher nursing posts. The RF responded positively to this invitation as it saw in this an opportunity to extend its own philosophy of public health nursing to India. The RF believed that any programme of public health nursing in India should be a part of the general public health programme. It outlined the functions of public health nurses as consisting of, "Health supervision, maternity service, and the teaching of home nursing ... classified according to the nature of the problems presented." It also considered supervision of midwives as one of the functions of nurses in India.

As a part of its efforts the RF carried out three surveys of existing nursing conditions in India : 1) by Ms. Mary Beard in 1933, 2) by Ms. Mary E Tennant in 1941 and 3) by Ms. Janet D. Corwin in 1945. The last survey was primarily undertaken to help the RF formulate a long-term policy on the public health programme in India. These were followed with such tangible assistance as a fellowship programme, advisory services and developmental aid to enhance the standards of the nursing profession in India. What was the outcome of these efforts? Was the RF successful in influencing the course of nursing in India? Did the RF make any specific contribution to Indian nursing ? This article attempts to answer these questions in the process of describing the efforts of the Rockefeller Foundation to shape and direct nursing policy in India between 1930-1950.

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**Survey Findings**

The combined outcome of the surveys by Miss Beard, Miss Tennant and Miss Corwin was a comprehensive delineation of the status of general and public health nursing in India. The three reports between them listed various deficiencies in nursing education and shortcomings of the nursing profession in India as elaborated below.

***Professional Shortcomings :***

Custom and social circumstances restrained women from upper classes from participating more fully in nursing which was considered a degrading type of work while on the other hand, in some hospitals, racial prejudices discouraged women from communities other than Anglo-Indians or domiciled Europeans from applying and working. Moreover, for most Indian women who joined the profession, nursing was more a means of livelihood rather than an area of interest.

***Deficiencies in Training :***

Training of nurses for hospital service and of health visitors, was observed to be in a backward state both quantitatively and qualitatively. The scientific concept was lacking in India and scientific methods were alien to nursing students who had inadequate exposure to science courses and laboratory work. Training was casual and superficial, lacked tie-up between classroom teaching and hospital ward practice and emphasised curative aspects of health care at the expense of community medicine. As a result, women who entered nursing were not really equipped to do constructive work and tended to undermine the quality and prestige of nursing. The RF surveys also highlighted the inadequacy of nursing schools in preparing nurses for leadership in teaching, supervision and administration. Nursing control was administratively and educationally in the hands of doctors. Whatever leadership positions in the profession were available were dominated by non-Indian nurses, prompting the RF to argue in favour of India developing the strength of her own people rather than counting on outside help forever.

The Rockefeller Foundation's surveys also commented on other training deficiencies such as the absence of libraries, teaching equipment, separate nursing school budgets, modern diagnostic equipment, lack of importance attached to theoretical education for nurses etc.

The three surveys made quite an accurate analysis of

the nursing scene in India and managed to generate awareness about and interest in the issue amongst government officials and nursing leaders in India.

**Government-RF Interface**

RF officials met nursing leaders, medical professionals and government officials to discuss the nursing situation and various aspects concerning RF aid. Government officials generally responded favourably to the RF's ideas although a complete agreement on the issues was not always possible. For instance, there were differences regarding the nature and quality of training for nurses. While the Indian Government favoured RF assistance for a postgraduate school of nursing in Delhi, Ms. Tennant clearly stated that the International Health Division (IHD) was not interested in supporting a postgraduate school unless steps were first taken to improve the quality of undergraduate training.

**The Bhore Committee and Nursing Education**

In 1943, RF officials put nursing education on the agenda of the Health and Development Survey Committee (HSDC), also known as the Bhore Committee. This Report is important for it provided the framework for health policy in independent India. Dr John Grant, RF employee, Director of the All India Institute of Hygiene, Calcutta and a member of the Committee, noting with great vision that the Committee would mark a turning point in Indian health care, insisted on the formation of a subcommittee on nursing education which would report to the Bhore Committee with its recommendations. Amongst other things, the subcommittee recommended the institution of a graduate course of nursing leading to a degree which would provide highly qualified leaders for the nursing profession from among the Indian women. The recommendations drawn up by the Nursing Subcommittee were incorporated into the main Bhore Report which was submitted in 1946 and a nursing college was established soon after. Thus, the report was acknowledgedly a factor in spurring up the establishment of the college. What of public health nursing? The RF appears to have had less success here.

**RF Aid to Nursing Education**

*College of Nursing :*

By the end of 1945, stimulated by RF prodding, the interest and activity of the Indian Red Cross, and the Bhore Report, the idea of an All India School of Nursing (later college) under the auspices of the Central Government began to gain ground. The school was to offer a graduate course of university level in nursing. A committee consisting of nurses, doctors and representatives of the Delhi University was formed to frame the curriculum for a training course leading to a B.Sc. (Hons.) of the Delhi University. The course would be of four years duration comprising of theoretical teaching of the university level; practical nursing ; experience in hospital wards and departments; and field work in public health and midwifery. The emphasis in the training programme was to be on teaching new concepts and practices, through demonstration.

Janet Corwin saw the proposal for the setting up of the School as "a most hopeful development" for she believed that the most concentrated aid by the IHD to nursing in India should be made to a specific educational project such as that proposed. Given that the college was viewed as the core around which sound developments in nursing education in India would take place, Corwin suggested that the RF assist in the organisation of its degree course, offer fellowships for staff members and provide for an Assistant Director of Public Health Nursing, the services of a nursing consultant and a suitable nurse from UK or USA. These suggestions appeared to have been accepted, for the RF made fairly extensive contributions to the establishment of the College of Nursing.

*Fellowships :*

In 1943, when the Government of India decided on a programme for training nurses abroad, the RF offered fellowships for a few. According to the RF thinking and plan, nurses trained abroad through the programme would on their return, be expected to occupy key positions in their specialised areas of nursing and subsequently influence the future development in those fields.

At this stage too the question of quality came up though it pertained essentially to the abilities and capacities of the individuals to be chosen for the fellowships. Miss Tennant was for selecting candidates of high calibre whereas M.C Balfour, Regional Director of RF, Delhi argued against the RF insisting on quality saying that it was far more important to train nurses in modern methods abroad who, on their return, would contribute to the strengthening of the knowledge base and skills of local nursing students. He opined that no case could be made for insisting on more than first class candidates and favoured compromise on quality. As later experience showed, the problem of locating 'intelligent' candidate fellows was real - there were instances of fellows failing to complete their training and returning to India: unable to cope with their courses.

Between 1943 and 1946, six nurses returned to India after studying on RF fellowships and two who had received travel grants. Meanwhile, two other nurses were studying public health nursing at Toronto. Once the College of Nursing in Delhi came up and the Vellore Nursing school introduced a graduate degree course, RF officials decided that future

fellowship aid would be given to further assist these two institutes and the Government of India in preparing Indian instead of foreign nurses for key administrative positions.

Through the Fellowship Programme, the IHD facilitated the training of the core staff of the new College of Nursing in Delhi. RF Fellows also occupied key positions in various health training institutes in the provinces of Madras, Mysore etc. and managed to influence the course content and training methodology therein.

And yet, in the years that followed, RF officials such as R.K.Anderson, Regional Director of RF, Delhi began to wonder if their foreign fellowship programme would yield any results. Instead, he favoured support to training facilities which he argued, would give greater returns in the long run. In rare cases, fellowships could be considered, if the Fellows were to return to positions where the modern view of nursing would be acceptable. He wrote, "Training abroad appears to have given these nurses, a belief they can speak with authority plus a zeal to put their American type of nursing into effect more rapidly than local conditions will permit leading to frustration and antagonism." Anderson observed that training received abroad could succeed only if the fellows had sufficient local support to put their training into practice and if the fellows in turn had sufficient ability to adapt their efforts to the local situation on their return. (*A parallel can be drawn to our medical personnel mostly trained in urban areas and summarily imposed on the rural community - Editor*).

*Consulting Services :*

The College of Nursing started functioning in July 1946 with an independent budget and independent of hospital service demands. The Rockefeller Foundation loaned the services of Miss Corwin as Nursing consultant to the College of Nursing. She was to serve in the capacity of Honorary Vice-Principal for Public Health Nursing and make possible the desired balance between public health and curative nursing therein.

Once the college came into being RF officials sounded hopeful and optimistic that their aid would lead to the desired ends. Miss Corwin wrote, " The support which the Rockefeller Foundation has given does not seem misplaced" and her own advisory activity "has also been of value in extending a philosophy of nursing education in keeping with that of the IHD". However, there were practical difficulties at the ground level. The philosophy of nursing education which the college was trying to follow was so new to some of the Indian staff that they needed a good deal of guidance. The students on the other hand, were unable to meet the standards demanded by the training. The course based on Miss Craig's work at Toronto was found to be too heavy for most of the students as compared to the usual hospital nursing courses.

*Developmental Aid :*

While the fellowships were expected to prepare personnel in modern concepts of nursing, the RF also offered developmental aid to develop modern infrastructure so essential for nursing education for which it created the Fund for Developmental Aid. While planning distribution of support from the Fund for Developmental Aid, the RF policy was to reinforce assistance which the IHD had already given in the form of fellowships, and to distribute books basic to public health nursing more widely.

In her report to the New York office, Miss Corwin suggested that IHD aid could be extended to developing nursing libraries and upgrading teaching equipment. Regarding the provision of a fund for books and magazines she wrote, "It would make possible the distribution of books of our choice to schools and public health agencies, would help bring in American points of view in nursing and would render goodwill towards the IHD." In 1946, this Fund was used to supply sets of related books to the central and provincial medical institutes.

However, by end of 1946 there were doubts as to whether continuation of the Fund was necessary, for until lines of nursing development became clearer in the Provinces and States, it was difficult to know where help should be given. It was hoped though, that if a later request to revive the Fund was made, it might receive favourable consideration.

**Backsliding**

Beginning 1946, political and constitutional developments leading to India's independence made the RF want to move cautiously and gradually with respect to their intervention in India's nursing programme. The feeling was that any advance planning and constructive programme for further IHD nursing activities in India would have to be deferred till times became more conducive to any positive development.

Over the next few years, the RF programme began to face difficulties. RF officials began to experience less hope for the future of nursing developments. Their efforts created awareness and enthusiasm among Indians but the expected change in attitude and perceptions did not take place. They complained of the lack of understanding of the philosophy and purpose of nursing education on any level; lack of attempts to define nursing; to revise and reform nursing education in India and to promote public health training in nursing. The Government's emphasis on quantitative needs and production of nurses appeared as naive enthusiasm and seemed to reflect superficial thinking. There was still too little realization of the importance of basic good nursing

to the advancement of medicine in India and hence, a demand for improvements in these fields did not sufficiently develop among officials or the public in general.

Plans were made for large new hospitals without previous plans for enlarging and bettering the training schools in order to be able to staff them. In most schools of nursing public health emphasis was conspicuously absent, as succouring the sick and the needy was the more obvious and traditional service to be rendered. The situation was more or less the same both at the central and provincial levels. Indeed in some states as in Madras, Mysore and Travancore the situation was actually backsliding.

RF plans for future activities appeared uncertain as a result of these problems. It was felt that specific recommendations as to the kind of help which might be requested could be made until the Government made its decisions about the future of the College. The fellowship programme faced a dearth of fellowship material.

By 1948, the College of Nursing began to encounter several problems. The B.Sc. course remained in an unsatisfactory state so much so that, RF officials began to wonder if it could and should be continued at all. The Government, although providing for an adequate budget, appeared unable or unwilling to provide the minimum conditions necessary for nursing education on a university level. The other problems were related to staffing - there were vacancies for want of suitable staff, existing staff was inadequately trained to teach, there was lack of classroom space, the teaching of science courses was unsatisfactory, and there were difficulties relating to hospital practice, midwifery and public health nursing practice.

In his semiannual report for 1948, Anderson wrote wondering whether the starting of the Nursing College in Delhi was too a hasty a decision. However, Anderson also strongly believed that there was extreme need for this training center and its failure at this time would undoubtedly retard further attempts at nursing education on a truly professional level. He therefore urged continued and increased support by the IHD.

The college, till 1949, had not offered a public health nursing course because of inadequate teaching staff and field work facilities, as any public health nursing training required house visits and health centre experience. Finally, in 1950, the Najafagarh Health Unit began to be used as a rural practice field though no urban demonstration centre was created.

**Conclusion**

The RF's interest in nursing education in India was related to both their concern for quantitative increase in female public health workers and in improving the standards of nursing in India. After a thorough effort to understand the deficiencies and shortcomings of the nursing profession, the RF officials stressed the need for minimum level of school education, the teaching of scientific methods, community health, undergraduate training and the creation of Indian leadership within the profession. The RF offered to provide fellowships, advisory services, developmental aid and personnel.

The RF attitude was quite in contrast with that of the Government officials who, while interested in a quantitative increase in nurses to meet the growing demand, were indifferent towards the quality of training and public health nursing. Amongst provincial governments, the attitude varied : while the Government of Bombay showed interest in public health nursing the same could not be said about the health department in Madras; the Government of Mysore showed considerable interest in public health nursing and the State took pride in the fact that it had a staff public health nurse in the public health department, but the Government did not feel the need for doing anything to correct the deplorable conditions of nursing and nursing education within the State.

Clearly, RF intervention did not bring about any perceptible change in the basic attitude of the people concerned. There were no efforts made to bring about even essential reform, leave aside any drastic changes, in nursing education and activity in India. This attitude of the governments appears to have hampered the RF's efforts the most. Thus, inspite of the assistance they extended , nursing and especially public health nursing, could hardly make any progress. The government was more interested in receiving tangible assistance and was less receptive to ideas about nursing or public health nursing. Government accepted assistance for infrastructural development which would contribute to quantitative production of nurses. Ideas and philosophy appear not to have permeated amongst the nursing sections as seen with the experience of the RF fellows who faced antagonism from their colleagues. RF Fellows themselves were dissatisfied with their work for their inability to put into practice the training they had acquired abroad.

All this is not to say that the RF failed to contribute and influence the course of nursing activity in India. But this influence was limited. The RF was able to stimulate sufficient interest in government and nursing circles to want to improve the standards of nursing in this country. The most significant aspect of the RF's intervention was, however, their stress on reducing India's dependence on non-Indian nurses and, even more important, on producing leaders from amongst Indian nurses in which they succeeded to an extent.

**References :**

Documents from the Rockefeller Archive Center, New York ❑

# स्वास्थ्य कर्मी

डॉ. एन.एच.आन्टिया

स्वास्थ्य के क्षेत्र में जन शक्ति की योजना और प्रशिक्षण, देश में होने वाली विभिन्न बीमारियों और उनके फैलाव को नजरअंदाज करने और लोगों की सामाजिक व आर्थिक जरूरतों पर समुचित ध्यान न देने की वजह से, लगभग पूरी तरह से असफल रहा है। ऐसा अनुमान है कि, आजकल देश में, अलग-अलग प्रकार के करीब ९ लाख डाक्टर हैं, हर ९१२ मरीजों पर १ डाक्टर । फिर भी ग्रामीण स्वास्थ्य देखरेख के लिए हमारे पास, केवल ३ लाख नर्सें और २.५ लाख पैरामेडिकल कार्यकर्ता ही हैं। हर साल देश में लगभग १६,००० डाक्टर; ११,००० नर्सें; १२,००० ए.एन.एम; १२,००० फार्मेसिस्ट और लगभग १०,००० पैरामेडिकल कार्यकर्ता और बढ़ जाते हैं। अतः डाक्टरों की संख्या नर्सों से अधिक है, जबकि आदर्श रूप से प्रत्येक एक डाक्टर पर चार नर्सें और प्रत्येक एक नर्स पर चार पैरामेडिकल कार्यकर्ता होने चाहिए। स्वास्थ्य के क्षेत्र में आई इस समस्या का कारण, समाज के प्रभावशाली तवके द्वारा अपने वच्चों को आकर्पक नौकरियाँ दिलाने के लिए वाहर से दवाव डालना और मेडिकल शिक्षा को एक और आकर्षक व लाभकारी व्यवसाय में वदल देना है। यह इस वात से भी जाहिर होता है, कि जवकि देश के १०६ सरकारी मेडिकल कालेजों से हर वर्ष १३,००० छात्र डाक्टर वनकर निकलते हैं, जो कि देश की असल स्वास्थ्य जरूरतों से कहीं अधिक है, फिर भी पैसा लेकर दाखिला देने वाले प्राइवेट मेडिकल कालेजों को खोलने के लिए राजनीतिक दवाव डाला जाता है। हमारे देश के लिये, पश्चिमी देशों में मान्यता प्राप्त, डाक्टर : रोगी के अनुपात की तुलना में, डाक्टर : नर्स : पैरामेडिकल कार्यकर्ता : सामुदायिक स्वास्थ्य कार्यकर्ता का अनुपात अधिक उपयुक्त है।

मेडिकल शिक्षा में प्रशिक्षण का स्वरूप और सिखाए गए मूल्य तो और भी चिंताजनक हैं। इस शिक्षा और प्रशिक्षण का, मानव कल्याण से वहुत नजदीकी संवंध होने के वावजूद, ये सामाजिक, सांस्कृतिक, आर्थिक, सदाचार और नैतिक पहलुओं से जुड़े हुए नहीं हैं। नई-नई पश्चिमी तकनीकियों के सीखने पर जोर देने की वजह से, ऐसे डाक्टर और ऐसी नर्सें तैयार हो रही हैं, जो सार्वजनिक प्राथमिक स्वास्थ्य केन्द्रों में काम करने की वजाय, विदेशों में और मुनाफा कमाने की ओर उन्मुख निजी क्षेत्र के लिए अधिक उपयुक्त हैं। प्राथमिक स्वास्थ्य केन्द्रों में उन्हें प्रवंधक डाक्टर के रूप में कार्य करना पड़ता है। साथ ही गाँवों और शहरी लोगों की मूल स्वास्थ्य जरूरतों को पूरा करने वाले पैरामैडिकल कार्यकर्ताओं को नेतृत्व भी प्रदान करना पड़ता है। परन्तु आज जिस तरह की डाक्टरी शिक्षा और प्रशिक्षण दिया जा रहा है, उसमें संक्रामक रोग विज्ञान, स्वास्थ्य के प्रतिवंधात्मक और प्रोत्साहक पहलुओं, जैसे महत्वपूर्ण चिकित्सीय विपयों तक की उपेक्षा की जाती है। सामाजिक एवं प्रतिवंधात्मक चिकित्सा को भी, वर्तमान प्रशिक्षण में कम प्राथमिकता दी जाती है, जो कि मुख्यतया उपचारीय तकनीकि से सम्वन्धित होता है।

अधिकतर प्रशिक्षण केन्द्र, शहरों और वड़े कस्वों में स्थित होते हैं। इन जगहों के विल्कुल अलग माहौल में स्वास्थ्य कार्यकर्ता अपने आप को ढाल नहीं पाते हैं, जिसकी वजह से, वे न तो माहौल से और न ही स्वास्थ्य कार्यक्रमों से जुड़ पाते हैं। यहाँ तक कि निजी क्षेत्र के ग्रामीण मेडिकल कालेज भी मुख्य रूप से, शहरों में रहने वाले उन अमीर लोगों की ही जरूरतें पूरी करते हैं, जिनके वच्चे, कहीं वेहतर और लगभग मुफ्त शिक्षा देने वाले सरकारी मेडिकल कालेजों में दाखिला नहीं पाते हैं। इन प्राइवेट मेडिकल कालेजों में १५ लाख से भी ज्यादा रूपये देकर दाखिला लेना, इस व्यवसाय का आकर्पक व लाभकारी रूप दर्शाता है। डाक्टरी शिक्षा पूरी कर लेने के वाद, इन पैसों की तेजी से वसूली की चाहत, भ्रष्टाचार को जन्म देती है। इस सवने डाक्टरों को मरीजों और अन्य लोगों से दूर कर दिया है, जैसा कि डाक्टरों के खिलाफ मरीजों द्वारा की जा रही कानूनी कार्यवाहियों और मुकदमों से जाहिर होता है। देशी प्रणाली के चिकित्सकों का भी, पश्चिमी शैली की ओर झुकाव हुआ है, जैसा कि उनके द्वारा ऐलोपैथी की दवाओं और इन्जेक्शनों के इस्तेमाल को वढ़ावा देने के रूझान से पता चलता है। देश में डेढ़ लाख औषधि विक्रेताओं के होने के वावजूद, अधिक से अधिक लोगों का औषधि विक्रेता वनना, वह भी जव अधिकतर दवाएँ डिव्वा-वंद उत्पादों के रूप में विकती हैं, इसी अव्यवस्था का एक लक्षण है।

प्राथमिक स्वास्थ्य केन्द्र, देश के ७५ प्रतिशत लोगों तक स्वास्थ्य सेवाएँ पहुँचाते हैं। डेढ़ साल का प्रशिक्षण प्राप्त एएनएम ही इन प्राथमिक स्वास्थ्य केन्द्रों की आधार-स्तम्भ हैं। ऐसा इसलिए है क्योंकि वे सामाजिक और सांस्कृतिक रूप से उसी समुदाय का एक हिस्सा होती हैं, जिस समुदाय में वे काम करती हैं। परन्तु इसके वावजूद औरत होने की वजह से, वे परिवार नियोजन कार्यक्रमों के लक्ष्यों को पूरा करने के दवाव और जल्दी-जल्दी किये जाने वाले तवादलों से सवसे अधिक परेशान रहती हैं।

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*डा. एन. एच. आन्टिया, निदेशक व ट्रस्टी, एफ़एम.आर. व एफ़.आर.सी.एच. ने प्लास्टिक सर्जरी, कुष्टरोग व सामुदायिक स्वास्थ्य के क्षेत्र में सराहनीय कार्य किये है। प्रमुख समितियाँ जिन से सम्वद्ध होकर उन्होने कार्य किये, उनमें भारत सरकार की योजना आयोग स्वास्थ्य समिति भी शामिल है।*

अत्यधिक राजनीतिक दखल के कारण पुरूष बहुद्देशीय कार्यकर्ता, काफी हद तक असफल रहते हैं, और समुदाय के प्रति उनका उत्तरदायित्व भी ना के बराबर ही रहता है, क्योंकि प्रमुख स्वास्थ्य समस्याएँ अधिकतर महिलाओं और बच्चों से सम्बन्धित ही होती हैं।

चीन के 'बेअरफुट डाक्टरों' और अपने देश के ही कुछ गैर-सरकारी संगठनों के अनुभवों पर आधारित सामुदायिक स्वास्थ्य कार्यकर्ताओं की योजना की शुरूआत, भारत में, सन् १९७८ में हुई। ये सामुदायिक स्वास्थ्य कार्यकर्ता, स्वास्थ्य शिक्षा, स्वास्थ्य की समझ और सामुदायिक भागीदारी को उपलब्ध कराने के लिए स्थानीय संपर्क सूत्रों के रूप में काम करते हैं। इस कार्यक्रम की सफलता की संभावनाओं को, भारत में कई गैर-सरकारी संस्थाओं द्वारा चलाई जा रही परियोजनाओं ने प्रदर्शित किया है। दुर्भाग्यवश, कई अच्छी योजनाओं की तरह, इसे भी एक निरर्थक सरकारी अभ्यास के रूप में बदल दिया गया। यद्यपि इन स्वास्थ्य कार्यकर्ताओं द्वारा किया जाने वाला काम, मुख्य रूप से महिलाओं और बच्चों की समस्याओं से सम्बंधित है, फिर भी सामुदायिक स्वास्थ्य कार्यकर्ता के रूप में अधिकतर पुरूषों की ही नियुक्ति की गई है, जो कि ५० रूपयों के मानदेय को मात्र जेब खर्च ही समझते हैं। कुछ प्रेरित महिला सामुदायिक स्वास्थ्य कार्यकर्ता, सहायता मिलने पर प्रभावशाली सावित हुई हैं; परन्तु लगातार सहयोग, प्रशिक्षण और दवाओं के उपलब्ध न हो पाने की वजह से, उनके हौसले भी पस्त हो जाते हैं। अंत में यही कहना होगा कि एक अच्छी कार्य प्रणाली को एक बार फिर से सही दिशा में चलने नहीं दिया गया और एक सामुदायिक धरोहर को नौकरशाही तंत्र ने अपने ढाँचे में हड़प लिया।

*(हिन्दी अनुवाद : मीता श्रीवास्तव)* □


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NEWSLETTER

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### Needed : A Give and Take

# Local Health Perceptions and Practices

**Seema Deodhar**

In the course of our training project at Parinche, our *tais* (local women trainees) had the opportunity to interact with other local people and gain an insight into their understanding of various diseases, the indigenous remedies for these diseases, their preferred health care providers etc.

Altogether 17 tais collected information from five different villagers each, which was then pooled together.* Our main intent in gathering this knowledge was to find out the anomalies in the health care behaviour of the people and accordingly decide where intervention was necessary to "correct" this behaviour and also, to inculcate a rational attitude in them. However, in the course of the study, we ourselves learned and gained a lot of useful information which is otherwise denied to us by the modern urban knowledge inputs.

We also gained a wider perspective of health behaviour. People have their own rationale for their particular actions; once we get to know their mental framework it becomes easier to understand their behaviour during illness which otherwise seems totally irrational and out of context. After all, there are many diseases for which allopathy has no cure and at times even gives disastrous results, yet, our belief in allopathy remains unshaken. How different then, is the attitude of the villagers, who continue to expect their faith to work miracles for them inspite of evidence to the contrary.

Seema Deodhar has done B.Sc Nursing and conducts health training sessions as part of the Parinche Project of FRCH

We also learned that many of our expectations from the people regarding daily hygiene and health consciousness are sometimes totally unrealistic and useless in the village context. If a person has to travel something like 10 miles to fetch even a pail of drinking water, it is ridiculous to talk about maintaining personal hygiene through daily baths. Similarly, it is illogical to expect someone to buy expensive medicines when she/he cannot even afford the simplest of meals.

Many of the traditional customs are health promotive even when seen in the modern context, some of which the urban society could very well emulate :

* Breast-feeding the child for a considerable span.
* Eating different varieties of food on festivals which ensures that they get different kinds of vitamins, minerals etc.
* Using home remedies for simple illnesses which would mean avoiding running to the doctor for every little problem.

On the other hand, some local customs definitely need to be changed through greater awareness :

* Not cleaning the hands after going to the toilet
* Giving the pregnant lady less food so as to control the size of the placenta.
* Using tobacco powder for cleaning teeth etc.

It is not as if there has been no change whatsoever. Over the years, modernisation and greater awareness have made some improvement. An old lady was found to be

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complaining of an increased work load on the women due to the spread of the habit of daily bathing and washing of clothes among the people. This improvement was possible because of an increase in the per capita income which has made soap more affordable, an improvement in the water supply system which has made water available more regularly and right at the doorstep of the people, and also, an increase in literacy as well as general awareness due to the penetration of media which stresses the importance of personal hygiene for maintaining good health.

Every change has not necessarily been for the better, though. About 50 years ago, carrots which are rich in vitamins, formed an important part of the regular diet of the people. Today, agricultural development has led to the availability of a variety of foodgrains and vegetables and the carrot has been branded as the food of the poor. Consequently, less and less people now eat carrots which are mainly used as animal feed.

Also, the availability of polished grain as well as the tendency to use extra fine flour has reduced the intake of chaff which is very nutritious.

Besides observing health behaviour we also gained an insight into the health perceptions of the people which revealed their concept of health to be very simple yet surprisingly comprehensive. Health, according to them, is not merely defined in negative terms as the absence of illness or disease, but rather, is related to all aspects of life including the physical, emotional, mental, spiritual, social as well as economical aspects.

Factors denoting good health as delineated by the people are :

1. Happiness
2. Pleasant mood
3. Wealth
4. Married status
5. Children (especially a son)
6. Respect in the village
7. Well knit, happy family
8. Physical fitness - no illnesses, diseases or deformities

**Classification of Various Health Problems**

Health problems are basically divided into two categories - illness and disease. An illness is defined as a minor health problem lasting for about 8 - 10 days which can be cured with home remedies or doctors' medicines. This includes ordinary fever, headache, diarrhoea etc. A disease is classified as a major health problem which either persists for more than a fortnight, is chronic or incurable, or leads to permanent disability or death. TB, leprosy, asthama, infertility and the like, fall into this category.

As very rightly pointed out by the villagers, over the years, due to advancement in medicine and better access to health care, some diseases have turned into illnesses. Cholera is now curable with timely medical assistance, hence, it has become more of an illness than a disease. The same holds true for pneumonia.

Health problems are further classified according to their source:

1. "Heavenly" wrath/ "Displeasure" of Gods
2. Astrological reasons/ "Unfavourable" stars
3. "Ancestral" wrath
4. "Possession" by "ghosts"
5. "Casting" of the "evil eye"
6. Physical reasons

The illnesses/diseases caused by the above causes and their typical symptoms:

1. Heavenly wrath - If the Gods are not propitiated as promised, the person for whom the Gods were propitiated is made to suffer to remind her/him of the promise - the person is either bitten by a snake, becomes accident prone, cannot beget a child (especially a son), gets some disease or the other, suffers from rash or bumps on the skin or may even die.

2. Unfavourable stars - When the stars are unfavourable, one's efforts do not yield any success, their is loss of income, the peace at home is lost due to constant bickering, things continuously get lost or stolen from the home etc.

3. Ancestral wrath - If the ancestors are not duly appeased, their spirits enter the successors or trouble them in some way or the other. While children who are affected cry constantly and do not open their eyes, adults suffer from cramps and shooting pain in the legs.

4. Possession by ghosts - If a child gets possessed it becomes heavy lidded, it gets fever and cries continuously. Adults who are possessed stare vacantly, become extremely lethargic, talk to themselves, generally behave strangely and sometimes get fever.

5. Casting of the evil eye - This results in strange and/or unfavourable happenings in the house. If one is the victim of the evil eye one feels like vomiting, gets stomachache and suffers from diarrhoea.

6. Physical illness - Something goes wrong with the working of the body or their is a physical deformity present right from birth.

People have various cures for different health problems:

1. When possessed by a ghost, they worship lord *Dutta.*

2. When troubled by the evil eye or ancestral wrath they visit the religious mendicants or oracles and follow certain rites prescribed by them to remove the ill effects.

3. When one is facing the Gods' wrath due to failure to propitiate them, the oracle gives the necessary advise regarding which God to worship; the particular rites to be performed like sacrificing a goat, offering food and clothes to the Goddess, inviting people to sing *bhajans* etc.; all of which cost an estimated Rs. 5000 to 6000.

4. When the stars are unfavourable, the people approach the brahmin who tells them exactly which star is unfavourable and what has to be done to counteract its influence.

5. In case of physical illness or infirmity, the people practice home remedies like eating nutmeg paste to cure diarrhoea etc.

If these remedies do not work, they visit the local healer and in rare cases, approach the doctor.

The local healers use various indigenous medicines including ***a) Herbal medicine :***

1. Jaundice - Wearing a necklace made of the *Gul* (Tinospora Cardiofola) creeper.
3. Headache - Tea with ginger
4. If pierced with a thorn - *Rui* (Calotropis Procera) milk.
5. Continuous bleeding from a wound - *Aina* (Terminalia Tomentosa) powder
6. To heal a wound - *Dagadi Pala* (Licopodium)
7. Excessive menstrual bleeding - Powder made from descending shoots of banyan tree (Ficus Bengalensis)
8. Excessive white discharge - Rice water bath
9. Passing of blood/mucus with stools - *Erand* (Jatropa Curtus) milk with tea

***b) Medicines prepared from animals/animal parts :***

1. On being bit by a scorpion or rupture of the eardrum - Apply oil in which a scorpion has been boiled.
2. Pneumonia - Drink rabbit blood
3. Non-lactation - Drink earthworm curry
4. Arthritis - Massage the stiff joints with bat blood
5. Asthama - Eat Pigeon blood and meat
6. Leprosy - Eat snakes (a person who has eaten snakes is believed to be immune to their bites)
7. If the animals start shedding their tails - Apply paste made of snake skin.
8. If an ox gets a wound on its shoulders - apply lizard oil etc.

Their are special local healers for particular diseases:

* Some healers do the work of modern day orthopedists and physiotherapists
* There are local massagers who give relief from stomachache as a result of tightening of abdominal muscles.
* Their are special healers to cure rickets by rubbing certain medicinal herbs on the suffering child.
* Some local women are specialists in conducting deliveries and offer cure for some typical women's health problems. They also treat cases of pneumonia, which the people believe to be a stomach problem, and of children suffering from stomach spasms.
* There are healers who chant mantras to cure headaches, stiff muscle joints, pneumonia, scorpion bites etc.

How do these local healers acquire their knowledge or professional status ?

1. Brahmin is a caste. Hence, a person born into a brahmin family automatically acquires that status. The knowledge is generally gathered from within the family itself.
2. Those healers who chant mantras for cure, invest the mantra with the power to heal by concentrating on and continuously chanting some words during an eclipse. These words then automatically turn into effective mantras.
3. Local healers who prescribe medicinal herbs as well as local massagers generally acquire their knowledge from within the family itself and sometimes from outside experts.
4. Women who have gained wisdom due to age and/or experience are approached for deliveries and for solving women's health problems. Similarly, women who are possessed by a God or Goddess, are considered to have acquired healing powers and are approached for various health problems.

All local healers except brahmins, accept payment in kind. In most of the cases, the payment to be made for a particular cure is preordained as per custom. Brahmins are usually paid Rs. 20 - 25 for consultation and offered food.

Generally, the healers avoid charging exhorbitantly as they believe that it will invite the displeasure of the Gods and reduce their healing powers. Whenever they are faced with any health problem, the people first try out home remedies. If they still do not feel better they go to some oracle or religious mendicant who diagnoses the problem and suggests the remedy for it. For eg., if the source of the problem is diagnosed as heavenly or ancestral wrath then they are directed to visit a brahmin, if it is some physical problem then they are asked to go to the doctor and so on. Thus, there is a kind of indigenous referral system working at the local level. What is needed is to add modern inputs to this local health system and remove the harmful practices through education. On the other hand, there is a need for documenting and dissemination information about indigenous medicine that is effective, inexpensive, easily accessible and with almost no side-effects. ❑

** This information has been assimilated and presented to the best of our knowledge. any misinterpretation or omission of data is regretted.*

*With Inputs from* ***Baby Khandkar and Bharati Sonavane***
*English Translation :* ***Vaijayanti Aphale***

# Effectiveness of Public Health Functionaries at the Grassroots level

*This article is based on a study of grassroots level public health functionaries conducted by* ***Dr. S.N. Morankar*** *at Supa, Pune district in 1991*

In the primary health care services provided by the Government, the community health volunteer (CHV) and the *dai* (traditional birth attendant), are the backbone of the PHC. The CHV is a member of the community who is delegated to undertake certain tasks, covering a population of 1000, requiring special skills, time and attention. The *dais* are trained in simple and practical aseptic techniques and provided with simple kits to conduct deliveries. Despite the existance of a large number of nurses and auxiliary nurse midwives (ANMs), more than three-fourths of the deliveries in the rural sector continue to be undertaken by the traditional birth attendants. This is natural, as one ANM is expected to attend to a population of 5000, which is physically impossible. The *dai*, who is available within the locality itself, is comparatively easily accessible. Hence, her role in maternal and child health care cannot be ignored.

In addition to these two PHC functionaries, an anganwadi worker and helper delivers the package of services provided for children and mothers under the Integrated Child Development Services (ICDS) programme. The ICDS programme covers supplementary nutrition, health check-up, primary health care/referral services, immunisation, nutrition, health education and non-formal pre-school education. Approximately one Anganwadi worker for a 1000 population is sanctioned in the rural areas. Thus, there are four important primary health care functionaries at the PHC level - the CHV and *dai* belonging to the primary health care services and the anganwadi worker and helper of the ICDS programme.

We had conducted a study at Supa village in Baramati taluka of Pune district in 1991 to understand the functioning of these grassroots level health workers. We held a few meetings with these workers at the sub-centre level in the presence of an ANM. The functioning pattern, difficulties (social as well as technical) faced while delivering health care and suggestions for effective work, were the main topics discussed in the meetings. Observations and informal discussion methods were also employed to collect information pertaining to the functioning of the system. A few community leaders* were also interviewed informally regarding their role and community participation in primary health care.

**Recruitment**

***CHVs :***

The selection of the CHV is a complex process involving the community, local leaders and the medical officer and is of great significance. There is a general understanding that the CHVs need to be local workers, broadly representative of the community they are to serve as well as acceptable to all the major sub-groups in the community. Also, the CHV has to be preferably middle-aged, literate, willing to render service without caste biase and without any encumberance so as to spare enough time for health work.

The health committee of the Gram Panchayat of Supa had chosen the CHVs according to a few criteria like middle age, literacy and time to spare. Though the selection criteria was apparently adhered to, during the actual selection process many caste/class biases tended to creep in. The health/village Panchayat committees selected the majority of the CHVs belonging to the dominant caste since most of the community workers themselves belonged to that caste and the CHVs had personal connections with the community members. In fact, that the dominant caste/class in the community tended to look upon the job as a means of providing employment to one of its caste members.

Some of the CHVs themselves belonged to the village committee. Thus, the impact of the selection process, which is expected to ensure community participation in CHV selection, is lost and community participation is reduced to decision making by a few dominant people with the minority groups almost completely excluded. Naturally, the villagers too had lost faith in the CHV personnel to fulfill their health needs.

***Anganwadi Workers :***

The anganwadi worker is a women selected from within the local community. The selection committee consists of the Panchayat Samiti president and two other members, the child development officer and the block/taluka development officer. The selection committee asks the village committee to forward the most suitable applications from the total applications received by the woman candidates. The main

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Dr. S.N. Morankar has done his PhD in Anthropology and is a researcher on the TB project carried out by FRCH

selection criteria for the anganwadi workers are : the female should have finished her matriculation, should be a local inhabitant and have some experience as a teacher even if it be for a *balwadi*. Preference is given to someone who is a widow, deserted, separated or disabled.

Though the actual selection criteria were adhered to, the applications forwarded by the village committee were invariably those of women belonging to the dominant caste and having connections to village leaders, despite many other eligible candidates available in the village.

The implications of this are :

1. Many CHVs remain non-functional.
2. PHC functionaries are unable to take action against such non-functioning CHVs due to the latters' connections with the village leaders. It has also been seen that a few CHVs have not attended training and many of them also do not attend monthly meetings but they continue to receive their honorarium as usual. If the medical officer tries to withold payment, he is threatened by the respective committee members.
3. Health/village committees refuse to take any action against the non-functional CHVs.
4. Though, technically, the CHVs have to report to the PHC functionaries, this rule is not adhered to many times, and the latter do not insist for fear of displeasing the community in which they have to function.

**Community Participation**

The CHVs, being a part of the community, are expected to involve the people in the promotive, preventive and curative activities of the PHC. Unfortunately, no real impact has been seen at the community level - at the most, the individuals have been roped in only as passive beneficiaries. Their is no attempt to take the community towards self-reliance and no instances of the community voluntarily contributing in cash or kind towards promoting community health.

**Village Health Committee**

It was expected that the village health committee would take part in promotive and preventive health aspects in collaboration with CHV and PHC functionaries. Unfortunately, even a relatively active member of both the village committee as well as the village health committee, educated upto second year of graduation, has this to say, "I do not really know what are the functions of the health committee and how to collaborate with CHV and PHC functionaries." If this is the state of an active and educated committee member, one can imagine what must be the awareness level of the other members.

**Patterns of Employment**

It was observed that there were a few health workers who functioned only in one category of health workers, while in other cases, the same persons simultaneously played the role of two or more categories of health workers.

**Functioning**

From the detailed job responsibilities of CHV and Anganwadi workers which have been described in table 1. it will be seen that many vital functions are overlapping such as maternal and child health, immunization, health check-up, nutrition, health education, referral services etc.

It has been found that these overlapping functions are being carried out more effectively by the health workers who are CHVs as well as Anganwadi workers as opposed to those who function as either a CHV or an anganwadi worker alone.

The reasons the workers who play a dual role (CHV + anganwadi worker or CHV + anganwadi helper) are more effective are :

1. Vital functions assigned to both categories of workers are overlapping so the total work gets reduced when pooled together. Also, more services get provided under one roof which makes the health care provision more efficient.
2. The social status of the worker is enhanced as a medical kit is provided to anganwadi workers.
3. The anganwadi worker has to regularly report to the anganwadi supervisor (Mukhya Sevika), which introduces some discipline in the work carried out.
4. The total honorarium increases to either Rs. 275 (Rs. 225 for anganwadi worker + Rs. 50 for CHV worker) or Rs. 160 (Rs. 50 for CHV worker + Rs. 110 for Anganwadi helper).

Similarly, workers who play the role of *dai* as well as CHV worker are more effective. Since the *dais* conduct deliveries they get more respect in the village and hence a better response for their CHV work like immunisation of the children, nutrition, health education and post-partum care.

In contrast, when the roles are separated various problems arise :

1. Their is a tendency to push the responsibility of overlapping functions on each other. This happens particularly during immunisation wherein both categories of workers are supposed to inform people and induce them to get immunised. They are supposed to provide a rough estimate to the ANM, who has to actually administer the vaccine, of the number of people likely to come for immunisation on a particular

**Table 1. Comparison between Job Responsibilities of CHV and Anganwadi Workers**

| No. | CHV | Anganwadi |
|---|---|---|
| | *Overlapping functions :* | |
| 1. | Maternal and child health | Maternal and child health |
| 2. | Immunisation, health check-up, referral services | Immunisation, health check-up, referral services |
| 3. | Nutrition and health education | Nutrition and health education |
| 4. | Identify children needing nutrition | Identify children needing nutrition |
| 5. | Birth and death records | Birth and death records |
| | *Non-related functions :* | |
| 6. | Family planning | Make a survey of children below 6 years of age and pregnant and nursing mothers within the community every month and note down their weight to identify those at risk. |
| 7. | Environment hygiene and sanitation: i) Disinfection of drinking water ii) Insectiside spraying iii) Cleaning of surroundings iv) Soak pits v) Latrines vi) Kitchen garden vii) Smokeless chulha viii) Larvicide of stagnant pools etc. | Organise non-formal pre-school education in the anganwadi for children in the age group of 3-6 years |
| 8. | Arrange for regular supplies of medicines, chemicals etc. | Organise supplementary nutrition for children (6 months to 6 years of age) and expecting as well as lactating mothers |
| 9. | Indentify and report cases of malaria, tuberculosis, leprosy and epidemic diseases to health workers and PHC | Make home-visits to educate the parents, especially of those falling in the risk group, so that they are enabled to take proper care and minimise the health risks of their children. |
| 10. | Involve community in its own health care | Elicit community support and participation for government run health programmes |
| 11. | Advise on common ailments | Maintain liason with other institutions and individuals in the village e.g. Panchayat, Mahila Mandals, School Teachers, *Dais* etc. and seek their support and participation in running the programme. |
| 12. | No formal reporting to the PHC | Maintain the prescribed registers and records. Report any developments in the village which require further attention to the Child Development Project Officer or Supervisor. |

day. The workers tend to shift the responsibility on each other which results in faulty reporting to the ANM. This creates lots of problems as the vaccine is contained in an ampule which has to be administered to about 12 people at a time. If the number of people turning up at the PHC is lesser than that, then the vaccine goes waste as an ampule once opened cannot be reused. On the other hand, at times, the number of people turning up is so much that they have to be sent back without being vaccinated.

2. Another major problem is the disparities in payment, what with the anganwadi worker getting paid Rs. 225 while the CHV worker a measly Rs. 50 for almost the same amount of work.

3. Medical kits are provided to anganwadi workers but not to CHVs which increases the status of the former among the people at the cost of the latter. This trend seems to be increasing over the years.

## Conclusion

The varied experiences documented by us offer an insight into the functioning of the primary health care workers at the village level. The main observation is the dichotomy between concept and reality. In concept, the PHC is supposed to be community oriented but in actual practice it inevitably becomes programme oriented. In concept, the PHC is an outcome of the felt needs of the people but in reality, the PHC planners hardly take these into account. In concept, the PHC is expected to be self-sufficient and supportive of the community but this is hardly the case. Lastly, the PHC is expected to encompass a multi-sectoral approach, which in reality is seldom realised.

The role of the CHV in PHC programme would have been easy to define if the PHC was genuinely community-oriented and an outcome of the felt needs of the people. Unfortunately, as the PHC has become mainly programme oriented, the CHV is largely placed in a situation where role expectations and performances do not match.

In reality, the PHC was introduced to reduce the widening gaps between those who have access and those who do not have access to resources such as income, food,

employment and education. It postulates a redistribution of resources and a strong sense of self-reliance among the people. But seldom has this been understood by the implementing authorities of the health programme. Therefore, the role of the CHV has been reduced to mainly serving as a link between the main programme and the people - to motivate and refer the people who need medical care.

The approach of CHVs is largely individualistic or family oriented, little impact has been felt at the community level. Therefore, since no responsibilities of the health committee are defined and no definite control mechanism has been defined, the CHVs could not meet the expected challenges.

This shows that there is an urgent need for a reformation of the existing cadres and system for which the following need to be clearly spelt out :

1) The role and job responsibilities of the cadres

2) Remunerations and personal profile of the cadre

3) Selection procedure to neutralise the bias of the dominant caste.

4) Functions and responsibilities of the village health committee

5) Record keeping and reporting to an appropriate supervisor.

6) Taking action against non-functional workiers and health committee members.

7) Coordination at higher levels such as PHC/block, District, State and Union with the PHC functions

8) Improvisation in the training content and period of training of health workers.

9) Increase the health awareness of health committees.

10) Most important, the people themselves need to be educated on the various aspects of health care including its socio-political, cultural, economic ramifications and also informed about the public health services available to them so that they learn to demand these services as a right.

* The Gram Panchayat consists of various committees at the village level such as health committee, environment and sanitation committee, water supply committee etc. The Gram Panchayat members form these committees which consist of a chairman, secretary and other members, through mutual discussions. Each member can serve on more than one committee, simultaneously. These committees are supposed to look after the overall management of the services falling within their perview. ❑

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*(पृष्ठ 8 से आगे)*

अधिक मानवीय, प्रभावी और कम लागत वाले तरीकों की ओर मुड़ रहे हैं। हमारी आयुर्वेद और योग की पद्धतियाँ सदियों से यही बात सिखलाती हैं। स्वतंत्रता के लगभग आधे दशक के बाद भी हमारे लोगों पर पश्चिमी चिकित्सा की इतनी मजबूत पकड़, न केवल तीव्र संक्रामक बीमारियों के इलाज और शल्य चिकित्सा के क्षेत्र में इस चिकित्सा पद्धति की योग्यता के कारण है, बल्कि इसलिए भी है, क्योंकि यह पद्धति अंग्रेजी सांस्कृतिक प्रभुत्व का एक अनिवार्य अंग है, जिसको बढ़ावा देने का उत्तरदायित्व हमारे नेताओं और विशिष्ट वर्गों के लोगों ने संभाला हुआ है। इसका नतीजा यह भी हुआ है, कि न सिर्फ हमारी स्वास्थ्य संस्कृति बल्कि हमारी देशी स्वास्थ्य शैली भी अवमानित व उपेक्षित हुई है। यह रवैया, चिकित्सा व्यवसाय के साथ-साथ, अब हमारे मध्यम वर्ग के लोगों में भी धीरे-धीरे आता जा रहा है। इसके साथ पश्चिमी देशों के प्रभावशाली प्रचार माध्यमों के कारण दवाएँ बहुत मँहगी हो गई हैं। यही नहीं, नई बाज़ारी अर्थव्यवस्था पर चलने के कारण,जड़ी-बूटी युक्त आयुर्वेद की दवाओं को भी अन्तर्राष्ट्रीय पेटेन्ट के अन्तर्गत लाया जा रहा है और वे अब उँचे दामों पर बेची जा रही हैं। देशी चिकित्सा पद्धति व होमयोपैथी की उपेक्षा, इस बात से भी जाहिर होती है, कि इन पद्धतियों को सार्वजनिक क्षेत्र द्वारा स्वास्थ्य पर किये गए कुल खर्च का केवल ४ प्रतिशत ही प्राप्त होता है, जबकि पाश्चात्य पद्धति पर ९६ प्रतिशत खर्च किया जाता है। ❑


**FREE ABSTRACTING**

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# चिकित्सा की भारतीय प्रणालियाँ और होमयोपैथी

डॉ. एन.एच.आन्टिया

भारत में स्वास्थ्य और चिकित्सा की एक बहुत पुरानी और बहुमूल्य विरासत है जिसका आयुर्वेद, सिद्ध व योग के रूप में पद्धतिकरण और कार्यान्वयन हुआ है। हमारे पास, स्थानीय रूप से मिलने वाली जड़ी-बूटियों से इलाज और अन्य लोक-उपचारों की जानकारी का ख़ज़ाना है। भारतीय चिकित्सा की प्राचीन पद्धतियों में यूनानी और हाल में होमयोपैथी भी जुड़ गई हैं। इन सभी पद्धतियों में हमारे लोगों के स्वास्थ्य, चिकित्सा की परम्पराओं और स्वास्थ्य संस्कृति की झलक मिलती है। हमारी स्वास्थ्य संस्कृति में, महत्व स्वास्थ्य का रहा है, जबकि बीमारी, जो कि स्वास्थ्य का बिगड़ना है, को एक ऐसे रूप में देखा जाता है जिसे मामूली से सुधार मात्र की ही ज़रूरत होती है। इन पद्धतियों का समग्र दृष्टिकोण, हमारी संस्कृति का एक अहम् हिस्सा है, जो मनुष्य को पूर्ण रूप से प्रकृति का ही एक अंग मानता है। अतः स्वास्थ्य हमारे दर्शन का भी एक हिस्सा है और जीवन जीने का एक ढंग भी, इसीलिए स्वास्थ्य हमारी कई धार्मिक और सामाजिक नीतियों से भी जुड़ा है। बीमारी के इलाज करने को जितना चिकित्सक क्रिया माना जाता है उतना ही सामाजिक क्रिया। इसी वजह से इसे व्यापार का रूप नहीं दिया गया है और इलाज करने वाले को, शिक्षक के बराबर का सम्मान दिया जाता है।

दुर्भाग्यवश, चिकित्सा की पाश्चात्य शैली इसके बिल्कुल विपरीत है। इस शैली की क्षमता, इलाज के लिए विच्छेदन (चीर-फाड़) के जटिल तरीकों में और प्राकृतिक रूप से होने वाली घटनाओं को किसी बीमारी का नाम देने में है। साथ ही इस शैली का अन्तिम लक्ष्य, प्रकृति और रोगों पर विजय पाना है। दुर्भाग्यपूर्ण बात यह है, कि विदेशी चीजों पर आँख बंद करके विश्वास करने के कारण, हमने इस पाश्चात्य शैली के अवगुणों को अनदेखा कर दिया ह। हालाकि इस शली न सक्रामक बीमारिया की राकथाम आर शल्य चिकित्सा (सजरी) क साधन दिय ह, जिनम हमारी दशी शलिया अपयाप्त ह।

यह भी दुर्भाग्यपूर्ण बात है कि ऐलोपैथी शैली के लाभप्रद पहलू, अभी भी हमारे लोगों तक नहीं पहुँचे हैं, और साथ ही साथ, गैर-संक्रामक रोगों जैसे, कैंसर, हृदय रोग, गठिया, इत्यादि के उपचार में हमारी देशी पद्धतियों के बेहतर पक्षों का भी अभी तक उपयोग नहीं हुआ है। पश्चिमी देश भी इन बीमारियों के इलाज और शोध पर, करोड़ों रुपये खर्च करने के बाद, अब जीवन शैली में सुधार से इन बीमारियों की रोकथाम के लिए

*(शेष भाग पृष्ठ 7 पर)*

*डा. एन. एच. आन्टिया, निदेशक व ट्रस्टी, एफएम.आर. व एफ.आर.सी.एच. ने प्लास्टिक सर्जरी, कुष्टरोग व सामुदायिक स्वास्थ्य के क्षेत्र में सराहनीय कार्य किये है। प्रमुख समितियाँ जिन से सम्बद्ध होकर उन्होने कार्य किये, उनमें भारत सरकार की योजना आयोग स्वास्थ्य समिति भी शामिल है।*

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# NEWSLETTER

Vol. XI, No.5 Sept. - Oct. 1997

### A New Approach to Pharmacological Evaluation of Medicinal Plants

# Re-searching Indigenous Medicine

**Dr. K. C. Sharma**

What is the truth behind the mysterious legends claiming the existence of panaceas for all diseases ? What is the source for all the titbit formulae or informal remedies which reach me frequently from patients, attendants or relations when I go visiting a patient ? At the base of it all lies the age-old wisdom of India promising a cure for many of the diseases which modern medicine, even in the 20th century, has failed to deliver.

The sciencea of medicine originated with man, and developed as civilisation advanced. As such, it is not a discovery, but an evolution, born out of man's struggle throughout the centuries.

As life and disease coexist, so must remedy have always followed any disease. After all, it is ridiculous to expect a person from Calcutta to have visited Kashmir for treatment of a snake bite ! This is especially true of geographically isolated areas such as Tibet and China. Each civilisation developed its own method of treatment by investigating locally available plants and other sources, leading to the simultaneous existence of a variety of plant medicines and their combinations to treat a particular disease.

It is obvious that man must use the most easily available material as remedy. As plants fitted the bill, medicinal properties of plants were discovered first. Indians have shown amazing depth and accuracy not only in acquiring this knowledge but also successfully transmitting this knowledge through verbal discourses even to the smallest household in the country. This has only been possible by acute power of observation, thinking, analysis and extensive trials by our persevering ancestors.

Today, there still exists a vast treasure of information regarding various medicinal plants and their preparations, metals and their compounds and many animal products, though, in the course of time, much knowledge has been lost. Those who possessed such knowledge have also played a part in its disappearance by keeping the knowledge exclusively to themselves or within the family, regardless of whether their successors were genuinely interested and capable.

The advent of allopathic antibiotics coupled with advanced surgical techniques has relegated plant medicine to the background. The current fast pace of life with a premium on quick results, regardless of ill-effects in the long run, has compounded the problem.

Being trained in Western therapy and after practicing it for about 30 years I have realised that it is still a far cry from being a satisfactory means of curing. Most available drugs have unwanted side effects, a short expiry date, are not very palatable and of course, terribly costly, taking them beyond the reach of the common man. I am convinced that notwithstanding the mad race for synthetic drugs, which often cure but occasionally kill,

Dr. Sharma, MBBS, MS, is a specialist surgeon at the District hospital, Udhampur, J&K.

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ultimately, natural products (particularly plants) alone will come to the rescue of man.

A large proportion of the world population continues to use herbal remedies such as folk medicine. Yet, estimates say that out of 2,50,000 to 50,00,000 species of higher plants available on earth, only about 5 to 10% have been investigated pharmacologically and that too, usually, only for one potential specific remedy. There are many reasons to account for such inaptitude on our part :

1. No inclination to explore this field of medicine;
2. Existing research being limited to short tours and enquiries which are of no use;
3. Mere reproductions of existing Ayurvedic works paraded as original research;
4. Inadequate medicinal stock inspite of many facilities provided over the last 30 years.
5. Modern scientists too cannot absolve themselves of some blame. Used to their city comforts, they are not inclined to squat on grass or stones, sleep on leaves and eat maize with whey or boiled leaves; in short, go close to nature, which is generally essential for any serious research on the subject. Not to speak of their apathy for the simple, at times unkempt locals, even if they be a storehouse of information!

Here, I wish to emphasise that "Research is a dignified profession to be pursued only by the consecrated and the inspired, in quietitude, at a leisurely pace and away from prying eyes. It cannot be placed on a business footing where one new fact is to be returned for each quantum of rupees invested." Original research can only be the product of a constantly active creative mind. And creativity is at its best when it is not burdened by external pressures and constant prodding. Great discoveries evolve; they are not delivered on call. Hence, for any meaningful research to take place, the present approach has to be redefined, recast and reoriented.

It is imperative to change the present working pattern by improved collection, management, development and application of existing knowledge to achieve quick and better results. Government must encourage and finance those already working in this field, even if they have a small informal setup. This could prove more cost-effective than supporting big formalised laboratories.

For best results, the following research methodology should be adopted :

* Studying and collecting data on plants, the use of various parts of a plant, the best time for collection, method of administration, the right dose, proper identification of the disease to be treated and side-effects if any. Observing the practitioners and interacting with the patients will be of great help in the verification of the results claimed. This will narrow the time gap between finding a useful plant and its trial on human beings.

* Mapping the existence of the various plants in the natural environment (marking only bulk availability).

* Cancelling out all false unprovable prescriptions, avoiding and possibly exposing publicity mongers, jugglers and self-styled healers.

* Maintaining a detailed collection of plants and their various parts, based on the above information,. As far as possible, the persons actually involved in collection should be well versed in the field and not mere hired staff who have no knowledge of the subject. Of course, in places which are normally inaccessible due to difficult terrain the help of locals and army personnel would be necessary for collection of plants the year round.

* Honest and tireless efforts at the laboratory for extracting the medicine from the plants for various diseases. The isolation of the active principal should be done in a technically sound manner.

* Experiments on animals.

* Finally, trials on human beings with the cooperation of clinicians and the patients themselves.

The stages before the lab work are the most important and difficult. They require immense hard work and patience and building up of a good rapport with the locals to make the most of the knowledge they posses. The language and expression of the locals will have to be followed keenly to avoid misinterpretation. Care should be taken to avoid confusing hearsay with facts, especially by those on a time-bound tour to a particular area.

The best policy would be to assign the task to enthusiastic and knowledgeable locals, giving them all the financial, technical and moral support required. Senior scientists could pay regular visits to them for checking and counter checking their work. Only those plants which have passed this test should be taken for laboratory examination. One should be prepared to put up with some apposition from the city dwellers who might resist the idea of allocating the research work to locals, as it could decrease their monopoly over the same.

A close relationship of unity and cooperation should be established between the peripheral support worker, lab

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Problems Assailing Ayurveda and Possible Solutions

# Udupa Committee Report - I

Dr. Shipra Banerjee

There were various forms of medical practices existing in ancient India, the most popular of which was Ayurveda. By the beginning of the Christian era, Ayurveda had even spread to adjoining countries like China and the Middle East. After flourishing for centuries, many factors led to its eventual decline, the advent of modern medicine being a major blow.

Though the problems that assail Ayurveda are deep rooted they are not insoluble and attempts have been made to resuscitate it from the early part of this century. Various Committees have been appointed by the Indian Government after independence, to look into the problems assailing the Ayurvedic medicinal system and find possible solutions to help in its revival. One of the foremost of these was the Udupa Committee commissioned in 1958, chaired by Dr. K.N. Udupa, the noted surgeon and scholar in Ayurveda.

## Terms of Reference

The terms of reference of the Committee were as follows:

1. To evaluate and assess the work already done in the field of Ayurvedic Research, especially by those Institutions receiving Central and State Government grants for the purpose.
2. To assess the existing facilities of training and research in Ayurveda;
3. To assess the nature, volume and standard of the Ayurvedic pharmaceutical products; and
4. To find out the existing status of Ayurveda regarding its practice and the recognition accorded to it.

Based on postal questionnaires, direct observations and interviews, besides personal contact as the main research tools, the report was completed by the end of 1958. Some of the major observations and recommendations of the report are presented below.

## Observation on Recommendations of Previous Committees

Concerning the recommendations of the various committees on Ayurveda, it is observed that the government has kept the implementation of these recommendations on hold until such time as its merit has been proved by authorities on modern medicine. The Committee feels that such an attitude unnecessarily favours modern medicine, while denying the trust of the people in Ayurveda. Instead, an effort needs to be made to fill the inexplicable gaps left in it, if not by current Ayurvedic knowledge, by modern scientific methods.

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## Ayurvedic Research

***Observations :***

Most of the research being done on Ayurvedic drugs from the beginning of the 20th century has been directed towards rediscovering useful medicine from the large mass of Ayurvedic drugs suitable to be used by the practitioners of Western medicine. While these efforts have enriched the Western system of medicine, the traditional Ayurvedic physician feels that nothing is being done for research in the Indian system of medicine as a whole.

The research being presently undertaken at teaching institutions and by individuals under Central or State schemes is not very systematic either. Lack of collaboration between professionals of various systems of medicine has resulted in accumulation of a large amount of uncompared and uncoordinated data. Adequate facilities do not exist in many places. There is duplication in the diseases chosen for investigations. Also, there is lack of complimentary research like literary and pharmacological research on a planned basis.

***Recommendations :***

It is recommended that a Central Council of Ayurvedic Research be established, as also three postgraduate training institutes having research centres in the remaining three regions of North, East and South India, on the analogy of the Jamnagar Institute in Western India. The State Governments should establish Boards of Research, which may closely follow the various lines of research chalked out by the Bombay Board of Research.

Research work in Ayurveda should be done under the following seven heads: 1. Clinical; 2. Literary; 3. Chemical; 4. Botanical; 5. Pharmacognostical; 6. Pharmacological; 7. Basic Principles of Ayurveda. Clinical research should precede every other type of research to be undertaken by vaidyas, preferably in a separate wing of a modern hospital in complete collaboration with the modern physicians there.

Literary research may be undertaken including collection,

### Dr. Katil Narasimha Udupa (1920-92)

A graduate in Ayurvedic Medical Sciences from the Banaras Hindu University (BHU) with a postgraduation in surgery from abroad, Dr. Narasimha Udupa went on to become one of the pioneers of integrated wholistic medicine in India. A man with a great vision, Dr. Udupa worked tirelessly throughout his life to put into practice what he thought was best for the health system of India. Initially, he was criticised by many Ayurvedic practitioners for trying to modernise and westernise the Ayurvedic system of medicine but gradually his model was followed almost all over India.

Starting to work in the field of surgery in various capacities all over India, in 1960, due to popular demand, he accepted the principalship of the undergraduate Medical College at the Banaras Hindu University. During the initial phase of the growth of the institution, Dr. Udupa worked relentlessly, not only as the builder of the institution, but also as a surgeon and a teacher. Under his aegis, the Medical College was eventually upgraded to form the Institute of Medical Sciences in 1972 under which both the Allopathic and Ayurvedic units flourished.In the Institute, Udupa pioneered research on several subjects including experimental research in surgery. One of his important researches was the role of the Arjuna plant in relieving heart trouble. Dr. Udupa also authored many monographs and even started and edited two medical journals.

After his retirement he did not bury himself in academics alone but tried to apply his knowledge and experience for the benefit of the community. Through the Integrated Rural Development Programme adopted by the BHU in 1980, he organised to provide services to the community, including health, welfare and employment generation. Similarly he made full use of a project funded by ICMR (Operation Research Project) to work with the community on a larger scale and try out many innovative and integrated approaches in health care delivery combining indigenous drugs, yoga and surgery. His compassionate and intelligent nature and good communication, administration and medical skills, allowed him to mobilise and get fine cooperation from both the project staff as well as the village community. He also started organisations dealing in indigenous medicine like the Bharatiya Swasthya Sangh, to serve the rural people and promote research in these fields.

He received many awards and honours in his lifetime including the "Padmashree" in 1972. Dr. Udupa was invited to deliver lectures and participate in various prestigious conferences all over India and abroad on a wide range of topics.

Unfortunately, Dr. Udupa's work was not appreciated enough especially by his colleagues from modern medicine, coming as he did from the ayurvedic backgroumd. But the people of Banaras continue to remember him with love and respect as a true "Dhanwantari" - a complete doctor.

translation and review of old manuscripts and publication of the more important ones, publication of suitable textbooks etc.

Modern scientists should take up chemical research on indigenous drugs whose efficacy has been proved clinically, taking the active help of vaidyas.

In the field of botanical research, steps should be taken to undertake surveys of medicinal plants in different regions in India in collaboration with the Forest Departments and detailed maps prepared thereon. The Central Council for Ayurvedic Researchshould then plan an extensive cultivation programme on a scientific basis with the advice of botanical experts in the country. In this context the treatises on *Vrikshayurveda* may be studied with advantage.

The Council should assign the task of pharmacological research on plants and herbs to 12 to 15 separate units, each consisting of a botanist, a vaidya and a photo-artist, and should aim at completing the work on the known herbs and plants in about ten years time. Similarly, pharmacological research on indigenous drugs should be planned and financed by the Central Council of Ayurvedic Research in consultation with expert vaidyas. This work should be allocated to pharmacologists who should work in collaboration with other science experts. It is very essential that in all this work the basic principles and recognised practice of Ayurveda should be investigated by learned Ayurvedic scholars.

It is also recommended that the Central Council may plan research in the following branches of Ayurveda, which are now in vogue among traditional vaidyas: Dietetics; Pediatrics; Treatment of mental diseases; Treatment of eye diseases; Orthopedics; Toxicology; Dentistry; Preventive medicine including yoga and Oil and massage treatment.

## Pharmaceutical Products

*Observations :*

Pharmaceutical chemistry is one of the branches of Ayurvedic medicine which was relatively well developed in the past. and includes medicinal preparations of both vegetable as well as mineral origin.

Till recently, the practicing physician himself used to prepare his own medicines. Following the introduction of Western systems of medicine, gradually, an attempt has also made to separate the Ayurvedic Pharmacy from the practice of medicine. The overall number of pharmacies as well as production technology has improved considerably after independence.

It is estimated that about eight million pounds of Ayurvedic medicines are consumed in India per year; the annual sale

of Ayurvedic medicines in India being about Rs. 6 crores. Unfortunately, there is lack of standardisation in the preparation and application of medicines which differes from place to place.

Closely connected with the preparation of Ayurvedic medicines is the problem of inadequate supply of raw materials. Moreover, the absence of a standard and comprehensive Ayurvedic Pharmacognosy as well as legal supervision has increased the scope for imitation of raw drugs and adulteration by sellers. The present system of collecting Ayurvedic drugs and plants from forests and hills through non-technical contractors and local men has caused denudation of forests and hills of valuable medicinal plants.

***Recommendations :***

The Committee recommends the compilation of an Ayurvedic Pharmacognosy based on botanical surveys in the various forest regions of the country and systemic collection and storage of raw materials in collaboration with the forest authorities and Botanical Survey of India. The Central Council for Ayurvedic Research should standardise the formulary of each medicine and compile a proper Pharmacopoeia. Standards will have to be laid down for prepared medicines too in order to ensure correct admixture of components. The creation of Drug Farms and Museums by Governme would be the first step in this direction. There should be well equipped laboratories for standard testing of raw materials used in the preparation of medicines. The forest department should keep certain hilly areas reserved for the cultivation and preservation of medicinal plants to be made available to the manufacturing firms as required.

**Status of Practice**

***Observations :***

While various acts have been passed to control the practice of modern medicine, legislation and implementation regarding practice of indigenous medicine has generally been indifferent. There is shortage of funds provided by the Government, lack of building and other facilities, shortage of Ayurvedic hospitals and dispensaries and failure of the authorities to recognise and recompensate adequately the services of the vaidyas.

On the whole, there is roughly about one vaidya for every 2500 people in the country, compared to one modern physician for every 5000 people. More than one third of the total population in our country, mostly from rural areas, is still treated under the indigenous system by spending 5% of the total medical budget. Since it is obvious that the people still resort to this treatment because they find it beneficial and more economical, it is our duty to approach the problem with sympathy and encourage and recognise the system.

It is to be noted that, while the services of modern medical practitioners are profitably utilised in nation building activities, the services of vaidyas are not being utilised in any programmes for the development of rural areas although such programmes are held up for want of trained technical personnel.

There are at present 11 states in India having Boards of Indian Medicine for the control and practice of Indigenous System of Medicine. The Boards maintain a register of qualified Ayurvedic practitioners besides supervision of Ayurvedic education, inspection of examination conducted by various institutions, exercise of disciplinary control over Ayurvedic practitioners and advising the state Governments generally in all matters of Indian medicine.

About 22% of the total number of registered Ayurvedic practitioners have received institutional training. But except for a few states, their grades of pay and status continue to be low in comparison to those of the modern medical graduates as they are insensitively grouped with traditional vaidyas.

The present practice of Ayurveda is limited to general practice though in Ayurveda eight branches of specialisation "Ashtanga" have been described. Most of those having received institutional training utilise both the modern and ancient methods that are taught to them for the purpose of diagnosis and treatment and the trend is increasing towards usage of modern medicine. Unfortunately, Ayurveda continues to be plagued by unethical practitioners who try to pass on useless drugs as rare traditional cures or scientifically researched remedies.

***Recommendations :***

The Government should revise their present policy and fully utilise the Ayurvedic practitioners in implementing the nation building activities. There should be separate high powered Directorates for Indian Medicine in all the states who should see to it that an adequate numbers of hospitals and dispensaries, properly housed and well-equipped, are opened and the vaidyas in charge of such institutions are well paid.

The Boards of Indian Medicine should register all Ayurvedic practitioners in distinct categories and exercise proper control over them. Educational aspects of Ayurveda should be dealt with by the University authorities, who may, however, take the advice of the Boards of Indian Medicine, wherever necessary. The practitioner of Ayurveda himself should strive to elevate his practice is moral terms and make efforts to bring his knowledge of medicine up-to-date. Finally, there should be a non-official All India Organisation of Ayurvedic Practitioners whose aim should be to promote the welfare of the science and its practitioners.

**To be contd. in the next issue.....**

# पारम्परिक चिकित्सा को समझना

दर्शन शंकर

पारम्परिक चिकित्सा प्रज्ञान, जो आज भी अपने समाज के एक वहुत वड़े हिस्से की स्वास्थ्य की आवश्यकताओं की पूर्ति करता है, का पुनर्जीवीकरण, प्राथमिक स्वास्थ्य देखरेख में आत्मनिर्भरता के आदर्श को प्राप्त करने में प्रमुख भूमिका निभा सकता है। जनता को केवल पश्चिमी अवधारणाओं में पुनःशिक्षित करने की वजाय, स्वयं जनता की स्वस्थ्य परम्पराओं के स्वस्थ घटकों को मज़वूत करना चाहिए तथा विकृतियों को हटाना चाहिए।

**पारम्परिक चिकित्सा प्रज्ञान : दो धाराएँ**

पारम्परिक चिकित्सा प्रज्ञान की दो धाराएँ हैं, लोक स्तर पर अनुभवसिद्ध धारा तथा शास्त्रीय स्तर पर संहितावद्ध धारा। अनुभवसिद्ध धारा, पारम्परिक मान्यताओं, नियमों तथा प्रथाओं के माध्यम से प्राप्त अनुभवों पर आधारित है तथा मौखिक परम्परा द्वारा प्रचारित - प्रसारित हुई है। यह भारत के गाँवों में वसी है। इसे लोक स्वास्थ्य परम्परा या 'लोक स्वास्थ्य संस्कृति' कहा जा सकता है। लोक स्वास्थ्य परम्पराएँ हमारे देश के ग्रामीण समुदायों के कोने-कोने में फैली हुई हैं। लोक स्वास्थ्य परम्पराओं के प्रचार-प्रसार का कार्य, करोड़ों गृहणियाँ जिनके पास घरेलू इलाज, खाद्य एवं पोषण का व्यवहारिक ज्ञान है; लाखों पारम्परिक दाईयाँ, एक्यूप्रेशर (वरमन), आँखों के रोग (नेत्र चिकित्सा), दाँतों की देखरेख (दंत वैद्य), विप वैद्य, पशुओं की देखभाल (पशु वैद्य) में दक्षता प्राप्त चिकित्सक; तथा गाँव के जड़ी-वूटी से इलाज करने वाले व्यक्ति, विशेपकर आदिवासी समुदायों में, जो तरह-तरह के सामान्य एवं पुरानी वीमारियों का इलाज करते हैं, द्वारा किया जाता है।

पारम्परिक स्वास्थ्य प्रणाली की दूसरी धारा, वैज्ञानिक (या शास्त्रीय) स्तर है। इसमें आयुर्वेद, सिद्ध, यूनानी तथा तिव्वती चिकित्सा जैसी संहिता वद्ध एवं व्यवस्थित भारतीय पद्धतियाँ सम्मिलित हैं। चिकित्सा की इन भारतीय प्रणालियों की अत्याधुनिक सैद्धान्तिक वुनियादें हैं, जिन्हें चिकित्सा एवं शल्य-क्रिया की सभी शाखाओं के शोध-प्रवंध से सम्वन्धित हजारों पाण्डुलिपियों के माध्यम से अभिव्यक्त किया गया है।

दोनो धाराओं का आपस में एक सहजीवी सम्वंध है। संहिता वद्ध धारा के द्वारा ही उसकी दवाओं की क्रियाओं, कारण विज्ञान, इत्यादि के सिद्धान्तों की समझ के आधार पर, लोक धारा का आँकलन किया जा सकता है, तथा उसकी विकृतियों को दूर किया जा सकता है। वास्तव में, वहुत सी लोक प्रथाओं को, शास्त्रीय धारा के सैद्धान्तिक ढाँचे के भीतर वेहतर तरीके से समझा गया है। शास्त्रीय धारा, दूसरी ओर, लोक धारा के ज्ञान से शिक्षा ग्रहण कर सकती है।

**विभिन्न वुनियादें : विभिन्न ज्ञान एवं संरचनाएँ**

आधुनिक और परम्परागत विज्ञान, दो पूर्णतया विभिन्न वुनियादों पर आधारित हैं और इसलिए उनकी आसानी से तुलना नहीं की जा सकती है। हालाँकि, अंधाधुंध तुलनाएँ की जाती रही हैं। भारतीय स्वास्थ्य विज्ञानों, जैसे आयुर्वेद, जो कि एक विज्ञान है, के विपय में समझ विकसित करने के लिए भारतीय वैज्ञानिक परम्पराओं, जो कि पाश्चात्य वैज्ञानिक परम्पराओं से वुनियादी तौर पर भिन्न हैं, के विपय में जानकारी हासिल करना आवश्यक है। भारतीय वैज्ञानिक समुदाय में यदि विज्ञान के विकल्पों पर स्वस्थ्य चर्चा हो तो इन वुनियादी भिन्नताओं को वेहतर तौर पर समझा जा सकता है। एक प्रमुख समस्या जिसका गैर-पश्चिमी समाजों को, अपने देशों के विज्ञानों के किसी भी गम्भीर मूल्याँकन के दौरान सामना करना पड़ता है, सभी पश्चिमी वैज्ञानिकों तथा दर्शनशास्त्रियों का यह आम दावा है कि 'अन्ततः, विज्ञान एक है, सार्वभौमिक है व अद्वितीय अभिव्यक्ति का (पश्चिमी) नमूना है।' इसलिए जहाँ एक ओर, संगीत भाषा विज्ञान, तर्क शास्त्र, कला, तथा राजनीति जैसे अन्य क्षेत्रों में तो वैकल्पिक क्रियाविधियाँ, सिद्धान्तों तथा प्रचलनों की कल्पना सम्भव हो सकती है, वहीं दूसरी ओर, 'विज्ञान में विकल्पों' पर परिचर्चा आरम्भ करना असम्भव है, क्योंकि इस विपय को ही असंगत या वेतुका समझा जाता है। विज्ञान में विकल्पों के प्रश्न पर, सर्वप्रथम इस विपय पर भारतीय प्रामाण्यवादीय द्रष्टिकोण को 'ध्यान में रखते हुए, एक नई पहुँच वनाने की शीघ्र आवश्यकता है। यदि इस प्रश्न पर गम्भीरता से विचार करने में रुचि रखने वाले, भारतीय शास्त्रों के विभिन्न वैज्ञानिकों, दर्शनशास्त्रियों तथा विद्वानों को पर्याप्त प्रोत्साहन दिया जाएगा, तो ऐसा वास्तव में सम्भव हो सकेगा।'

**चिकित्सा विज्ञान की विभिन्न वुनियादें स्वाभाविक रूप से ज्ञान की विभिन्न संरचनाओं को जन्म देती हैं।**

वुनियादी सिद्धान्त, अवधारणाएँ तथा श्रेणियाँ जिन पर भारतीय स्वास्थ्य विज्ञान आधारित है, वास्तव में पश्चिमी चिकित्सा विज्ञान से भिन्न हैं। जवकि भारतीय विज्ञान पंचमहाभूत सिद्धान्त के पूर्णतावादी परिप्रेक्ष्य पर आधारित है, पश्चिमी वुनियादी सिद्धान्त परमाणुवाद सम्वंधी है; जवकि भारतीय विज्ञान सांख्य, वैशेशिका और योग जैसी दार्शनिक वुनियादों पर आधारित है, पश्चिमी चिकित्सा विज्ञान प्रत्यक्षवादी संवंधी वुनियादों की विभिन्न विचारधाराओं पर आधारित है, जो स्वरूप, संरचना, श्रेणियों तथा अवधारणाओं में भिन्न-भिन्न हैं। यह वुनियादी अन्तर, वीमारियों के कारणों, औपधि-विज्ञान तथा दवाओं का क्रियाओं, आहारिकी व पोपण, शरीर-क्रिया विज्ञान, निदान शास्त्र, इत्यादि से सम्वन्धित सिद्धान्तों

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*दर्शन शंकर, अकादमी ऑफ डिवेलपमेंट साइंस, केशले, जिला-रायगढ़, महाराष्ट्र के निदेशक हैं। उन्होंने भारतीय चिकित्सा, विशेपकर, जड़ी-वूटी सम्वंधी दवाओं के प्रोत्साहन में अग्रगामी प्रयास किए हैं।*

के निरूपण में भी प्रदर्शित होता है। उदाहरणार्थ, भारतीय औषधि-विज्ञान, जिसे द्रव्य गुण शास्त्र के नाम से जाना जाता है, में सम्पूर्ण पौधे या उसके भागों - जैसे पत्तियाँ, तना, बीज, जड़, छाल, फल, फूल - का रस, वीर्य, विपाक एवं प्रभव जैसे पैरामीटरों या परिमाणों पर उनके अंतर्जीवी प्रभावों के संदर्भ में अध्ययन किया जाता है और इसे एक सक्रिय पदार्थ के रूप में इस्तेमाल किया जाता है। आधुनिक औषधि-विज्ञान दूसरी ओर, पेड़ों (अथवा उसके भागों) से सक्रिय रसायनों को पृथक करता है तथा विभिन्न परिमाणों पर उसके अंतःपात्री तथा अंतर्जीवी प्रभावों का अध्ययन करता है। दोनों विचारधाराओं के निःसंदेह अपने-अपने फायदे हैं अन्तर संभवतः इस तथ्य में निहित हे कि भारतीय ज्ञान प्रणालियों में, रासायनिक विज्ञान सम्बंधी ज्ञान अनुपस्थित है। इसके स्थान पर, एक पूर्णता वादी श्रेणी- जिसे द्रव्य गुण शास्त्र कहते हैं, विद्यमान है। यदि हम यह मानते हैं कि भारतीय विज्ञानों में रासायनिक विज्ञान का अभाव एक गम्भीर कमी है, तो हमें यह मानना ही पड़ेगा कि आधुनिक विज्ञान में द्रव्य गुण शास्त्र का अभाव भी उतनी ही गम्भीर कमी है। हालाँकि, किसी भी प्रणाली की वैज्ञानिकता में कमियाँ, स्वयं में कोई, मुद्दा नहीं हैं, वास्तविक तथ्य यह है कि ये भिन्नताएँ, बुनियादी मूलभूत असमानताओं से पैदा होती हैं, जिसकी वजह से इन दोनों प्रणालियों के स्वरूप, संरचना तथा श्रेणियों की साधारणतम तुलना भी व्यर्थ हो जाती है।

**शब्दावलियाँ एवं तुलनाएँ - सरलता से मेल नहीं**

दोनों विज्ञानों के किसी भी तुलनात्मक अध्ययन में वार्ता के लिए उपयुक्त शब्दावली एवं भाषा का होना अत्यन्त आवश्यक है। उदाहरण के तौर पर, भारतीय प्रथाओं में, बोध प्रक्रिया, पित्त की एक क्रिया है जिसमें सत्व गुणों की प्रबलता प्रदर्शित होती है। पश्चिमी दर्शन में, हालाँकि, बोध प्रक्रिया, तंत्रिका तंत्र (प्रमस्तिष्क मेरु) के क्षेत्र के अंतर्गत आएगी, जिसे भारतीय विज्ञान में वात के समतुल्य माना गया है। ऐसे समीकरण की अमान्यता इस तथ्य से उत्पन्न होती है कि वर्गीकरण के सिद्धान्त मूलतः भिन्न श्रेणियों के हैं। पश्चिमी शरीर विज्ञान, तंत्रिका ऊतकों, माँस पेशीय ऊतकों आदि से सम्बन्धित है। वर्गीकरण का सिद्धान्त शरीर-रचना सम्बंधी तथा अंगों की संरचना पर आधारित है। दूसरी ओर, वात, पित्त और कफ़ के त्रिकात्मक वर्गीकरण में, तीनों गुणों के परस्पर-संबद्ध कार्यों पर आधारित, जैव-वैज्ञानिक आधार है।

**पश्चिमी विज्ञान की प्रयोगात्मक प्रक्रिया से दूर**

आधुनिक प्रयोगशालीय प्रक्रिया का सार है, किसी भी समस्या को उसके परिवेश से अलग करना, तथा प्रकृति के अन्य विभिन्न कारकों से अन्तर्सम्बन्धों को समाप्त करना और उसे नियंत्रण - योग्य परिमाणों की न्यूनतम आवश्यक संख्या तक घटाना। इन परिमाणों को तत्पश्चात, बदला जाता है (आमतौर पर एक समय में एक) और अध्ययन की जाने वाली प्रणाली पर उसके प्रभाव का अध्ययन किया जाता है।

इसके ठीक विपरीत, पारम्परिक पहुँच या दृष्टिकोण, समस्याओं को उनकी पूर्णता में तथा उनके अन्तर्सम्बंधों तथा जटिलताओं के साथ सुलझाने का प्रयास करती है प्राकृतिक परिवेश में समस्याएँ सुलझाने का यह तरीका, सन्तुलित सुझाव देने में प्रभावी प्रतीत होता है। भारतीय प्रणालियाँ, आम बोध को योजनाबद्ध करने का प्रयास करती हैं और बहु-आयामी स्वरूप में उसकी आवश्यक एकता को समाप्त करने की बजाय इसे परिशुद्ध बनाने का प्रयास भी करती हैं।

अतः पारम्परिक प्रणाली, अपने सैद्धान्तिक निरूपण में भी, स्वस्थ जीवन को प्राप्त करने का प्रयास करती है। यह प्रणाली, पश्चिमी विज्ञानों की भाँति, इसके विभाजन करने या भारी परिवर्तन लाने में विश्वास नहीं रखती। इसलिए ऐसा प्रतीत होता है कि पारम्परिक विज्ञान, बहुत से सूक्ष्म अवलोकनों के आधार पर बने हैं, तथा पश्चिमी विज्ञान के 'प्रयोग' (आधुनिक प्रयोगशालाओं में किए जाने वाले) का इस प्रणाली में स्पष्ट प्रतिपक्ष नहीं है।

**मापन एवं परिमाणन दृष्टिकोण में अन्तर**

यद्यपि मापन व परिमाणन भारतीय चिकित्सा प्रणाली के आवश्यक हिस्से हैं, वे आधुनिक प्रणालियों से स्वरूप में भिन्न हैं। पारम्परिक विज्ञानों के अधिकतर मापन, इकाइयों को, व्यक्तियों के रूप में, 'सामान्य' करके किए जाते हैं। दूसरे शब्दों में, किसी व्यक्ति की ऊँचाई या उसके हाथ-पैरों की लम्बाई नापने के लिए, मापन को उस व्यक्ति की अँगुली, अर्थात, उक्त व्यक्ति की उँगली के आयाम के रूप में अभिव्यक्त किया जाता है, 'न कि उस व्यक्ति के बाहर के किसी मनमाने मानक, अर्थात, अन्तर्राष्ट्रीय मीटर, के रूप में। योग चिंतामणी में, उदाहरण के तौर पर, समय की मात्रा को, एक सोते हुए व्यक्ति के साँस लेने की एक प्रक्रिया - एक बार साँस भीतर लेना तथा एक बार साँस बाहर फेंकना, अर्थात 'श्वास-प्रश्वास', के रूप में परिभाषित किया गया है। यद्यपि मापन और परिमाणन का भारतीय चिकित्सा प्रणालियों में अपना स्थान है, परन्तु आधुनिक प्रणालियों की तुलना में उनका महत्व कुछ हद तक सीमित है।'

**गम्भीर पर-सांस्कृतिक चिकित्सीय शोध को विधिसम्मत बनाने की आवश्यकता**

इस प्रकार की भिन्नताएँ, उन चिकित्सीय व्यावसायिकों के लिए आश्चर्य का विषय नहीं हैं जो संस्कृतियों की बहुलता एवं उनके विभिन्न वैज्ञानिक अभिव्यक्तियों से परिचित हैं। किसी भी पर- सांस्कृतिक प्रयत्न में, सिद्धान्तों, श्रेणियों एवं अवधारणाओं में परस्पर संबन्ध स्थापित करने में कठिनाइयाँ अवश्यम्भावी हैं। उनका सामना करने व उनको दूर करने के लिए गम्भीर तुलनात्मक शोध कार्यकर्ताओं की आवश्यकता होगी। देश में तुलनात्मक चिकित्सीय शोध के लिए पाठशालाओं में, चिकित्सीय व्यावसायिकों द्वारा सृजनात्मक चर्चा आरम्भ करनी होगी जिसमें ज्ञानमीमांसा एवं विज्ञान के दर्शन से सम्बन्धित मूलभूत मुद्दों पर चर्चा हो। एक छोर से दूसरे छोर तक जाने के लिए एक तुलनात्मक ढाँचे की आवश्यकता है, जो कि एक पुल का काम कर सके। इसके उपराँत ही हम दोनों प्रणालियों की ज्ञान संरचनाओं के अन्तर को दूर कर पाने में सफल हो सकेंगे। इन स्कूलों में ही, पारम्परिक चिकित्सा विज्ञानों की 'समझ' विकसित कर पाने हेतु मिलन स्थल प्राप्त हो सकेगा।

*(हिन्दी अनुवाद : मीता श्रीवास्तव)* ❑

Contd. from page 2

researcher and the clinicians. It is essential to create favourable conditions for work and study, so that scientific and technical personnel can devote themselves entirely to the advancement of scientific research.

One should not fail to acknowledge the work of the locals, for the major work in this scheme of things will have been done by them. Otherwise, the lab scientist, who merely confirms the original findings by isolation of active principles and animal experiments, will walk away with all the credit.

Serious efforts are needed to overhaul the administrative setup for optimum utilization of inputs and safeguarding the interests of young qualified scientists and other genuine and sincere workers of allied cadres.

It has been observed that immediately after studying the properties of a plant, if found useful, we try to cultivate it in the laboratory. It is likely that it may loose some of its medicinal properties in the process, hence, as far as possible, the plants should be retained in their natural environment.

Any work done on indigenous medicine should be encoded into a *materia medica* for further reference so that it is not lost again. Reference museums should be established and exhibitions of the plants held from time to time to create greater awareness.

Finally, there should be identification, collection and systematic documentation of all information about individuals and groups working in different parts of the country and the world for closer coordination and mutual exchange of knowledge.

**Acknowledgement:**

Dr. C.K. Atal, Director, Regional Research Laboratory, Jammu. ❑

**FREE ABSTRACTING**

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### A Critical Analysis

# Health Education in Schools

**Sangeeta Sachdeva**

Formal health education imparted in schools is concerned with the acquisition of knowledge about health and disease as a part of secondary socialisation resulting in health related behaviour.

From the year 1989, Health Education has been introduced as special subject in the school curriculum to imbibe into the children the value of good health and develop healthy habits leading to better health status. The specific objectives are :

* To create awareness about the concept of health and factors influencing health.

* To create awareness about personal as well as environmental cleanliness.

* To imbibe consciousness about exercise, rest, sleep, good posture and proper diet for maintaining good health and develop healthy habits in the students.

* To develop in them the right perspective about the principle and practice of health and physical well being.

* To acquaint them with the knowledge of first aid and safety and develop skills of providing first aid in the case of sport injuries.

* To advocate immunisation against communicable diseases as an important means of positive health.

A study was conducted in 1996 to make a critical analysis of health related information in the science curriculum to determine whether the information content and format actually served to fulfil the stated objectives, and to evaluate the need for restructuring of the same.

The exact impact was sought to be calculated by understanding the following :

* Whether the distribution of health related information in science curriculum followed the axioms a) whole to parts and b) simple to complex.

* Students' knowledge and awareness about health and its relation to scholastic achievements.

* Factors affecting students' awareness about health.

### Sampling Frame

Ten schools in Pune city formed the sampling frame - seven following the State board pattern (four English medium and three Marathi medium) and three, the Central board pattern. Twenty students each from classes VII, VIII and IX from all schools (except for total 40 students in one school) were finally selected. The schools as well as students were selected to represent different socioeconomic backgrounds.

### Collecting Data for Analysis

To get an idea of their exposure to health knowledge outside of the school syllabus, the material in their libraries including several scientific journals, educational journals, newsletters and textbooks as well

The author has submitted the above report as her desertation for MSc. in Health Sciences

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as reference books was analysed.

The data for analysing students' general awareness of health and the factors affecting them was obtained through questionnaires and a retention test which was mainly of a qualitative type. A questionnarie was prepared to collect information about the students' socioeconomic background which included questions on :

* Educational background of the parents.
* Occupation of the parents.
* Who helped them in their studies.
* How often did they read science textbooks at home.

Questions related to education were close ended with various alternative answers being provided. For tallying scholastic achievements with performance in the retention test, we went through the school records for obtaining their marks in the previous academic session and for some schools, also those in the current academic session. Marks obtained included overall marks as well as those specifically in science subjects.

**Methodology**

The retention test paper was first pretested on students from standards VII, VIII and IX, prior to finalising it. The students attempting the pretest were strictly not from the sample schools in the study. If a particular question was not attempted by any student at all, the question was deleted from the final questionnaire. Thus about 4-5 questions had to be deleted from the pretest paper, though the pattern and distribution of topics and type of questions remained unchanged. Also, yes/no type of answers were omitted by reformatting the questions. For eg. the question "When breathing through the mouth, does the air reach the stomach?" was changed to, "When breathing through the mouth, how does the air reach the windpipe and lungs?" Those questions which most of the students answered were reviewed and modified wherever necessary. Care was taken to keep the language as simple as possible. Where difficult words were used, it was seen that their meaning would come through in the question itself. Finally, the modified questionnaires were translated into Marathi.

The final test paper contained 20, 20 and 24 questions for classes VII, VIII and IX respectively. The questions in each paper had an equal proportion of questions based on previous grade's science knowledge and awareness about health. Prior to setting the questions the contents in science textbooks for classes III to IX were reviewed and topics containing information on health were identified. The questions on previous grade's science knowledge gave equal weightage to each topic. Based on these questions; an equal number of questions were framed to test awareness about health, taking into consideration all possible informal sources of health information including TV, newspapers, slogans, hoardings etc. All questions were of the short answer type - either one word or a sentence. Six questions were common to all the questionnaires.

Most important, those appearing for the test were given no prior knowledge of it in order to get genuine responses. Care was also taken to minimise copying.

**Data Analysis**

The data collected on parent education and occupation etc. was either categorised or graded for analysis. The data revealing the relationship between scholastic achievements and retention test score was analysed on the computer including application of correlation tests and drawing of scatter graphs. To understand the significance of correlation, the 't-test' was applied.

**Limitations of the Study**

* A retention test for previous grade knowledge of science (only topics related to health) was conducted in the last month of 1996-97 session. It should have been in the mid-term of 1996-97.
* When selecting a unit from the school, the new admissions for 1996-97 were automatically excluded.
* The questionnaire forms should have been filled by the students immediately before or after they had taken the test. Due to technical problems they could only be distributed later on.

**Results**

To analyse the results, first, the health related information in the text books (Class III - IX) was classified under five broad heads namely : human biology, nutrition, environment, disease and its prevention and control, and others. The analysis revealed the following anomalies :

* Frequently, the topics are introduced in a complex manner making them difficult to grasp. For instance, in the Vth std. textbook, chapter 5, which deals with balanced diet, should be introduced in a simpler manner.
* Complex topics have been introduced in earlier standards while the basic explanations underlying these topics have been given in more advanced classes. For eg. the functions of the heart, lungs and brains included in chapter 8 of the IVth std. textbook, should be taught only after the simple organs have been explained first, which are, incidentally, taught in chapter 19 in class VI. Whatever class the information

is imparted in, the order should be that of simple organs followed by complex ones. Similarly, in class IX (chapter 21), salient features of the human body have been dealt with. These should be taught at a much earlier grade before teaching about the five important body systems - digestion, excretion, circulation, respiration and coordination and regulation - presently taught in class IV.

* Many of the topics have been dealt with in a scattered manner with one aspect of it being covered in one standard and the other aspects elsewhere. To give an example, digestion of food covered in class IV (chapter 10) should be included in chapter 18 of the VIIth std. textbook in which life processes - photosynthesis, digestion and excretion have been covered.

* The axiom of whole to parts has been ignored in many cases. In the 3rd std. textbook, chapter 9 on food deals with micro nutrients. However, no interrelationship has been established with their role, which is described independently. Also, in classes III to V, there is no mention of the five food groups and their proportion in the diet, though they are being taught topics dealing with food/diet.

* The same information has been unnecessarily repeated in different classes or sometimes in different chapters in one textbook itself. In chapter 7 in class III (our body) and chapter 19 in class IV (parts of living things) some of the content has been repeated. In class V, chapters 9 and 5 repeat the information on ideal diets for different age groups.

* Some important information has been left out completely. In none of the classes, is there a mention of the immune system though other systems in the human body have been described repetitively. From class III to X, there are many chapters talking about micro organisms including beneficial and nuisance micro organisms, spread of various diseases etc. but nowhere has the concept of disease causation been dealt with.

* Nonscientific language has been used frequently, inadvertently adding a touch of humour! Page 30 of the 3rd std. textbook mentions that the body structure of both boys, girls as well as adults is similar ! While page 32 in the same textbook reveals that everyone has skin, the 5th std. textbook claims that a house that has been lived in does not gather dust. Page 122 of the 4th std. textbook states that organs of plants can all be seen from outside and also that in most animals, one individual is either male or female (pg 125).

**Students' Awareness about Health Related Topics**

There were some questions in the retention test paper, which were common to all the three classes (VII, VIII and IX) and drew some peculiar answers from many of the students:

1. *Q.* In the alimentary canal/digestive track which organ follows the stomach ?

***Expected Ans*** : Small intestine/ intestine/ duodenum.

***Actual Ans*** : Less than half gave the correct answer. Wrong answers included kidneys, pancreas, liver, brain, heart etc.

2. *Q.* If a person generally takes balanced diet but occasionally takes a meal which is not balanced, what will happen?

***Expected Ans***: Nothing will happen since the meal that is not balanced is taken only occasionally.

***Actual Ans***. Very few gave the right answer. One of them wrote that if 2/3rd of the times the diet is balanced then nothing will happen. One or two students mentioned about stores in the body. Invariably, most students wrote that he would fall sick, have a stomach upset, become fat, get pain, get indigestion etc.

3. *Q.* Name the communicable disease that is spreading very fast these days and for which there is no cure yet.

***Expected Ans***. AIDS

***Actual Ans***. A little over half the students gave the answer AIDS. Some of the students mentioned AIDS and other diseases like blood cancer, dengue fever, plague, leprosy, small pox etc.

4. *Q.* When breathing through the mouth how does the air reach the wind pipe and lungs ?

***Expected Ans***. Gullet, pharynx, the food and wind pipe are connected/jointed/mix on the way, there is a gap that closes the food pipe etc.

***Actual Ans***. Many of them gave the above answer though there were others who wrote trachea, larynx, by nose or through the wind pipe.

**Scope for Change**

* Teachers are basically from other disciplines and find it difficult to convey the true concept of health education to the children. Lack of adequate reference books on the subject does not allow teachers to gain extra knowledge of the subject.

* While at the primary level, health related topics are woven into environmental studies, at the upper primary and secondary levels, the relationship between health related topics and science and social studies is less systematic from the point of view of health education.

* Another weakness of the present training programmes is their 'academic', 'medical profession' and 'service' orientation in contrast to the desired 'participatory', 'problem solving' and 'life-skill' focus. Very often, there is a wide gap between what is recommended in the school health programme and what can be practised in the existing living

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# Movement Education in Schools

*Sandhya Jinturkar*

Physical education, now known as 'movement education' concentrates on developing the physical fitness of the student through various physical activities. Today, it forms an important component of the formal health education system. The following are the specific aims of physical education:

* Developing a liking for outdoor activities including specific sports.
* Making free and easy movements possible.
* Developing flexibility, strength and body control through gymnastics.
* Developing the power of concentration through yoga.
* Developing proficiency in particular sports at an early age.
* Developing the overall personality of the child - a sound mind in a sound body.

Besides pure physical fitness, physical education channelises the children's overflowing enthusiasm in the right direction which could otherwise lead to destructive behaviour. It teaches the children to be self-disciplined and alert. It also develops team spirit and cooperative behaviour, necessary in professional life later on, something not easily achieved within the four walls of the classroom.

**Education Policy and Committees**

Education, like development, is a continuous process and an important ingredient of it. It is necessary that educational policy is continuously upgraded to keep pace with the changes in society. Since independence, in India, educational committees have been appointed periodically to upgrade the educational policy.

The first such committee to be appointed was the Mudaliyar committee in 1952-53. This committee is noted for introducing the concept of multipurpose schools and suggesting steps to be taken for the universalisation of education. Amongst other things it also stressed on improving the overall health and physical development of the children. As per its recommendations, in 1965, the Ministry of Education prepared the syllabus for physical education, published in a book 'The National Fitness Corps' (NFC handbook) for standards 1 to 11.

In 1864-66 the Kothari Committee was appointed. It did not do anything specific for physical education but it did lay special emphasis on universalisation of education - taking it to the rural areas, and also stressed on complete personality development. Naturally, the scope and importance of physical education increased simultaneously.

In 1986, based on recommendations from many committees, organisations and experts, the Government announced the New Education Policy and requested the state governments to structure their respective educational policies accordingly. Following this, in 1988, the Maharashtra Government prepared and implemented a new educational curriculum which gave the student the prime importance in the scheme of things and focussed on all round development of the children. 'Health Science' was introduced as a special subject of which physical education is a part.

As per the policy, physical education has been made compulsory. The primary school has been allotted 5 periods a week while the secondary school 4 periods, for physical education. Most important, it is now compulsory to evaluate the students development in this field. As part of the school upgradation programme, playgrounds, games equipment, as well as teachers with special training in various sports and general physical education etc. are to be provided to the schools. If necessary, special areas in the city would be demarcated by the government for building playgrounds. Special emphasis will be given to sports and related subjects along with the usual curriculum, for which the necessary organisations as well as hostels for students will be established. Promising students in the sports field will be given special encouragement. Traditional Indian sports will be promoted and yoga introduced in all schools as a means of improving and coordinating the mind and body. Simultaneously the BPEd. syllabus will include yoga to make properly trained teachers available in that discipline.

**Conclusion**

Though the importance of physical education has increased, some important drawbacks remain, the most glaring one being that though it has been made compulsory it does not feature in the report card. Hence, it automatically gets lesser importance as compared to academic subjects. Moreover, its weightage in terms of actual classes allotted gets reduced in higher classes where preference is given to academics. (It should be noted that in China, Mao Ste Tung has made physical fitness compulsory for promotion to higher classes). It is time physical fitness is given its due importance and seen as one of the major preventive measures in our health policy.

Contd. on pg. 7

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# Changing Health Behaviour Through School Health Education

*This article by* ***Khalipha Bility, Susan Burkhalter, Abbas Shaker, Nazeema Ahmed, Hans Onya and Numvulo Masinyana*** *has been extracted from the Urbanisation and Health Newsletter, No. 32, March 1997*

How do children and adolescents perceive poor sanitation and hygiene practices in the world around them? What methods are most appropriate for identifying children's perceptions of water and sanitation conditions? How can parents and teachers use these perceptions to support learning and teaching about hygiene in school settings? This article describes the South African School Hygiene Education Project (SASHEP) which attempts to answer these questions. This multi-phase research and demonstration project aims at developing a child-oriented sanitation and hygiene education curriculum that is informed by the perceptions of children and adolescents in primary schools. The project links research and demonstration : 1) To address skill gaps between knowledge and the competencies of children to promote positive hygiene behaviour; 2) To overcome the didactic way hygiene education is currently taught in most schools; and 3) To facilitate the widespread use of multimedia in hygiene education. In the curriculum implementation phase we seek to use culturally sensitive and multimedia-learning strategies for stimulating the imagination and creativity of young people.

Though it will specifically address water and sanitation problems, the framework can be applied to other health problems, such as oral and dental health and teenage motherhood.

The project derives the inspiration for its study from the importance that health education has in developing communities struggling to improve their overall health status. The period of transition they are going through has brought forth various challenges on the health front, one of them being inadequate physical infrastructure and facilities for sanitation, especially in rural and semi-urban areas. However, attempts to provide infrastructure without accompanying it with an appropriate change in health behaviour has led to less than optimum utilisation of facilities created. "Research indicates that applying technology without addressing the cultural factors or changes in behaviour can cancel out the otherwise positive aspects of sanitation intervention."

To improve this situation, appropriate hygiene education in schools, supported by good curriculum materials, needs to go hand in hand with the development of infrastructure and services for good sanitation. Unfortunately, the strategic position of the school in society and the health education opportunities schools provide have not been harnessed adequately to promote the health of school communities.

The school can be an important setting for testing innovative approaches to health promotion. School health education, besides developing appropriate health habits, should also encourage the construction of water, sanitation and hygiene facilities that are properly used and maintained.

The role and importance of school health is also related to demographic, health and education situation in the country as more than 35% of its population is below the age of 25 and a large part of it is in school. Children are disproportionately affected by poor sanitation and inappropriate health education and many of them continue to go to school with easily preventable and curable chronic illnesses. These diseases, along with their causes, interfere with the children's ability to learn and enjoy school.

Increasing hygiene education among school-age children will have the additional benefit of extending health promotion knowledge to communities in two basic ways : Firstly, the black school children in both urban and rural areas are usually responsible for providing care for their younger siblings. As care providers, school children can use the health knowledge and skills acquired in schools to provide better care for their siblings. Secondly, in most rural communities, today's school children are the first generation who can read and write. In these communities, literate children are influential members and are often listened to with respect and dignity. Schools can use this status to promote health and reduce the prevalence of many water, sanitation, and hygiene-related diseases among children.

Appropriate education must place the child's culture and experiences at the centre of learning - it should be developmental. Understanding the child's perception should provide an insight into the child's learning experiences and the connections children make between disease and daily activities. The project research team will make a situation analysis on hygiene education, water and sanitation on both local and international levels. Information on prescribed health education in the local schools will be compiled to identify gaps in the curriculum. A summary of teaching and learning materials from other countries will be gathered to benefit

**School-Age Child Health Education and Teacher's Training**

FRCH has been doing constructive work in school health education since 1988, through the implementation of the School Health Education Project (SHEP) in 34 rural and urban schools in Maharashtra, with the aim of evolving a model for health education in schools. The experience of the teachers involved in this project, who conducted various health education activities in schools showed that if children in their receptive age are given a broader, social health perspective along with health information in a scientific and systematic manner, they can become both enthusiastic recipients and efficient transmitters of health knowledge. In 1994, this project was extended into the School-Age Child Health Education and Teacher's Training (SACHETT) project to be implemented in 4 selected districts of Maharashtra: Ahmednagar, Solapur, Pune & Nashik. The three year project, now coming to an end, essentially extended the experience gained in FRCH's earlier SHEP project to the Teacher Education Institutes (TEIs). The project also aimed at 1) improving the quality of the teaching material and manuals produced during SHEP in TEIs and their pilot schools 2) developing human resources for health education in TEIs and 3) devising means of integrating health education in the present curricula, especially helping teachers to understand health concepts and how to integrate them with other subjects.

A three-tier process of training was conducted under SACHETT. First, a training workshop was held for the D.Ed. college lecturers. These trained lecturers then conducted various health education activities in their respective colleges for their D.Ed. students, for one period every week. The D.Ed. students in turn conducted health education classes for school children of the pilot schools attached to their colleges. The training of selected school teachers was also undertaken by SACHETT in its four districts, in order to extend the scope of health training to those teachers not adequately covered by the in-service training at D.Ed. colleges.

The evaluation of teachers performance in the final phase of the project showed the D.Ed. students of all four districts to be better than their lecturers in the essential facets of health education. This was due to many factors like the D.Ed. students being in direct contact with school children unlike the D.Ed lecturers; most D.Ed. lecturers being unwilling to accept newer concepts and means of communication due to their age, job-complacency etc.

from the experiences of other societies and projects.

The team will observe and document children's behaviour and decision making in matters of hygiene to enable them to make healthy life choices concerning water, sanitation and hygiene. Results of the research with children will influence the scope and sequencing of content. We assume that the child's readiness to learn about water, sanitation and other matters depends on the most basic of all knowledge, `how to learn'. The key is to identify psychosocial and emotional barriers to learning and identify resilient factors that enable learners to develop important health skills. Problems and model solutions are approached, not in terms of theory alone, but in terms of their real world effects.

In addition to chalking out the formal curriculum, the research team is keen to look at the context or environment in which it is to be taught.. Mounting evidence indicates that the school's climate or ethos or environment plays a significant role in the learning process and outcomes.

In phase one, situation analysis on hygiene education, water and sanitation will be done both on local and international levels. Information on prescribed health education in the local schools will be compiled to identify gaps in the curriculum. A summary of teaching and learning materials from other countries will be gathered to benefit from the experiences of other societies and projects.

Phases two and three, which will run concurrently, involve the final selection of pilot schools which will correctly reflect the complexities of the sanitation situation, diversity and multicultural realities of South African society. This will be done to ensure that the curriculum and other products are appropriate and relevant to the needs of the children in specific areas. The criteria for specifying school type will depend on several variables, including location and type of existing infrastructure for sanitation and water supply. These factors will be coded in a matrix to define the characteristics of school type and to help the research team identify hygiene education priorities in different environments and schools. About 15 primary and secondary schools will be selected in each category.

Children's perceptions and the meanings they associate with water and sanitation are studied using qualitative methods. Several methods can be used to obtain this information - introduction to the activities, explanation, drawing and writing The last two involves asking children to draw or write about all the things about water and cleanliness that make and keep them healthy.

Water and sanitation conditions between and within the

different provinces vary considerably. Comparison of results from the provinces will allow the team to establish both a generic curriculum and context-specific curricula. The generic curriculum would describe hygiene education for all children. The context specific curriculum would describe how learning should be made appropriate and relevant to the needs of the learner in a particular environment. The research team anticipates some tension between local and universal or national health education priorities. In the end, the team will be guided by several factors, including the results of phase-one research.

Collaboration between home and school can enrich the school health education curriculum and provide an environment for children to practice what they learn in school. The overall development process of children at home and school is influenced by the way learning opportunities are structured for children, parents and communities to be involved in all aspects of school activity. Understanding environmental influences on how children grow and develop along the five most critical developmental pathways (physical, social-emotional, psychological, cognitive and ethical) should be central to how we plan for learning and bring up children in the school setting.

In phase four, the health education and training materials will be piloted in each of the research sites, in the same schools where children were interviewed to gather data on perceptions of sanitation and hygiene education. The testing of these materials shall take place in the context of the School Development Programme. The SDP is a comprehensive process of school reform - the basic programme orientation is that all activities in the school should be related to and focused on enhancing the development of each child. Implementation of this comprehensive approach will involve in-service training related to child development, school management and parent participation.

The project team will also work closely with the community and school health nurses, health education teachers, other health workers and students themselves.

Finally, in phase five, the team will compile the responses to the pilot-testing and revise and adapt the final products. These products will include multimedia modes of learning materials (print, audiovisual, radio drama).

**Methodology**

In the secondary schools the team will conduct focus group interviews. With permission, these interviews will be recorded and the data analysed through the "Glasser and Strauss" method. Analysis of these codes provides the framework for developing the hygiene and health education curriculum for secondary schools. The project advocates the use of appropriate, child-friendly school health education materials.

First, the project team will gather children's perceptions of water, sanitation, and ill health to identify obstacles to and opportunities for improved sanitary practices. Second, these findings will provide content for in-service teacher training. Capacity development and research training of both the practitioners and students are developed through a series of short courses and workshops. Third, teachers and students work together to develop supplementary health education materials to be integrated in the curriculum, and produce guidelines for extra curricular activities that involve parents and communities. Finally, monitoring and process evaluation activities will allow the project team to make improvements at every stage of programme implementation. ❑

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conditions of the learners (and in some cases, that of teachers).

* The underlying biological, social, cultural and economic causes common to most diseases must be concentrated upon rather than teaching a few diseases in detail. This will help students to understand the importance of preventive measures, including precautions to be taken at the individual and social level, for good community health. ❑

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Secondly, like other policies, the education policy too is top-down in nature, where the grassroots level problems in conducting physical education are ignored. The biggest problem is that of low budgets, especially in rural schools, where expensive equipment for special sports cannot be made available. The government should allow for variation in the syllabus according to the capacity of the schools and provide special grants to rural schools for promoting sports.

There should be more variation in physical activities introduced in school so that students get a wider choice. For instance, Japan has recently introduced, on an experimental basis, a free period for an hour everyday where the student can pursue any constructive activities s/he wants. Thus physical education can be used to increase the attraction for schools.

Another major anomaly is the difference between the subjects taught at the BPEd.. course and the expertise required in actually conducting the physical education class, especially as per the revised curriculum. Thus along with the school curriculum, the BPed. curriculum should also be revised periodically.

Most important, the goal of universalisation of education should be pursued relentlessly so that physical education is automatically made accessible to children all over India.

*English Translation : **Vaijayanti Aphale*** ❑

Problems Assailing Ayurveda and Possible Solutions

# Udupa Committee Report - II

Dr. Shipra Banerjee

*This is the concluding part of the article on the Udupa Committee Report that featured in the previous issue.*

**Observations and Recommendations on Training**

*Observations* :

In 1958 there were 76 training institutions in Ayurveda in both the Government and private sectors. Of these, 49 followed the Integrated Medicine pattern with a total student strength of 7000 and 1100 graduates to its credit while 27 of the colleges adhered to Shudha Ayurveda with a total student strength of 1500 and producing 300 title holders per year. There were also six Sanskrit Colleges imparting teaching in Ayurveda.

The committee came to the conclusion that the main areas to be touched in Ayurvedic training were the upgradation of the content and teaching methodology vis a vis modern medicine and standardisation of Ayurvedic teaching all over India.

*Recommendations :*

One of the first steps in the upgradation of Ayurveda would be that the Central and State Governments make an unequivocal declaration of policy recognising the training and practice of Ayurveda.

A Central Council of Indian Medicine should be set up as a very first measure of reform. This council will take steps to lay down uniform standards of syllabus, degrees, teaching, teaching institutions, etc. The Central Council, Universities, Boards and teaching institutions must work out details of curriculum of studies, based on the recommendations of this committee, so that the students have comprehensive knowledge and practice that helps them to become good medical practitioners. The curricula should be somewhat elastic and should be adopted by the authorities concerned, in consultation with the Central Council, to suit local conditions.

An Ayurvedic student must learn the fundamental principles of Ayurveda including *Ayurvedic Sharir* and its philosophical aspects in relation to *Darshana, Dravya Guna* and *Rasa Shastra, Bhashya Kalpana, Rog Nidana* and *Chikitsa*, and *Swasthya Vritha* including Preventive Medicine. It is important that the student realise that Ayurveda deals not only with the physical body as in the case of modern medical sciences but it also deals with the metaphysical aspects including the sense organs, mind and soul. A knowledge of this aspect is necessary to comprehend the basis for *Nidana* and *Chikitsa*. Simultaneously, an Ayurvedic student must also be taught anatomy and physiology, in addition to the principles of modern pharmacology and therapeutics, pathology and bacteriology, modern medicine, surgery, midwifery and gynecology, and medical jurisprudence. Hence, the present integrated system should continue. A broad-based curriculum for a five-year course excluding an appropriate period of internship is suggested.

The Shudha Ayurved system should also continue for some time to come but with the addition of certain modern subjects and increased facilities for practical training. This will equip the general practitioner of Ayurveda to deal more efficiently with present day patients, whose conceptions of life and environment etc. have changed considerably from the past. In due course it is anticipated that one uniform course of training in Ayurveda can be prescribed.

The basic qualifications for admission to the integrated course should be Intermediate level with physics, chemistry, biology and sanskrit. The qualification for admission to the Shudha Ayurveda course should be Matriculation with Sanskrit or equivalent qualification. Persons successfully completing the integrated training should be given a Bachelor's Degree and those completing the Shudha Ayurvedic training should be awarded the title of *Ayurvedacharya* or *Pravina*. The degree and the title should, however, be uniform in the whole country.

By properly channelising the training of the Integrated and Shudha Ayurvedic physicians and the traditional vaidyas of known reputation, medical relief can be improved considerably, especially in the rural areas. In fact, the students of Ayurveda should also be given public health training in order to enable them to render public health service in the rural areas.

For greater integration, the State Governments should pursue the question of establishing Chairs of Indian Medicine in undergraduate as well as postgraduate modern medical colleges. In addition there may be an Ayurvedic ward in each medical college hospital, so that the principles of Ayurvedic treatment are better comprehended by modern people. This will help to remove the bias in their minds towards Ayurveda.

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For providing adequate number of efficient teachers at an early date, the Central Government should, in addition to the Post Graduate Training Centre at Jamnagar, establish three more model Post-Graduate Training Centers at Banaras, Poona and Trivandrum to cover the Northern and Eastern, Central and Southern Zones respectively. In these centres, a three year training course should be instituted for integrated degree holders, Shudha Ayurvedic title holders and modern medical graduates. In addition there should be special training courses of one year duration for all existing teachers of Ayurveda. Modern medical colleges should give facilities to integrated graduates to undergo post-graduate courses in modern subjects so that such graduates may teach modern subjects to Ayurvedic teaching institutions. The Central Council of Indian Medicine should work out the details of such teachers' training programme on a uniform basis. Pending such a step, only the top personnel in modern medical field holding M.D., M.S.., etc. should be appointed Professors in integrated teaching institutions.

In addition, every Ayurvedic teaching institution or at least one institution in each State should provide for post-graduate courses in Ayurvedic as well as in Modern subjects, as part of the development programme of the State concerned.

Attempts should be made to immediately affiliate all Ayurvedic training institutions to Universities with separate faculties for Ayurvedic medicine. This will tone up the standard of teaching and examination and improve the buildings, laboratory equipment, practical facilities etc. The Central Council of Indian Medicine should also take appropriate steps at a very early date to bring the status of principals, professors, lecturers etc. in Ayurvedic Training Institutions at par with the corresponding posts in modern medical colleges.

Teaching methods too require a great deal of improvement. Two fifths of the time should be devoted to lectures and three fifths to practicals by students themselves. The philosophical aspects of Ayurveda should be emphasised throughout the undergraduate training. Teaching methods adopted with success in foreign institutions like tutorials, journal clubs and weekly or fortnightly staff rounds in every teaching hospitals should also be introduced in these institutions. Greater attention than at present should be paid to the teaching of Ayurvedic subjects. Each group of subject should be constituted into a separate department and one subject should be taught by one professor, who should have a lecturer and a demonstrator attached to him. It is important to teach basic facts and principles of the subjects rather than going into great details so that the student remembers and intelligently applies the principles taught while treating patients.

The basic qualifications for admission of students into Ayurvedic Institutions should be so fixed that they will be well-equipped to understand the Ayurvedic subjects taught and committed to practising Ayurveda in the future. It should be ensured that the students admitted have interest in the ancient science and aptitude for research and that they are not joining the course merely as a last resort. Some of the other conditions that will encourage students to take up Ayurveda are that they are assured of equal prospects in the profession as their compatriots in modern medicine and that their privileges are the same as the modern medical practitioners. Finally, the Government should encourage girl students to take up Ayurveda particularly because gynecology, obstetrics, pediatrics etc. have still to be introduced scientifically in the Ayurvedic system. Along with other financial help, governments should provide special scholarships to attract the proper kind of students to improve the present unsatisfactory position in Ayurvedic Training.

Immediate attention may be given to compiling subject-wise text books in Ayurveda on a uniform basis and annotations of original texts, as part of the Literary Research Programme. Existing textbooks may be reviewed and whatever is suitable may be accepted. A few concise textbooks on modern medical subjects may also be prepared for use in Ayurvedic Institutions. Government should encourage publication of textbooks by giving financial assistance, prizes etc. All textbooks should be revised from time to time as science progresses. Every Ayurvedic institution should maintain a proper library under the charge of a trained medical librarian and professors should encourage students to use them.

Research departments should become part and parcel of Ayurvedic teaching institutions. Preparation of medicine and practice should be separated if the Ayurvedic practitioner's status is to be improved. Special courses like B.Pharm (Ayurveda) should be instituted.

In order to create a suitable atmosphere in Ayurvedic studies, it is necessary to have proper buildings with adequate practical facilities like a medicinal plants garden, museum, pharmacy and hospital (with at least 150 beds for a student-strength of 50). Students' hostel and recreation facilities should be provided in ample measure in all teaching centers.

**Concluding Remarks**

In its concluding remarks the committee wrote :
"We will be failing in our duty if we did not acknowledge that a number of the suggestions and recommendations we have made, have already been covered by the conclusions arrived at by the previous Committees set up by the Central

**Contd. on pg. 12**

# अनौपचारिक स्वास्थ प्रशिक्षण के मॉडल

वैशाली वैद्य

*'कोई प्रशिक्षण कार्यक्रम, एक व्यक्ति की भाँति, रोचक लगना बंद हो जाता है, जब वह अपने में विकसित होना व अपनी विशेषताएँ खो देता है' - डेविड वर्नर*

परिन्चय में एफ आर सी एच द्वारा चलाई जा रही (Health-Environment-Sanitation- Education for Rural Out-of School Children-HESEROC) परियोजना, अन्य कार्यकलापों के साथ-साथ, स्कूल छोड़े हुए बालकों व बालिकाओं में, अनौपचारिक तरीके से, स्वास्थ्य, साफ-सफाई एवं पर्यावरण के प्रति जागरूकता पैदा करने के लिए भी प्रयासरत है। शिक्षण का कार्य-ताईयों (स्थानीय महिलाओं) द्वारा किया जाता है, जिनके लिए एफ आर सी एच के पूना एवं परिन्चय में कार्यरत कर्मचारिओं द्वारा प्रशिक्षण कार्यक्रम चलाया जाता है। इन प्रशिक्षण कार्यक्रमों में विभिन्न विषयों को अलग एवं नए तरीकों से पढ़ाया जाता है तथा इस बात को ध्यान में रखा जाता है कि इन जानकारियों को ताईयों के माध्यम से खेलवाड़ियों के बच्चों तक पहुँचाया जाना है। खेलवाड़ियाँ, स्कूल जाने की उम्र के बच्चों के लिए अनौपचारिक शिक्षण केन्द्र हैं। प्रशिक्षण कार्यक्रमों में केवल एक ही नियम अनिवार्य होता है, वह यह कि कार्यक्रम का प्रत्येक सत्र, रोचक, जानकारी से परिपूर्ण, आसानी से समझा जाने वाला, सहभागिता पर आधारित तथा स्थानीय संस्कृति के अनुरूप होना चाहिए। प्रशिक्षण के दौरान हमें स्वास्थ्य प्रशिक्षण के विभिन्न पहलुओं के विषय में व्यवहारिक ज्ञान प्राप्त हुआ, जैसे प्रशिक्षण के आरम्भिक चरणों में किस प्रकार से प्रशिक्षणार्थियों की सहभागिता प्राप्त की जाए, पूरे प्रशिक्षण काल के दौरान किस प्रकार से उनकी रुचि बरकरार रखी जाए, आदि। हमें जो व्यवहारिक ज्ञान व अनुभव प्राप्त हुए, उनमें से कुछ के विषय में नीचे दिया गया है।

**झिझक मिटाना..**

हमारे परिन्चय निवास में हम स्थानीय महिलाओं की दिनचर्या से परिचित हुए, और जैसा कि हमें शीघ्र ही समझ में आ गया, उनकी दिनचर्या उन्हें इतना थका डालती थी कि उनके पास, अपने मनपसंद क्रियाकलापों को करने के लिए शायद ही कोई समय या शक्ति बच पाती थी। यहाँ तक कि वे आम कला व कढ़ाई के कामों से भी ज्यादातर दूर रहती थीं।

उनकी इस पृष्ठभूमि के कारण, हमने उनकी छुपी हुई सृजनात्मकता का इस्तेमाल करने तथा उसके माध्यम से विभिन्न विषयों की समझ को बेहतर बनाने का प्रयास करने का निर्णय लिया। इस प्रकार के प्रयास से निश्चित रूप से उनका ध्यान आकृष्ठ हुआ, जबकि नीरस औपचारिक भाषणों में ऐसा नहीं होता है। हम लोगों ने प्रशिक्षण का सत्र, रद्दी कागजों और अन्य व्यर्थ सामग्रियों से ग्रीटिंग कार्ड, गुड्डे-गुड़िया, आदि बनाने के प्रत्यक्ष प्रदर्शन से आरम्भ किया। प्रशिक्षण सत्र के लिए एक उपयुक्त परिप्रेक्ष्य के उद्देश्य से हमने कागज से बनी, बहुत सी, बड़े आकार की गुड़ियों को कक्षा की दीवारों पर चिपका दिया। ताइयाँ, जिन्हें अपनी सृजनात्मकता प्रदर्शित करने का शायद ही कभी कोई मौका मिल पाता है, जल्द ही हमारे साथ शामिल हो गईं और उन्होंने उपलब्ध सामग्रियों से कई सृजनात्मक वस्तुएँ बनाईं। (बाद में, जब कभी भी हम उन ताईयों के घर जाते, तो हम देखते कि उन्होंने उन वस्तुओं को बहुत गर्व के साथ अपने घर की दीवारों पर सजाया हुआ है)। प्रशिक्षण के पहले सत्र में ही, ताईयाँ इस कार्य में पूर्णतया तल्लीन हो गईं और सबसे महत्त्वपूर्ण बात तो यह हुई कि उनकी आरम्भिक झिझक भी जाती रही, जिससे प्रशिक्षण कार्यक्रम के वातावरण को अनौपचारिक होने में मदद मिली। इसके उपरांत हमने कुछ खेल खेले। चिकित्सा, दवाएँ, स्वास्थ्य देखरेख, पर्यावरण, इत्यादि पर चर्चा का, धीरे-धीरे व दक्षतापूर्ण ढंग से खेलों में समावेश किया गया। सम्पूर्ण दिन का कार्यक्रम फिर इसी प्रकार चला।

*वैशाली वैद्य शिक्षा शास्त्र में प्रशिक्षण प्राप्त हैं तथा उन्हें अध्यापन में २० वर्षों का अनुभव प्राप्त हैं। वे एफ आर सी एच की एच.ई.आर.ओ.सी. (HESEROC)परियोजना में मुख्य अन्वेषक भी थीं।*

**कार्य करके सीखना ..**

विभिन्न आवश्यक विषयों पर चर्चा को, वास्तविक प्रयोगों व जहाँ कहीं संभव हुआ, दृश्य साधनों का समावेश कर, अधिक अर्थपूर्ण बनाया गया। ताईयों ने स्वयं ही प्रयोग किए, इससे प्रशिक्षण पूर्णरूप से सहभागिता पर आधारित रहा। उदाहरण के तौर पर, निर्जलीकरण के समय काम में लाए जाने वाले जीवनरक्षक घोल, जलसंजीवनी के विषय में बताने के समय पिलनवाड़ी की मंगल ताई ने जल, शक्कर व नमक के सरल घोल को बनाने की प्रक्रिया को प्रदर्शित किया तथा यथास्थान सामग्रियों व उनकी मात्रा, आदि के विषय में भी मौखिक रूप से बताया। साथ ही साथ, इसी समय, परिन्चय की नंदा ताई ने सभी सूचनाओं को साफ़ व आसानी से पढ़ी जाने वाली हस्तलिपि में ब्लैकबोर्ड पर लिखा। घोल के तैयार हो जाने के बाद, ताई ने घोल को पिलाने की विधि भी, दूसरी ताई के बच्चे पर प्रदर्शित की। इस प्रकार की दृश्य-मौखिक जानकारी व प्रयोगात्मक शैली ने ताइयों को बहुत अधिक प्रभावित किया व उन पर गहरी छाप छोड़ी। ताईयों ने खेलवाड़ियों में इस प्रयोग को न सिर्फ अपने छात्रों के सम्मुख पुनः कर के दिखाया, बल्कि कुछ ने तो वास्तव में घोल को बनाकर अपने परिवार जनों को, जो निर्जलीकरण से पीड़ित थे, इस घोल को पिलाया भी।

**किसी विषय पर चर्चा आरम्भ करना..**

विभिन्न प्रकार के भूमिका -नाटक, खेल, गीत, आदि, जो अधिगम को एक रोचक अनुभव बना देते हैं, के अतिरिक्त एक बार हमारे प्रशिक्षण सत्र का आरम्भ, बड़े ही नाटकीय ढंग से हुआ। एक बार, जब हम सभी प्रशिक्षण के लिए कुछ पेड़ों की छाँव में इकट्ठे हुए, जैसा कि हम आमतौर पर करते थे, तो अचानक पास ही खड़ा हमारा एक स्थानीय प्रशिक्षक बेहोश होकर ज़मीन पर गिर पड़ा। उसे क्या हुआ है, यह जानने के लिए सारी ताईयाँ उसकी ओर दौड़ पड़ीं। हमारे बीच एक डॉक्टर भी था, पर वह उसी वक्त कहीं गायब हो गया। अतः ताईयों ने सारी जिम्मेदारी अपने हाथों में ले ली। जहाँ एक ओर कुछ ताईयों ने भीड़ पर नियंत्रण किया, जिससे कि उस तक स्वच्छ हवा पहुँच सके, वहीं दूसरी ओर कुछ ने उस पर कपड़ों, आदि से हवा की। एक ताई ने तो उसके नाक के सामने अपनी चप्पलें तक रख दीं, जबकि कुछ ने उस पर पानी की छींटें दीं। धीरे-धीरे उसने अपनी आँखें खोल दीं। उसे उसके लिए विशेष तौर पर बनाई गई चाय भी दी गई।

इसके बाद हमारे एक अन्य स्थानीय प्रशिक्षक ने ताईयों से यह बताने को कहा कि राजू बेहोश होकर क्यों गिर पड़ा। ताईयों ने तरह-तरह के स्पष्टीकरण दिए, जैसे, 'वह रात ठीक से नहीं सोया होगा', 'वह इस प्रशिक्षण कार्यक्रम के लिए अत्यधिक मेहनत के साथ तैयारी कर रहा होगा', 'उसने ठीक से भोजन नहीं किया होगा', इत्यादि। ताईयों ने इन सभी चरणों की एक सूची भी बनाई, जिनका उन्होंने, उसे वापस होश में लाने के लिए इस्तेमाल किया था। इस प्रकार 'प्राथमिक उपचार', जो उस दिन का निर्धारित विषय था, पर चर्चा आरम्भ हुई। बाद में यह मालूम हुआ कि राजू का अचानक बेहोश होकर गिरना व डॉक्टर का (अ)समय गायब हो जाना, 'प्राथमिक उपचार' पर स्वाभाविक चर्चा आरम्भ करने के लिए जानबूझ कर किया गया था।

**पूर्व निर्धारित स्थल पर प्रशिक्षण (थोड़ा सा नाटक) ..**

परिन्चय से मात्र १० कि.मी. की दूरी पर वीर बाँद स्थित है। हमने यह निर्धारित किया कि हमारे पर्यावरण के सत्र के लिए यह स्थल सर्वोपयुक्त है। ताईयों के लिए यह एक बदलाव भी साबित होगा, ऐसा विचार किया गया। आवश्यक व्यवस्थाएँ करने के उपरान्त, हम प्रशिक्षण स्थल पर गए व प्रशिक्षण आरम्भ किया। हमने पर्यावरण के विषय में चर्चा करने के लिए भूमिका-नाटक का माध्यम चुना। आरम्भ करने के उद्देश्य से हमने सभी ताईयों में कागज़ की पर्चियाँ बाँटीं, प्रत्येक पर्ची पर एक विशेष भूमिका

लिखी हुई थी। हमने प्रशिक्षणार्थियों के समूह को दो या तीन सह-समूहों में बाँटने की आम प्रथा, जिसमें प्रत्येक सह-समूह स्वयं अपने पात्र निर्धारित करते हैं, को नहीं अपनाया, क्योंकि हम इन सह-समूहों पर कुछ हावी होने वाले/वाक्पटु लोगों के प्रभुत्व की स्थिति से बचना चाहते थे।

नाटक कुछ इस प्रकार का था- 'लकड़ी के एक व्यापारी ने गाँव के कुछ प्रभावशाली लोगों को, स्थानीय जंगल को काटकर गाँव में लकड़ी का व्यापार करने की अनुमति देने के लिए, समझा- बुझा कर राज़ी कर लिया। उस व्यापारी ने इसके समर्थन में यह स्पष्टीकरण दिया कि इस व्यापार के आरम्भ करने से गाँव में रोज़गार के अवसर बढ़ेंगे व समृद्धि आएगी। वास्तव में, इस व्यापारी के सम्मान में एक आम सभा का आयोजन भी किया गया है, जिसके लिए शहर के कुछ पत्रकारों के साथ-साथ सारा गाँव उमड़ पड़ा है।' ताईयों से कहा गया कि वे इस दृश्य को विकसित कर उसका मंचन करें, जिसमें प्रत्येक ताई, अपनी भूमिका के अनुसार यथासमय व यथास्थान स्वतः दृश्य में सम्मिलित हो जाए।

जब दृश्य का वास्तव में मंचन किया गया तो गाँव की आम जनता (ताईयों) ने व्यापारी के विरुद्ध मोर्चा ले लिया। उनका तर्क था कि वे अपने गाँव का विकास करने में स्वयं सक्षम हैं, उन्हें इस कार्य को करने के लिए किसी बाहरी व्यक्ति की आवश्यकता नहीं है, जो इसके लिए उनके जंगलों को ही नष्ट कर दे। लोग अपनी भूमिका में इतने तल्लीन हो गए कि सड़क पर चलने वाली आम जनता भी रुककर पूछने लगी कि आखिर यह कहा-सुनी किस बात को ले करके है। यह भूमिका-नाटक मनोरंजन मात्र का प्रयास नहीं था। दृश्य के मंचन के दौरान गाँव की महिलाओं ने जिस प्रकार के संवाद चुने, वे पर्यावरण सम्बंधी उक्त विषय पर उनकी समझ को प्रदर्शित करते हैं तथा यह स्पष्ट करते हैं कि वे उनसे किस प्रकार से जुड़ी हुई हैं व किस प्रकार से प्रभावित होती हैं।

बाँध से होने वाले लाभ व हानि के विषय में भी चर्चा हुई। इससे बाँध से होने वाली संभावित हानियों, विशेषकर, बाँध पर काम कर रहे श्रमिकों की समस्याओं के विषय में गाँव की महिलाओं की जागरूकता का स्तर स्पष्ट होता है। ताईयाँ इस मत की थीं कि यद्यपि श्रमिक सुबह से रात तक बाँध पर कार्य करते हैं परन्तु उन्हें बहुत कम मेहनताना मिलता है जबकि सारा का सारा मुनाफा ठेकेदार व उसके आदमी ले जाते हैं। ताईयों की यह जानकारी अप्रत्याशित थी, विशेषकर उन महिलाओं में, जो गाँवों के जीवन-स्तर के मुकाबले बेहतर जीवन-स्तर की थीं व जिनके पास श्रमिकों की कठिनाईयों के विषय में जानने का कोई कारण नहीं था। यह बात ज़रूर थी, कि कहीं पर, तर्क-संगत विचारधारा व आवश्यक सूचनाओं की कमी देखी गई। हमने इस कमी को, आगामी प्रशिक्षण सत्रों में दूर करने की दृष्टि से नोट किया।

भूमिका-नाटक का समापन, व्यापारी को, गाँव के प्रभावशाली लोगों के विरोध के बावजूद, आम सहमति से गाँव के बाहर निकालकर हुआ। जब सभी नाटक के रोमाँच के बाद शाँत हुए तो चर्चा पर्यावरण व प्रदूषण तथा उसके विभिन्न पहलुओं की ओर स्वाभाविक रूप से मुड़ गई, जिसमें ताईयों ने तत्परता से भाग लिया।

**उपलब्ध संसाधनों का अनुकूलतम उपभोग...**

पर्यावरण प्रशिक्षण का एक अन्य पहलू, रद्दी सामग्रियों का प्रयोग करने के नवीन तरीकों के विषय में जानना था, विशेषकर, शिक्षण साधन बनाने के सम्बंध में। इस सत्र के लिए हमने प्रशिक्षणार्थियों को टूटी हुई चूड़ियों के टुकड़े, नारियल के कवच/खोल के टुकड़े, समुद्री सीप, इमली के बीज, बालू, सूखा हुआ गोबर, भुट्टे, भूसा, तरह-तरह के कागज़, स्केच पेन, चॉक, धागा, झाड़ू की सीकें, इत्यादि दीं।

आरम्भ में तो अधिकतर ने कागज़ व पेन का ही सहारा लिया, कुछ ने झाड़ू की सीकों, आदि से घर भी बनाया। परन्तु यह थोड़ा निराशाजनक था। अतः हमने ताईयों से कहा कि वे शिक्षण साधनों को बनाने के लिए उनके द्वारा रोजमर्रा के कामों में इस्तेमाल की जाने वाली किसी भी सामग्री का प्रयोग कर सकती हैं, न कि सिर्फ हमारे द्वारा दी गई सामग्रियों का। इसके बाद तो उनकी सृजनात्मकता का जैसे बाँध टूट गया हो। उनमें से एक ने बालू की मदद से बाँध का एक मॉडल बनाया, तो दूसरे ने कीचड़ से एक सुन्दर सा फल बनाया। परन्तु सबसे स्मरणीय कृति, साँप के काटने से उपचार कैसे हो, इस विषय पर रंगोली व कीचड़ से बनी एक चित्रकथा थी। इसमें प्राथमिक उपचार के बक्से को कीचड़ से बनाया गया था। सत्र के अंत में सभी कृतियों को प्रदर्शित किया गया तथा प्रत्येक ताई ने अपने द्वारा बनाई गई कृतियों के विषय में बताया।

प्रत्येक कृति की सभी के द्वारा अत्यधिक प्रशंसा की गई। सबसे उल्लेखनीय बात यह थी कि इस प्रयोग को सभी ताईयों द्वारा उनकी खेलवाड़ियों में दोहराया गया और वहाँ पर भी बच्चों ने उतनी ही सुन्दर व आकर्षक कृतियाँ बनाईं।

**प्रशिक्षण का अनुकूलतम उपयोग..**

सहभागिता पर आधारित प्रशिक्षण में भाग लेने तथा उसके अनुभव से आनन्दित होने के उपरान्त, ताईयों ने यही प्रणाली अपनी-अपनी खेलवाड़ियों के छात्रों पर भी अपनाई। वास्तव में इस प्रक्रिया को मज़बूत करने के उद्देश्य से, प्रत्येक सत्र के समाप्त होने के उपरान्त, हम इस बात पर ध्यान केन्द्रित करते कि किस प्रकार से ताईयों को उपलब्ध की गई जानकारियों को उनके माध्यम से गाँवों तक पहुँचाया जाए, विशेष रूप से खेलवाड़ियों के बच्चों तक। इसके लिए, बच्चों के लिए किस प्रकार के प्रयोग किए जाने हैं, जैसे कई प्रश्न पूछे जाते। हमने ताईयों की, बच्चों को यह पढ़ाने में मदद की, कि वे किस प्रकार से सरल शौचालय, पानी के गड्ढे, रद्दी काग़ज़ से नोटबुक बनाएँ, शिक्षा-सम्बंधी भ्रमणों का आयोजन करें, इत्यादि। इनमें से अधिकतर प्रयोग किए गए। जहाँ तक शिक्षा - संबंधी भ्रमणों का सम्बंध है, औपचारिक शिक्षा प्रणाली में आयोजित भ्रमणों के विपरीत, ये भ्रमण स्थानीय स्थलों तक ही सीमित थे और बच्चों ने बहुत आनंद उठाया। इन भ्रमणों के दौरान ही पर्यावरण के विभिन्न पहलुओं पर चर्चा होती। इसमें पर्यावरण के अपक्षीणन पर चर्चा भी सम्मिलित है। इन भ्रमणों का न सिर्फ शिक्षा की दृष्टि से महत्त्व था, बल्कि इससे खेलवाड़ी के छात्रों में सहभागिता की भावना पैदा हुई और खेलवाड़ियों में अन्य बच्चों ने भी प्रवेश लेने की उत्सुकता दिखाई। इसके बाद, जब बच्चों से अपनी पसंद के किसी विषय पर निबंध लिखने को कहा गया तो उनमें से सभी ने इन भ्रमणों व पिकनिकों पर निबंध लिखे।

**प्रशिक्षकों का प्रशिक्षण ...**

हम ताईयों को हमेशा ही प्रशिक्षण देने नहीं जा रहे हैं। अतः यह आवश्यक हो जाता है कि हम अपने स्थानीय प्रशिक्षकों को पूर्ण रूप से स्वतः प्रशिक्षण देने की कला में निपुण बनाएँ। इसमें प्रशिक्षण के लिए आरम्भिक कार्य करने, विषयों को चुनने से लेकर उनके प्रस्तुतीकरण की योजना बनाने तथा वास्तविक प्रशिक्षण के सत्र के आयोजन का कार्य सम्मिलित है। प्रशिक्षकों के प्रशिक्षण का यह कार्य चुनौतीपूर्ण था और हमने इसे स्वीकारा। हालाँकि हमारे स्थानीय प्रशिक्षकों ने कभी भी किसी प्रशिक्षण सत्र का आयोजन स्वतः नहीं किया था, फिर भी उन्हें इस प्रक्रिया का प्रत्यक्ष अनुभव देने के उद्देश्य से हमारे द्वारा आयोजित प्रशिक्षण सत्रों में नियमित रूप से भाग लेने के लिए प्रोत्साहित किया गया। अतः वे अनौपचारिक, सहभागिता पर आधारित प्रशिक्षण प्रक्रिया को शीघ्र ही समझ गए। उन्होंने विषय सामग्री को उदाहरण देकर समझाने के लिए नवीन शिक्षण साधनों को स्वयं तैयार कर उनका इस्तेमाल भी किया। परन्तु इस प्रकार के प्रशिक्षण को आयोजित करने के लिए उन्हें बहुत मेहनत करनी पड़ी, विशेष रूप से इससे भली-भाँति परिचित होने से पहले तक। आरम्भ में उन्हें अधिक पढ़ने, आवश्यक बातों को लिख कर रखने, अधिक जानकारी एकत्र करने, आदि के लिए समझाना-बुझाना पड़ता था। प्रत्येक सुबह, पिछले दिन उनके द्वारा किए गए कार्य की समीक्षा करनी पड़ती थी। परन्तु जैसे-जैसे प्रशिक्षण आगे बढ़ता गया, उनमें अधिक उत्साह व विश्वास पैदा हुआ और फिर उन्हें किसी देखरेख की आवश्यकता नहीं रही- अब प्रशिक्षण पूर्णरूप से विकेंद्रित व सहभागिता पर आधारित हो गया था।

*(हिन्दी अनुवाद : मीता श्रीवास्तव)* ❑

Contd. from pg. 5

or State Governments. In the process of studying the various problems involved, however, certain new ideas have come to our mind which we have frankly expressed. We have also tried to give more informative statistics, figures and tables, which we feel will be useful to the Government and others in any future action they may wish to take.

As has been mentioned earlier our task was to enquire why the previous recommendations had not been put into effect. In this connection we feel that the authorities concerned have not tackled the problem in its entirety and viewed the previous suggestions as a comprehensive whole, thus leaving the deadlock in the development on indigenous systems of medicine, unsolved. We now hope that earnest and sincere efforts will be made by all concerned to implement our suggestions to the full extent. The Central Government, the State Governments, the Boards of Indian Medicine and the practitioners themselves should squarely face the huge task ahead of them and make honest attempts to recognise the Ayurvedic system of medicine and to raise it to a high status it deserves.

Our aim has been to find out ways and means of resuscitating the ancient system of medicine in order that it may benefit not only science but also the suffering humanity. In this task we have expressed our views very frankly, the spirit of which, we hope, will be appreciated.

We are confident that an Independent India striving to revive all our ancient culture will not fall behind in restoring Ayurveda to its pristine glory and by trying to absorb the best in other systems of medicine will produce one integrated system of Indian Medicine as early as possible.

Our remarks about the ways and means of improving the method of training, research, etc. in Ayurveda will apply generally to other indigenous systems of medicine like Siddha and Unani also."

Expressing their thanks to the various organisations and individuals involved in preparing the report, the authors closed this chapter. ❑

**FREE ABSTRACTING**

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