HEALTH SCREENING OF URBAN POOR WOMEN

By

ANITHA S.

A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN - DEEMED UNIVERSITY, COIMBATORE - 641 043

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN HOME SCIENCE EXTENSION EDUCATION

APRIL - 1998

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Certified as **Bonafide** Research Work

Signature of the Head
of the Department

Signature of the Guide

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Introduction

INTRODUCTION

As enunciated by the United Nations, women's health features as an important Human Development indicator in placing a nation at a particular ordinal position among the nations of the world.

While adopting the goal of "Health For All" by 2000 A.D, the World Health Organisation (WHO), has expressed concern over the gender issues related to health, with special reference to differential exposure to risks, access to the benefits of technology and health care, rights and responsibilities and control over their lives (WHO, 1995).

Women's status and their health are intricately intertwined. Any attempt to foster women's equality will be successful only if their health status is cared for, taking note of the cultural ethos of the community (Devadas, 1997).

Women's health matters not only to women themselves but also to their own children and families and to their communities as a whole. Women have all along been the health providers to their families and communities. Intra household tasks related to health such as child bearing, rearing, breast feeding, personal hygiene, prophylactic and curative measures, first aid and home nursing are the inclusive preserves of women.

As for the community, women form the backbone of the health care system in almost every country. They give long years of dedicated services as community health advocates and workers, such as Anganwadi workers, nurses, midwives, doctors, pharmacists, nutritionists and health educators. As Shiva (1997) aptly puts it, if the Anganwadi workers, ANMs and the nurses in India stopped working for a few days the health care services would come to a stand still and there would be drastic deterioration.

However, the gender development index, the maternal mortality rate, the inverse sex ratio etc., reflect the poor status of women's own health. Deeply entrenched partiarchal values determine the health measures and the health programmes resulting in gender bias and gender insensitivity in health care.

Women's health status affects their productivity and their contribution to development particularly in poor households where women's work is essential for family survival. The pervasive neglect of women's productive and reproductive health is a deterring factor to the optimal utilisation of women power. It is important to recognise women's health needs during the entire life cycle - infancy, adolescence, adulthood and old age.

The magnitude of the problems of under-nutrition and malnutrition in India is of staggering dimensions. Malnutrition being a reflection of unfulfilled dietary demands, is most likely to occur during the three most demanding periods in human life (i) growing age upto adolescence (ii) pregnancy and (iii) the period of lactation. Therefore, the worst impact of malnutrition is on the people falling within these three groups and especially those in the low income brackets. Malnutrition ultimately manifests in increased maternal as well as infant mortality and morbidity rates (Devadas, 1997).

The Maternal Mortality Rate in India ie., 560/100000, is the third highest among the South and East Asian Countries, next only to Afghanistan and Bangladesh. Furthermore, the alarming fact is that for every woman who dies, 18 others suffer from other consequences of pregnancy such as abortion, axemia, anaemia, bleeding, puerperium sepsis etc. Women continue to be targeted to carry the entire burden of conception, contraception and child rearing (The Progress of Nations, 1996).

Over the five decades since Independence, there has been a tremendous increases in the health services in India. Against 725 Primary Health Centres (PHCs) in 1951, there were 21,693 in 1995 with 1,31,900 subcentres and 2,385

Community Health Centres. Over Rs. 70,000 crores have been spent annually on provision of basic health care services (Durgaprasad, 1997).

Despite the expansion of primary health care facilities, even today over 80 per cent of the health care is in private hands where curative health care is emphasized. In a market economy where the quality of health care is influenced by the purchasing power, women who are socially and economically disadvantaged are vulnerable.

To make the health care system more meaningful and sustainable, it should be committed to prevention; proximate to the needy and more responsive to their needs and problems. Furthermore, health care should not be viewed in isolation but as part of the development scenario. The current trend is to integrate health components in women development programmes such as Development of Women and Children in the Rural Areas (DWCRA), Indira Mahila Yojana (IMY) etc., where convergence of developmental inputs and services is given focal attention.

The Avinashilingam Education Trust has been given the responsibility to implement the Indira Mahila Yojana (IMY) Programme in Coimbatore District, sponsored by the Department of Women and Child Development of the Ministry of Human Resource Development, Government of India. Forty slums in Coimbatore Corporation areas have been covered under the

IMY with 8000 women enrolled in women's groups called Indira Mahila Kendras (IMKs). The IMKs (with 200 women members each) aim at collective action and articulation by the women at the grassroots through awareness building, income generation and convergence of developmental inputs and services. Health is a crucial developmental input. Therefore health screening of the members has been envisaged as a major activity for empowering the women. This research study has therefore been undertaken with the following objectives :

To

* motivate the urban poor women to get themselves screened for health and nutritional status;
* select parameters to assess the health and nutritional status;
* involve medical and health care personnel for technical help;
* conduct health and nutritional screening for the urban poor women selected;
* categorise the women screened according to the health and nutritional status;
* examine the relationship of certain factors with the health and nutritional problems and
* plan strategies and measures for alleviating the health and nutritional problems identified among the urban poor women.

Review of Literature

II REVIEW OF LITERATURE

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

A. Women's Health Scenario and

B. Health Care Delivery System in India

A. Women's Health Scenario

Issues which are fundamental to women's health care are sanitation, nutrition, infection, stress, overwork, work hazards, drug use, pregnancy, child birth and sexual harassment. Women are and have always been providers of health care, yet they have little or no control over the shaping of health services, research, the environment or the work they do (Kumar, 1990 and Mehta and Sethi, 1997).

The consequences of gender discrimination in health are reflected in the demographic status of women in India, interms of unfavourable sex-ratio. Other indicators like sporadic cases of female foeticide and infanticide and unfavourable juvenile sex-ratio show that there is threat evident to a woman's life throughout her biological cycle. Even when the life is saved, women often remain undernourished and are constantly under morbidity conditions. It needs to be underscored that women's right to a healthy life is as important as their right to life (Kielman, 1983 and World Conference on Women, 1995).

In developing countries where large number of people are suffering from the consequence of under development, women and their children are the hardest hit by poverty, famine, squalid living conditions, disease and lack of health care. As for India, the declining sex ratio of 929 females per 1000 males in 1991; a low female literacy at 39.4 per cent; a high birth rate of 30.5 in urban areas and 32 in rural areas and a low death rate at 10.2 per thousand population; a low mean age of marriage at 18.7 years (much less in rural areas); coupled with a low couple protection rate at 40 per cent and a birth parity of 3.7 to 2.5 are matters of grave concern responsible for sliding down in the ladder of Human Development Indices (Durgaprasad, 1997).

Maternal deaths related to pregnancy and child birth constituted 1.1 per cent of the total reported deaths in India in 1991. Further 15 per cent of the deaths among women are in the reproductive age group (15-44 years). Estimates show that approximately 1,20,000 die of maternity related causes every year. Bleeding after pregnancy, puerperium and anaemia are the major causes of death followed by abortion and toxaemia. The age specific mortality data shows that the female deaths are higher than that of males in all the age

groups upto 35 years. It is only after women have passed their peak child-bearing years that the female mortality rates begin to decline and become lower than the male rates.

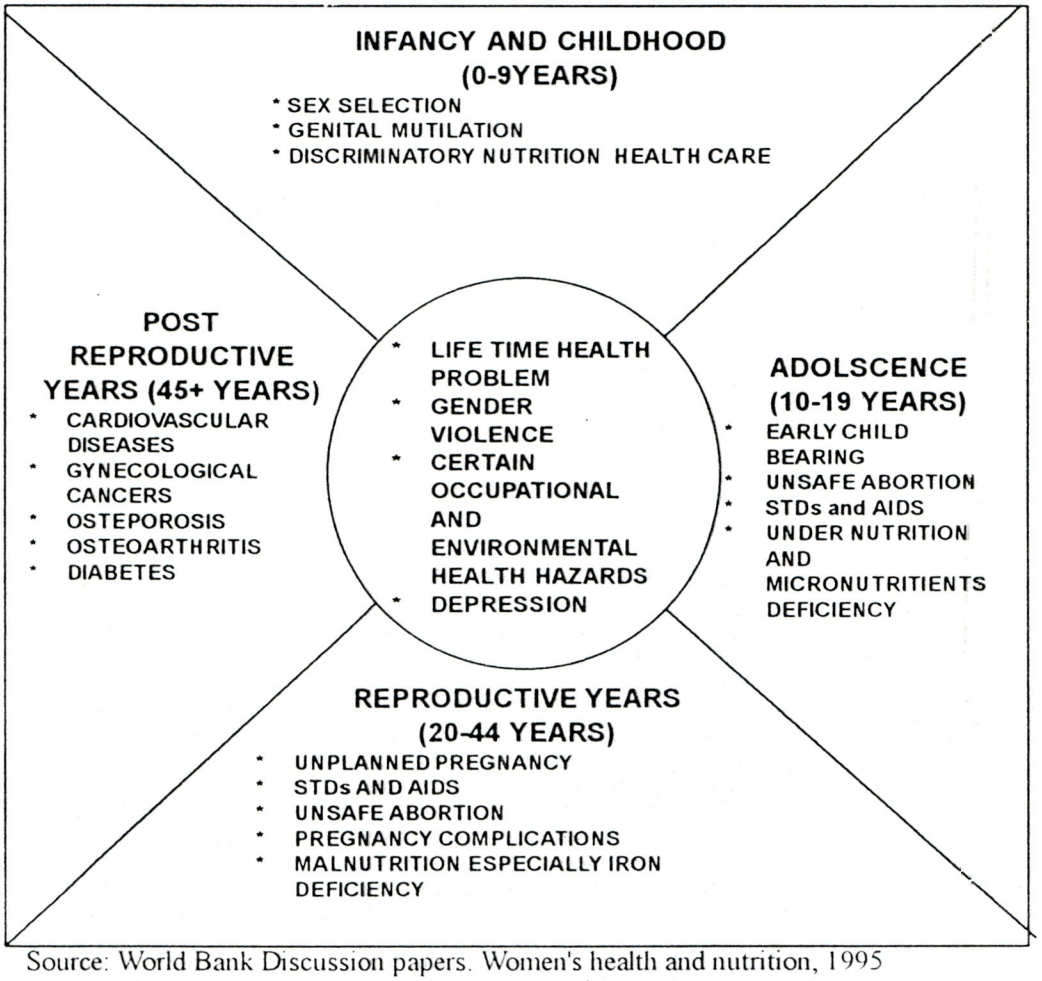
Furthermore for every maternal death, 13 to 100 women face severe life threatening complications. Systematic data on the morbidity conditions of women are not available. General gynaecological morbidities, morbidities that are related to contraception use, sterilization, menstruation, menopause, the incidence of cancer of the breast and reproductive organs and morbidities related to specific nature of work that women carry out, need to be systematically studied. Much of women's morbidities are treated as normal and are attributed to the female biology. The secrecy associated with much of women's morbidities conceal their actual incidence and prevent effective intervention, although there are programmes for family welfare, mother and child welfare, safe motherhood and child's survival (Shiva, 1997).

The India Country Report for the IV World Conference of Women at Beijing (1995), prepared by the Department of Women and Child Development recognized the increasing feminization of poverty and the negative impact of macro-economic policies and the continued discrimination and its impact on women's health. The 1996 World Health Report of WHO speaks

of increased resurgence of communicable diseases, vector-borne diseases and water-borne diseases. Women suffer all this and much more. The most vulnerable, health wise are widowed, disabled and refugee women. Their numbers and their suffering are both increasing.

The strange invisibility and social acceptance of the girl child's neglect and the denial of her basic rights begin within the four walls of her own home. This discrimination is born of cultural and religious values that spring from the patriachal, patrilineal Indian ethos. Continuous restriction of food due to poverty, social customs, rituals and taboos lead to nutritional deprivation of females (Bhardan, 1984 and Department of Women and Child Development, Government of India, 1988).

Many of the health problems affecting women of reproductive age, their new borns and older women begin in childhood and adolescence. For example, inadequate diet in youth and adolescence can lead to anaemia or stunting growth which contribute to complications in child birth and under weight babies and insufficient calcium can lead to osteoporosis later in life. Figure 1, points out the age specific nutrition and health problems women face.



Source: World Bank Discussion papers. Women's health and nutrition, 1995

HEALTH AND NUTRITION PROBLEMS AFFECTING WOMEN EXCLUSIVELY OR PREDOMINANTLY DURING SPECIFIC STAGES OF THE LIFE CYCLE

Figure 1

Although both men and women are affected by nutritional factors, women for biological reasons and social discrimination, have a higher risk of suffering from health-impairing nutritional deficiencies. Insufficient iron in the diet leads to anaemia, a condition that causes extreme fatigue and lower resistance to disease, and in women, difficulties in pregnancy and child birth. In developing countries, about 55 per cent of pregnant women and 44 per cent of all women suffer from anaemia. In India, the problem of anaemia is very huge, with 70 per cent women (90 per cent of pregnant women) being anaemic. About 40 to 50 per cent adolescents are also anaemic. Anaemia is the cause of maternal deaths during child birth in 30 per cent cases. It is also responsible for the low birth weight in the new born, bleeding during labour and many other complications (WHO, 1995; Mehta and Sethi 1997 and Health Action, 1998).

B. Health Care Delivery System in India

At the threshold of the 21st century, global economic, social and political shifts make it imperative for the perspectives and contributions of women to be brought more forcefully into the health and development arena. Accordingly, several of the goals of "Health For All" by 2000 A.D. as shown in Table I, relate to women's health.

TABLE 1

GOALS FOR HEALTH AND FAMILY WELFARE PROGRAMME 2000 AD.

Sl. No.	Indicator	Level as quoted in NHP	Achievement: 1990	Goal 2000	Latest available
1.	Infant mortality rate	Rural 136 (1978)	86		82 (1993)
		Urban 70 (1978)	51		45 (1993)
		Total 125 (1978)	80	below 60	74 (1992)
	Prenatal mortality	67 (1976)	49.6	30-35	47.5 (1992)
2	Crude death rate	Around 14	9.6	9.0	9.2 (1993)
3	Pre-school child (1-5 years) mortality	24 (1976-77)	33.3 (0-4 years, 1988)	10	26.5 (1992)
4	Maternal mortality rate	4-5 (1976)	-	below 2	4(1993)
5	Life expectancy at birth (years) Male	52.6 (1976-81)	58.1 (1986-91)	64	60.5 (1991-96)
	Female	51.6 (1976-81)	59.1 (1986-91)	64	61.7 (1991-96)
6	Babies with birth weight below 2500 gms (percentage)	30		10	30 (1992)
7	Crude birth rate	Around 35	29.9	21.0	28.5 (1993)
8	Effective couple protection (percentage)	23.6 (March 82)		60.0	45.4 (March, 1994)
9	Net reproduction rate (NRR)	1.48 (1981)	-	1.00	-
10	Growth rate (annual)	2.24 (1971-81)	2.03	1.20	2.1 (1981-1991)
11	Family size	4.4 (1975)	40 (1988)	2.3	-
12	Pregnant mothers receiving ante-natal care (%)	40-50	60 (1988)	100	82 (1993)
13	Deliveries by trained birth attendants (%)	30-35	40-45 (1988)	100	47.3 (1992)
14	Immunization status(% coverage) TT (for pregnant women) TT (for school children)	20	78.16	100	82.48 (1993-94)
	10 years	-	60.5	100	60.5
	16 years	20	86.45	100	86.45
	DPT (children below 3 years)	25	98.19	85	93.10 (1993-94)
	Polio (infants)	5	98.86	85	93.57 (1993-94)
	BCG (infants)	65	101.51	85	96.95 (1993-94)
	DT (new school entrants 5-6 years)	20	82.0	85	82.0
	Typhoid (new school entrants 5-6 years)	2	62.6 (1987-88)	85	62.6
15	Leprosy - percentage of disease arrested cases out of those detected	20	24.46	80	74.86
16	TB-percentage of disease arrested cases out of those detected	50	66	90	66
17	Blindness - Incidence of (%)	1.4	1.49	0.3	1.49

Sources: 1. Government of India, Ministry of Health and Family Welfare, Directorate General of Health Services, Central Bureau of Health Intelligence, Health Information of India, 1993, Nirmal Bhavan, New Delhi, 1994

2. Ali Almas and Pratap Sisodia, "Health Profile of India: An Overview", Health for the millions, Souvenir, Voluntary Health Association of India, New Delhi, October, 1995, pp. 47 to 53.

The health care facilities offered by a community in the form of medical services for women, is a significant index of the emphasis that a community places on the health of its women. Improving women's health and eliminating inequalities requires partnerships of many kinds : women and men; old and young, international agencies, government and NGO's, researchers, health professionals, women's health advocates, programme planners and users of health services. In looking at women and health, there is a tendency to concentrate on women in need of health care or women as users of health services (WHO, 1995).

The overall scenario of health care in India is an admixture of light and shade; of some remarkable achievements and also grave failures. However, over the last fifty years a vast network of health care services has been built up (Table II).

TABLE II

EXPANSION OF HEALTH SERVICES 1951 - 1995

Items	1951	1961	1971	1981	1991	1992	1993	1995
Primary Health centres	725	2656	5112	5740	20450	20719	21009	21693
Sub centres	-	-	28489	51405	131958	131454	131470	131900
Community Health centres	0	0	0	217	2071	2193	2289	2385
Hospital Beds (All types)	171178	230000	348655	569495	810548	-	-	-
Medical colleges	28	60	98	111	128	146	146	-
Doctors	61840	83756	151129	268712	394068	410875	-	-
Dentists	3290	3582	5512	8648	10751	11300	19523	-
Nurses	16550	35584	80620	154280	340208	385410	449351	-

Source : Government of India, Ministry of Finance, Economic Division, Economic Survey 1995-96, New Delhi, 1996.

The problems of health care are enormous. Access to primary health care is inadequate to the majority of the population because of non-availability of basic preventive and promotive health care packages, clinics, doctors, drugs and paramedical personnel in rural areas. Consequently, 60 - 80 per cent of expenditure on medical and health care are borne by people themselves in our country, which is too high a proportion for our levels of poverty. Health for All by 2000 AD appears to be a distant dream.

Kasthuri (1994) in her study revealed that there was significant association between the peri-natal mortality and the distance travelled to get care.

Studies by Bhardwaj et al. (1995) demonstrated the relationship between maternal care and neonatal deaths. The post natal mortality was found to be high (ie., 90.9/1000 live births) where the pregnant women had not received any kind of antenatal care from PHCs. This study was supported by those by Chowdary et al. (1989) and Bhattacharya (1991). The lowest morbidity (11.02 per cent) was reported by the mothers who had received early care ie., from the 16th week of gestation and the highest morbidity (83.05 per cent), when no antenatal care was offered to mothers. The study also revealed that children of working mothers suffered more

from illness. Apart from these, attributes like mothers' educational status and percapita family income were also found as important factors determining occurrence of illness during neo-natal period.

The health goals must be integrated with those of the over all socio-economic goals and meaningful and substainable changes in the organisation and delivery of health services (Kaur and Goyal, 1996). Evidence from around the world has demonstrated that investment in people's health is fundamental to improving a country's general welfare and economic growth, as well as to reducing poverty (World Bank, 1993). Public investment in women's health and nutrition in particular can contribute to balanced and sustainable economic growth (World Bank, 1995).

The essential services to promote women's health care are as given in Table III.

TABLE III

ESSENTIAL SERVICES FOR WOMENS HEALTH

Essential Health Interventions	Essential Behvaiour Change Interventions
Prevention and Management of Unwanted Pregnancies	**Facility Based Obsteric Care, Post Partom Care**
* Family planning	* Monitoring for infection and Hemorrhage
* Management complications from unsafe abortion	**Prevention and Management of Sexually Transmitted Diseases**
* Termination of Pregnancy	* Condom promotion and distribution * Prenatal screening and treatment for syphilis * Symptomatic case management * Screening and treatment of commercial sex workers
Pregnancy Services **Prenatal Care**	**Promotion of Positive Health Practices**
* Prompt detection, management and referral of pregnancy complications * Tetanus toxoid immunization * Iron and folate supplements	* Delayed child bearing among adolescents * Safe sex * Adequate nutrition * Increased male support
* Iodine supplements, where iodine deficiency disorder in endemic * Malaria drophylaxis in endemic areas	**Eliminating Harmful Practices**
Safe Delivery	* Public education and services to discourage gender discrimination, domestic violence and rape
* Hygienic Routine Delivery	* Public education to discourage female genital mutilation
* Detection Management and Referral of Obsteric complications	

Source : World Bank Discussion Papers : Women's Health and Nutrition, 1995.

Deeply entrenched patriarchal values are reflected in health messages, health programmes as well as running of the medical, health and other institutions including those related to medical and health education (Devadas, 1997). The special problems in the utilisation of health services by women are :

* discrimination at the hands of the medical system due to lack of understanding of the social situation of the women in the poverty group.
* non-availability of female doctors
* the timing of the dispensaries/hospitals not being convenient and
* belief by women in traditional methods.

Governments must improve the health outlook for their female citizens and enact and promote gender - sensitive policies to strengthen the health delivery system and redress social, educational and economic inequities. Existing services can be improved, extended and tailored to fit local conditions. Governments could recruit and train more female health providers. National education programmes can be used to promote positive health behaviours related to family planning, nutrition, AIDS prevention and tobacco consumption.

Non-governmental organisations that are well respected in the community can be helpful in reaching and representing disadvantaged women. They can play a vital role by increasing policy makers' awareness of the real social and economic gains from improvements in women's health.

International agencies can help by informing national decision makers about lessons gained from world wide experience and by supporting interventions that have proved cost-effective. External inputs may be particularly helpful in the design of demonstration projects and the expansion of women's health programmes to a national scale (World Bank, 1995).

Despite the availability of health services, the issue of women's access to health care is a complex one being influenced by factors such as need, permission, ability and availability (Chatterjee, 1983).

Need is the extent of ill-health among women, as shown by data on female morbidity and mortality.

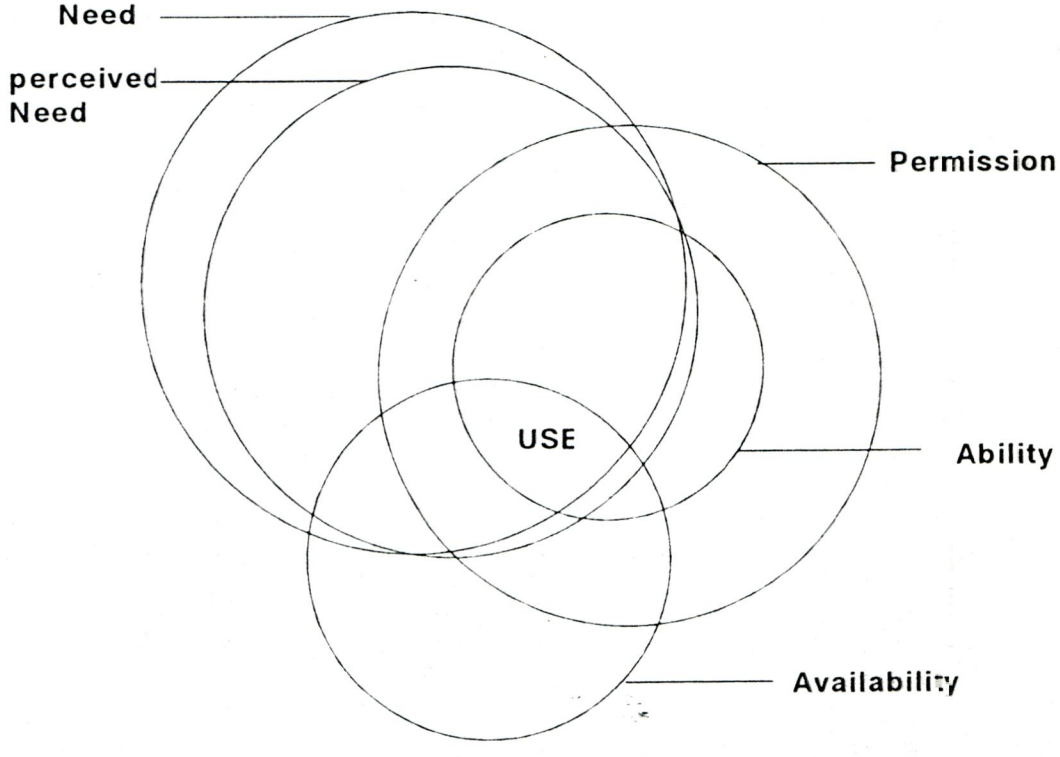
Permission is the result of social factors which dictate whether women can seek such health care outside the home, as well as define women's role as health care providers within the household.

Ability is determined by economic factors which enable women to meet the costs of health care.

Availability refers to the extent of health services for women (Figure 2).

In the Indian context, while need is large, it is qualified by perceptions of illness and women's conditioning to tolerate suffering ie., perceived need is smaller. Severely constrained permission and ability restrict demand by women for health services. Effective demand or use of health services, is further reduced by the inadequate fit between needs and services available.

Supplementation of allopathic medical facilities with indigenous and traditional systems as in Kerala and Tanil Nadu can be attempted. Greater stress on preventive health care, medicine and health education should be laid (Giridhar, 1995). Nutritional interventions should be followed up with promotive health care programmes. Health literacy efforts should be made integral to preventive, promotive, curative and rehabilitative health care. Meaningful involvement of the private sector in all these endeavours would go a long way in evolving a people oriented and a sustainable health care system (Durgaprasad, 1997).



DETERMINANTS FOR USE OF HEALTH SERVICES

Figure 2

Methodology

III METHODOLOGY

The methodology for the study on "Health Screening of Urban Poor Women" included the following steps :

A. Selection of the Locale for the Study

B. Organising the Screening Campaigns

C. Categorising the Women Screened, according to their Health and Nutrition Status

D. Arranging for Follow up of the Cases

A. Selection of the Locale for the Study

Five urban slums from Coimbatore Corporation, where the Avinashilingam Trust has initiated Indira Mahila Kendras (IMKS) were selected for this study.

B. Organising the Screening Campaigns

This aspect of the study included the following :

1. Creating awareness among women on the need for health screening;
2. Contacting the officials for technical help;
3. Developing tools for assessing the Health and Nutritional Status and
4. Conducting the Campaigns.

1. Creating awareness among women on the need for health screening

The leaders of the selected IMKs in the urban areas were met individually and oriented about the importance of health and nutrition for their members. Hand bills prepared on the importance of health screening of women were printed and distributed to all the families in the areas selected.

2. Contacting the officials for technical help

The various health/medical infrastructure available in Coimbatore City - Governmental and Non-governmental were approached for technical help, explaining the purpose of this effort. They included the Silovam Eye Hospital, the P.S.G. Medical College, Integrated Child Development Services (ICDS) and the Coimbatore's Corporation health officials.

3. Developing tools for assessing the health and nutritional status

An interview schedule was developed to assess the socio-economic background of the members of the IMKs (Appendix I).

According to Devadas (1996) interview is the oral version of questionnaire or schedule in which the subject supplies the needed information through a face to face

relationship. In this method, the interviewer asks questions to informants pertaining to the survey and collects the desired information (Gupta, 1996).

A checklist was also prepared for clinical assessment to be filled in by the doctors (Appendix II).

4. Conducting the campaigns

Health check up campaigns were conducted in the five urban slums selected (Plate I). The Corporation Health authorities were approached for drugs for common ailments for free distribution to the most needy.

In total, 771 women were covered in these screening campaigns. The mothers insisted on health screening of their children also; therefore the screening included also children. In total 489 children benefitted out of the health screening.

C. Categorising the Women Screened, according to their Health and Nutritional Status and Identifying the Women 'At Risk'

The women screened were categorised according to the health and nutritional disorders as guided by the medical team. The women 'at risk' requiring special attention were enlisted separately for immediate medical help. The same was done for the children screened.

Plate.1 HEALTH SCREENING IN PROGRESS

The parameters used to determine the general health and nutritional status were the heights, weights and Body Mass Index (BMI).

As pointed out by the Indian Council of Medical Research (ICMR), 1995, age and body weight largely determine the nutrient requirements of an individual. Body Weights and heights of children reflect their state of health and growth rate, while adult weight and height represent what can be attained by an individual with normal growth. The ICMR standards of the height of the Reference Man and Woman is 163 cm and 151 cm respectively; the body weight of the Reference Man and Woman should be 60 kg and 50 kg respectively. In the health check up, the heights and weights of women were noted and compared with those of the ICMR standards.

The body weight of the women was also assessed by the Body Mass Index (BMI) calculated as per the following formula :

$$BMI = \frac{\text{Weight in kilograms (kg)}}{\text{Height in meter square } (m^2)}$$

Based on the BMI, the women screened were graded following the classification given by Garrow (1993) as detailed below :

BMI Class	Presumptive diagnosis
< 16.0	CED* Grade III (Severe)
16.0-17.0	CED* Grade II (Moderate)
17.0-18.5	CED* Grade I (Mild)
18.5-20.0	Low weight normal
21.0 - 25.0	Normal
26.0 - 30.0	Obese (Grade I)
> 31.0	Obese (Grade II)

* Chronic Energy Deficiency

D. Arranging for Follow up of the Cases

Copies of the consolidated reports of the areas were forwarded to the Corporation Health Officials for further follow - up in terms of special campaigns and for measures to improve the sanitation and environment.

Special cases were referred to the specialists in P.S.G. hospitals and Silovam Eye Hospital.

Results And Discussion

IV RESULTS AND DISCUSSION

The results of this study are presented and discussed under the following headings :

A. Personal Details of the Women under Study

B. General Health Profile of the Women

C. Nutritional Disorders prevalent among the Women

D. Health Problems of the Women and

E. Health Status of the Children screened

A. Personal Details of the Women under Study

All the members of the IMKs under reference were adult women in the age range of 18 to 55 years, with 62 per cent in the 18 to 40 years. Table IV gives details of family size, occupation and income.

TABLE IV

PERSONAL DETAILS OF THE WOMEN UNDER STUDY

Details	Percentage of Women N : 771
Family size	
1 - 3	29.3
4 - 5	49.7
6 - 7	17.0
Above 7	4.0
Occupation of the head	
Organised sector	0.8
Unorganised sector	87.3
Self-employed	11.9
Monthly income in Rs.	
Below 500	21.0
501 - 1000	67.0
1001 - 1500	5.2
1501 - 2000	3.4
2000 and above	3.4

As for family size, a majority of over 70 per cent had four or more members. In Karumbukadai, a Muslim dominated area, the family size was found to be very large with 41.6 per cent having more than five members in their families.

Occupation wise, 87.3 per cent families belonged to the unorganised sector. While 11.9 per cent were self-employed, only for less than one per cent women, the heads were employed in the salaried class.

With regard to income, 96.6 per cent families could be ranked in the 'poor' category as per the stipulations by the Housing Urban Development Corporation (HUDCO, 1994) ie., earning income below Rs. 2000 per month.

B. General Health Profile of the Women

This aspect of the study is discussed on the following lines :

1. Heights and Weights of the Women
2. Body Mass Index

1. Heights and Weights of the Women

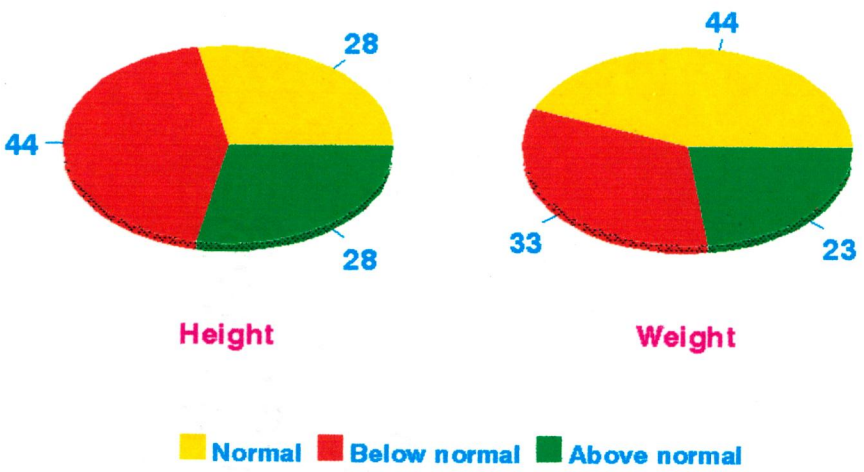
The heights and weights of the women were compared with those of the Reference Woman by ICMR (1995). Table V and Figure 3 illustrate the position.

TABLE V

HEIGHTS AND WEIGHTS OF WOMEN UNDER STUDY IN COMPARISON WITH ICMR 'REFERENCE WOMAN'

Details	Distribution of the women	
	Heights (cm)	Weights (kg)
On par with ICMR 'Reference Woman'	216 (28)	340 (44)
Below ICMR standards	339 (44)	256 (33)
Above ICMR standards	216 (28)	175 (23)

Figures in parantheses indicate the percentages
Note : Height of ICMR 'Reference Woman' - 151 CM
Weight of ICMR 'Reference Woman' - 50 kgs



Heights and Weights of Women under study in comparison with ICMR "Reference Woman"

Figure 3

As for the heights, only 28 per cent women were on par with the ICMR 'Reference Woman'. A considerable majority of 44 per cent could be rated only 'below ICMR standards'. Twenty eight per cent could be classified as 'above ICMR standards'.

With regard to weights, 44 per cent were on par with ICMR 'Reference Woman'; 33 per cent were below the ICMR standards and 23 per cent were above the ICMR standards.

2. Body Mass Index

The Body Mass Index (BMI) showed wide variations, as revealed in Table VI and Figure 4.

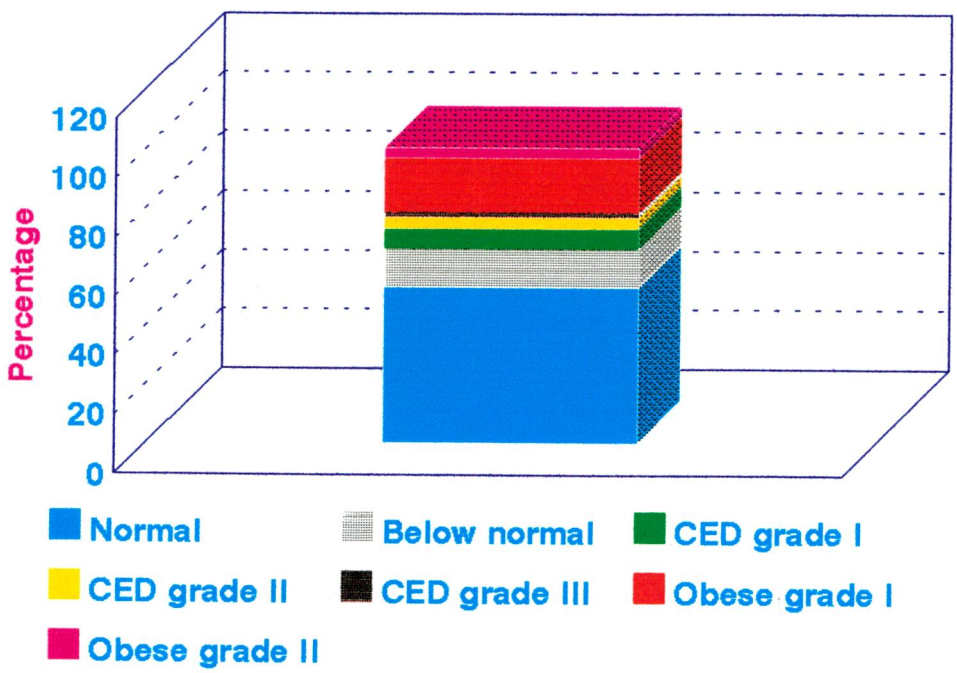
TABLE VI

DISTRIBUTION OF THE WOMEN UNDER STUDY ACCORDING TO BODY MASS INDEX (BMI)

BMI	Category	Total N:771	Areawise Distribution				
			Karumbukkadai N:190	Elango Nagar & Avaram-palayam (N:164)	Periyar Nagar N:150	Selvapuram South N:150	Venkitapuram N:117
Normal	21.0-25.0	406 (52.6)	106 (55.7)	85 (51.8)	75 (50.0)	85 (56.6)	55 (47.0)
Below Normal	18.5-20.0	105 (13.2)	24 (12.6)	22 (13.4)	23 (15.3)	18 (12.0)	15 (12.8)
CED* Grade I	17.0-18.5	53 (6.8)	4 (2.1)	27 (16.4)	8 (5.3)	5 (3.3)	9 (7.6)
CED* Grade II	16.0-17.0	29 (3.7)	7 (3.6)	3 (1.8)	11 (7.3)	1 (0.6)	7 (5.9)
CED* Grade III	<16.0	12 (1.5)	4 (2.1)	-	7 (4.6)	1 (0.6)	-
Obese Grade I	26.0-30.0	142 (18.4)	35 (18.4)	25 (15.2)	21 (14.0)	35 (23.3)	26 (22.2)
Obese Grade II	> 31.0	28 (3.6)	10 (5.2)	2 (1.2)	5 (3.3)	6 (4.0)	5 (4.2)

CED* - Chronic Energy Deficiency

Figures in parantheses indicate percentage of women



Distribution of the women under study according to Body Mass Index (BMI)

Fig. 4

Only 52.6 per cent could be categorised as having the correct BMI. Areawise, 55.7 per cent in Karumbukkadai, 51.8 per cent in Elango Nagar and Avarampalayam, 50 per cent in Periyar Nagar, 56.6 per cent in Selvapuram South and 47 per cent in Venkitapuram were found to have normal BMI. The overall analysis shows that 13.2 per cent of women were found to be below normal. Areawise 12.6 per cent in Karumbukkadai, 13.4 per cent in Elango Nagar and Avarampalayam, 15.3 per cent in Periyar Nagar, 12 per cent in Selvapuram South and 12.8 per cent in Venkitapuram were found to be having BMI as 'below normal'. This may be due to the poor nutritional status of these women.

However, it was surprising to find that 6.8 per cent, 3.7 per cent and 1.5 per cent of women under study were found to have a chronic energy deficiency and were assigned the I, II and III grades respectively.

Areawise 2.1 per cent in Karumbukkadai, 16.4 in Elango Nagar and Avarampalayam, 5.3 per cent in Periyar Nagar, 3.3 per cent in Selvapuram South and 7.6 per cent in Venkitapuram were under chronic energy deficiency (CED) of Grade I.

As for chronic energy deficiency (CED) of Grade II 3.6 per cent women in Karumbukadai, 1.8 per cent in Elango Nagar and Avarampalayam, 7.3 per cent in Periyar Nagar, 0.6 per

cent in Selvapuram South and 5.9 per cent in Venkitapuram fell in this category.

With regard to CED grade III, 2.1 per cent in Karumbukkadai, 4.6 per cent in Periyar Nagar and 0.6 per cent in Selvapuram South were in this category.

However, it was surprising to find 18.4 per cent of women under study to be obese grade I and 3.6 to be obese grade II. Areawise, 18.4 per cent of Women in Karumbukkadai, 15.2 per cent in Elango Nagar and Avarampalayam, 14 per cent in Periyar Nagar, 23.3 per cent in Selvapuram South and 22.2 per cent in Venkitapuram were classified as obese grade I.

As for obese grade II, 5.2 per cent in Karumbukkadai, 1.2 per cent of Elango Nagar and Avarampalayam, 3.3 per cent in Periyar Nagar, four per cent in Selvapuram South and 4.2 per cent in Venkitapuram were found to be in this category. This classification of obese grade I and II may be attributed to their diets comprising predominantly cereals, warranting the need for nutrition education.

C. Nutritional Disorders prevalent among Women

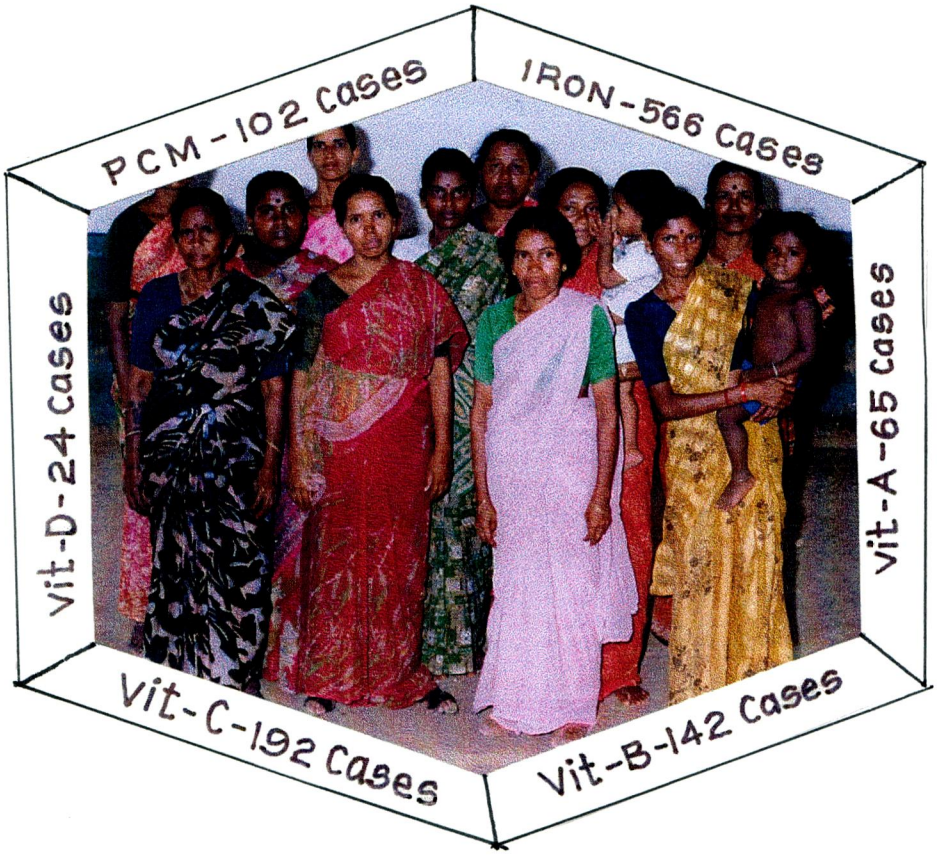
Screening of the women in the five slums by the medical teams revealed certain nutritional disorders as detailed in Table VII and Figure 5.

TABLE VII

NUTRITIONAL DISORDERS PREVALENT AMONG THE WOMEN UNDER STUDY

Nutritional Disorder	Total	Areawise Distribution				
		Karumbukkadai	Avarampalayam & Elango Nagar	Selvapuram South	Periyar Nagar	Venkitapuram
	N:771	N:190	N:164	N:150	N:150	N:117
Protein Calorie Malnutrition	**102**					
a. Poor musculature	52	22	19	5	3	3
b. Deficient subcutaneous fat	30	14	8	1	5	2
c. Nutritional Oedema	20	4	10	4	-	2
Iron	**566**					
a. Mild Anaemia	447	95	105	81	136	30
b. Marked Anaemia	119	33	38	16	26	6
Vitamin - A	**65**					
a. Xerosis or Pigmentation	21	9	4	-	1	7
b. Bitot's spot	20	4	10	4	-	2
c. Angular conjunctiva	15	-	2	10	1	2
d. Xerosis of the Cornea	9	1	5	3	-	-

Vitamin - B	142					
Thiamine	55					
a. Tenderness of the calf	55	40	7	6	1	1
Riboflavin	80					
a. Anguar Stomatitis	32	20	2	9	-	1
b. Glazed tongue	48	10	8	6	23	1
Niacin	7					
a. Crazy pavement skin	7	1	2	4	-	-
Vitamin - C	192					
a. Bleeding gums	32	40	7	6	1	1
b. Carries	160	102	20	8	26	5
Vitamin - D	36					
a. Dry or Rough skin	36	24	6	5	-	1



NUTRITIONAL DISORDERS PREVALENT AMONG THE WOMEN UNDER STUDY

Figure. 5

Protein Calorie Malnutrition (PCM) was detected in 102 cases (13.2 per cent) manifesting, itself in poor musculature (6.7 per cent), deficient subcutaneous fat (3.8 per cent) and nutritional oedema (2.5 per cent).

Anaemia was the most commonly prevalent nutritional disorder affecting 566 women (73.4 per cent) which is higher than the national average of 70 per cent as per WHO (1995) statistics. Marked anaemia was found in the case of 119 (15.4 per cent) women. This situation warrants immediate attention interms of supplementation of iron as well as nutrition education particularly for pregnant and lactating mothers. Among the women screened, there were two pregnant women and 269 lactating mothers. In Karumbukkadai area alone, many young mothers even below 18 years were found and several of them had repeated pregnancies and abortions.

Vitamin A deficiency was detected in 62 cases, with specific cases of xerosis or pigmentation (2.7 per cent), Bitot's spot (2.5 per cent), Angular Conjunctiva (1.9 per cent) and Xerosis of the Cornea (1.1 per cent).

Vitamin B complex deficiency was found in 142 cases (18.4 per cent). Thiamine deficiency was detected in 55 cases (7.13 per cent) as revealed from the tenderness of the calf. Riboflavin deficiency was prevalent among 80 cases,

with 32 cases of Angular Stomatitis (4.1 per cent) and 48 cases of glazed tongue (6.2 per cent). Crazy pavement skin, a deficiency symptom of Niacin was found in seven cases (0.9 per cent).

Vitamin C deficiency was detected among 192 cases (24.9 per cent) marked by bleeding gums (4.2 per cent) and carries (20.7 per cent).

Dry or rough skin due to vitamin D deficiency, was found among 36 women (4.6 per cent).

Further analysis revealed that there were considerable number of cases with multiple nutritional disorders as shown in Table VIII.

TABLE VIII

MULTIPLE COMPLICATIONS

Nutritional Disorders	Number of Women 'At Risk'(N:221)
Anaemia and Carries	82
Anaemia and Angular Stomatitis	39
Angular Stomatitis and Carries	33
Poor musculature and tenderness of the calf	16
Poor musculature and dry or rough skin	12
Angular Conjunctiva and dry or rough skin	6
Anaemia and Xerosis of Cornea	6
Nutritional oedema and Bitot's spot	6
Nutritional oedema and bleeding gums	5
Angular Stomatitis and bleeding gums	5
Angular Stomatitis and Angular Conjunctiva	5
Deficient subcutaneous fat and tenderness of the calf	4
Xerosis of the Cornea and Xerosis or pigmentation	2

Anaemia coupled with Carries was found in 82 cases of women, followed by Anaemia with Angular Stomatitis (39) and Angular Stomatitis and Carries (33).

Poor musculature along with tenderness of the calf was found in 16 cases followed by poor musculature with dry or rough skin (12) and dry or rough skin with Angular Conjunctiva were found in 6 cases.

Anaemia with Xerosis of Cornea was found in 6 cases of women, followed by nutritional oedema with Bitot's spot among 6 women.

Angular Stomatitis coupled with bleeding gums was seen in 5 cases of women, followed by Angular Stomatitis with Angular Conjunctiva found in 5 cases. Nutritional oedema with bleeding gums was detected in 5 cases.

Tenderness of the calf coupled with deficient subcutaneous fat was found in 4 cases followed by Xerosis of the Cornea with Xerosis or pigmentation in 2 cases.

This situation points out the immediate need for nutrition education for mothers in the areas under study concentrating on deficiency symptoms and the possibilities of overcoming them through consumption of nutritious diets.

As a first step a leaflet on anaemia was prepared and distributed to all the women in the slums under study (Leaflet appended).

D. Health Problems of Women

Clinical examination of the women in the five slums by the medical team revealed that 267 women screened had health problems. Table IX and Figure 6 show the broad categories of health problems diagonised and Table X gives details of the specific health complications.

இரத்த சோகை

குழந்தைகளையும் கர்ப்பிணிப் பெண்களையும் பரவலாகத் தாக்கும் நோய்களில் மிக முக்கியமானது இரத்த சோகையாகும். இந்தியாவில் 60 சதவீதம் பெண்கள் இந்நோயினால் பாதிக்கப் படுகிறார்கள்.

இரத்த சோகையை எவ்வாறு கண்டறிவது?

இரத்த சோகை உள்ளவர்கள் மிகவும் வெளுத்துக் காணப் படுவார்கள். விரல் நகங்கள், கண்கள், உள்நாக்கு இவை வெளிறிப் போயிருக்கும். விரல் நகங்கள் கரண்டி வடிவத்தில் வளைந்து காணப் படும். தோலில் தேமல் உண்டாகும். மேலும் பசியின்மை, மயக்கம், சோர்வு இவையும் இரத்த சோகையின் அறிகுறிகளாக இருக்கலாம்.

இரத்த சோகை எதனால் ஏற்படுகிறது?

நமது ஆரோக்கியத்திற்குத் தேவையான சத்துப்பொருட்களில் இரும்புச்சத்து மிகவும் முக்கியமானது. இரும்புச்சத்து குறையும் போது அனீமியா எனப்படும் இரத்த சோகை ஏற்படுகிறது. ஊட்டச் சத்து மிக்க உணவு சாப்பிட்டாலும் அது சரியான முறையில் ஜீரணம் ஆகாத போது இரத்த சோகை உண்டாகிறது.

இது தவிர இரத்தப் போக்கிற்கும், இரத்த சோகைக்கும் நேரடித் தொடர்பு உள்ளது.

இரத்தப்போக்கு அதிகமாகும் போது இரத்தத்தில் இரும்புச் சத்து குறையத் தொடங்குகிறது. இதனால் சுவாசம் சீராக இருப் பதற்கு அவசியமான ஹீமோகுளோபின் இரத்தத்தில் குறைகிறது. இது இரத்த சோகையை ஏற்படுத்துகிறது.

பருவ வயதை எட்டும் போதும், மாதவிடாய் சமயத்திலும், கர்ப்பப்பையில் கோளாறுகள் ஏற்படும் போதும், பெண்கள் இரத்த சோகையால் அவதிப்படுகிறார்கள்.

சிலசமயம், குழந்தைகளுக்கு இரத்த அணுக்கள் உற்பத்தி யாகும் எலும்பு மஜ்ஜையில் சரியான உற்பத்தி இல்லாத போது இரத்த சோகை ஏற்படுகிறது.

கொக்கிப்பூச்சிகளின் எண்ணிக்கை வயிற்றில் அதிகமாகும் போதும் இரத்த சோகை ஏற்படும். குழந்தைகள் செருப்பில்லாமல் நடக்கும் போதும் கிருமிகள் அவர்கள் உடலில் புகுந்து விட, இந் நோய் உண்டாகும்.

மதுப்பழக்கத்திற்கு அடிமையானவர்களுக்கும், குடல் அரிப்பால், இரத்தக்கசிவு ஏற்பட்டு இரத்த சோகை வரும்.

இரத்த சோகை வராமல் தடுக்க என்ன செய்யலாம்?

இரத்த சோகையைத் தடுக்க தினமும் நம் உணவில் இரும்புச் சத்து நிறைந்த உணவுகளைச் சேர்த்துக் கொள்ளுதல் இன்றியமை யாதது. தானியங்களில் கேழ்வரகு எனப்படும் ராகியில் இரும்புச் சத்து நிரம்ப உள்ளது. வெல்லத்திலும், கீரைவகைகளிலும் இச்சத்து மிகவும் அதிகம். காய்கறிகளில் முட்டைக்கோஸ், பாகற்காய் பெரிய நெல்லிக்காய் ஆகியவற்றிலும், பழவகைகளில் பேரீச்சை, உலர்ந்த திராட்சை, மாதுளம்பழம், வாழைப்பழம் ஆகியவற்றிலும் இச்சத்து மிகுந்துள்ளது. மாமிசம் சாப்பிடுபவர்கள் இச்சத்தை முட்டை யிலிருந்தும், இறைச்சியிலிருந்தும் பெறலாம்.

இரத்த சோகை வந்துவிட்டால் முதலில் மருத்துவர் உதவி யுடன் மாத்திரைகள் சாப்பிடுவது அவசியம். அதன் பின்னர் இரும்புச் சத்து நிறைந்துள்ள சத்துணவு மூலம் இரத்த சோகை வராமல் தடுத்துக் கொள்ள வேண்டும்.

வெளியீடு

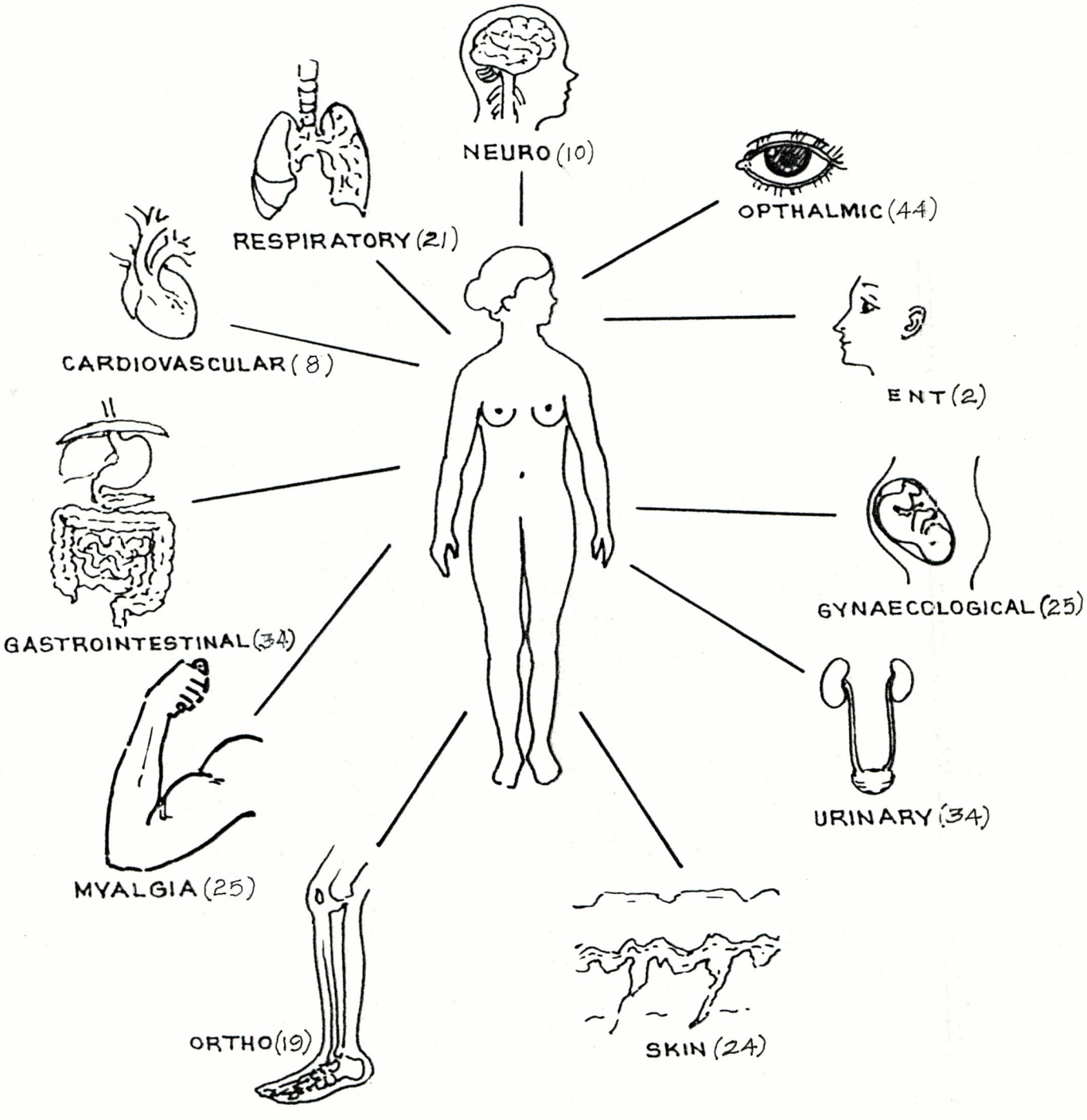
மனையியல் விரிவாக்கக் கல்வித் துறை
அவினாசிலிங்கம் பல்கலைக்கழகம்
கோயமுத்தூர் - 641 043

TABLE IX

HEALTH PROBLEMS OF WOMEN

Health Problems	Number of women being affected (N:267)
Opthalmic	44 (16.4)
Uro	34 (12.7)
Gastro Intestinal	34 (12.7)
Myalgia	25 (9.4)
Gynaecological	25 (9.4)
Skin	24 (8.9)
Respiratory	21 (7.8)
Ortho	19 (7.1)
Neuro	10 (3.7)
Cardio vascular	8 (2.9)
Carcinogenic	3 (1.1)
Ent	2 (0.7)
General	18 (6.7)

Figures in parentheses show the percentage of women.



HEALTH PROBLEMS OF WOMEN UNDERSTUDY

Figure.6

TABLE X

SPECIFIC HEALTH PROBLEMS OF WOMEN UNDER STUDY AREA WISE

Health Problems	Total N:267	Karumbukkadai	Venkitapuram	Periyar Nagar	Avarampalayam & Elango Nagar	Selvapuram South
Opthalmic	44					
a. Leucornea	23	18	-	4	-	1
b. Cataract	9	1	1	6	1	1
c. Eye infection	8	-	-	-	8	-
d. Mild conjunctiva	2	2	-	-	-	-
e. Eye disease	1	1	-	-	-	-
f. Hymetopia	1	1	-	-	-	-
URO	34					
a. Urinary infection	34	27	4	1	1	1
Gastro Intestinal	34					
a. Peptic ulcer	19	-	-	1	11	7
b. Gastritis	9	4	1	-	4	-
c. Deodenal ulcer	1	-	1	-	-	-
d. Amoebiasis	1	1	-	-	-	-
e. Worm infestation	3	-	3	-	-	-
f. Collis	1	1	-	-	-	-
Muscular	25					
a. Myalgia	25	25	-	-	-	-

Gynaecological	25					
a. Scanty menstruation	19	-	-	1	11	7
b. Menorrhea	4	4	-	-	-	-
c. White discharge	2	-	-	2	-	-
Skin	24					
a. Allergy	15	7	2	-	5	1
b. Rashes	3	-	-	-	-	3
c. Itching	2	1	-	1	-	-
d. Scabies	2	-	-	2	-	-
e. Icthyosis	1	1	-	-	-	-
f. Skin infection	1	1	-	-	-	-
Respiratory	21					
a. Lower respiratory infection	1	-	-	-	-	-
b. Bronchitis	18	3	-	9	3	3
c. Asthma	1	1	-	-	-	-
d. Pharyngitis	1	1	-	-	-	-
Ortho	19					
a. Arthritis	13	10	1	-	2	-
b. Arthalagia	2	2	-	-	-	-
c. Oestoarthritis of the right knee	2	1	1	-	-	-
d. Pain in the left hip joint	1	1	-	-	-	-
e. Polyarthritis	1	1	-	-	-	-

Neuro	10					
a. Neuritis	9	-	5	-	1	3
b. Peripheral Neurosis	1	1	-	-	-	-
Cardiovascular	8					
a. Chestpain	5	2	1	-	2	-
b. Hypertension	2	1	-	-	-	1
c. Blood pressure	1	-	-	1	-	-
Carcinogenic	3					
a. Leukamia	2	-	-	-	-	2
b. Cancer teeth	1	1	-	-	-	-
ENT	2					
a. Middle ear infection	1	1	-	-	-	-
b. CSOM	1	1	-	-	-	-
General	18					
a. Body pain	1	1	-	-	-	-
b. Boils	1	-	1	-	-	-
c. General weakness	14	-	11	-	-	3
d. Tooth ache	1	1	-	-	-	-
e. Viral fever	1	1	-	-	-	-

Opthalmic complications appeared to be the most prevalent health problem diagonised among 44 cases (16.4 per cent). The highest incidence was for leucornea with 23 cases followed by cataract and general eye infection.

As many as 34 cases (12.7 per cent) of urinary tract infection were detected who needed immediate treatment.

Among the 34 women (12.7 per cent) who suffered from gastro intestinal disorders, 19 had peptic ulcer, 9 had gastritis and others either amoebiasis or worm infestation.

There were 25 cases (9.4 per cent) of Myalagia, all found in Karumbukkadai slum.

Gynaecological problems were found among 25 (9.4 per cent) women with scanty menstruation, menorrhea or white discharge.

Twenty four (8.9 per cent) cases of skin disorders were found with 15 of them having skin allergy.

Among the 21 women with respiratory tract disorders (7.8 per cent), 18 had bronchitis.

Arthritis was the most prevalent (13 cases) among the ortho disorders affecting 19 (7.1 per cent) women.

There were 10 neuro cases (3.7 per cent) with nine having neuritis.

Among the eight cases (2.9 per cent) having cardiovascular disorders, five complained of chest pain.

Three carcinogenic cases were found with two of them having leukemia.

ENT problems were detected in two cases. General weakness was found in 18 cases.

E. Health Status of Children Screened

The heights and weights of the boys and girls according to their age group were compared with those of the National Centre for Health Statistics (NCHS) standards by ICMR (1995) (Appendix III). Table XI and Figure 7 give the details.

TABLE XI

HEALTH STATUS OF CHILDREN SCREENED

Category	Number of children N:489		Percentage distribution of children											
			Heights						Weights					
	Boys N:211	Girls N:278	Boys			Girls			Boys			Girls		
			A	B	C	A	B	C	A	B	C	A	B	C
Infants	133	136	13.5	74.4	12.0	16.9	78.6	4.4	13.5	79.6	6.7	6.6	90.4	2.7
Preschool	34	71	29.4	47.0	23.5	12.6	81.6	5.6	55.8	23.5	20.5	26.7	66.1	7.0
Primary	44	71	25	54.5	20.4	33.8	42.2	23.9	25.0	52.2	22.7	38.0	47.8	14.0

A = On par with the (NCHS) standards
B = Below the NCHS standards
C = Above the NCHS standards

Height %
100 80 60 40 20

Weight %
20 40 60 80 10

Infant

Pre School

Primary

Boys
Girls

NCHS Standards
Below "
Above "

HEALTH STATUS OF CHILDREN SCREENED

Figure. 7

Analysis revealed that among the 133 boys and 136 girls in the 0-1 year age group, only 13.5 per cent of boys and 16.9 per cent of girls were found to be in normal height, whereas 74.4 per cent of boys and 78.6 per cent of girls were found to be below normal and the rest 12 per cent and 4.4 per cent of boys and girls were found to be above normal.

As for the weights, among the boys and girls in the same age group, only 13.5 per cent and 6.6 per cent of boys and girls respectively were in the normal category. A majority of 79.6 per cent boys and 90.4 per cent girls were found to be below normal in weight. Very few boys (9 per cent) and girls (2.2 per cent) were found to be above the normal standards.

Gender differences were obvious with boys in a superior position compared to girls as for as heights and weights of infants are concerned.

Plates 2, 3, 4 show some of the nutritional disorders found in infants.

Among the preschoolers screened, there were 34 boys and 71 girls. While 29.4 per cent boys and 12.6 per cent girls were found to be of normal height, 47 per cent boys and 56 per cent girls were below normal. Only 23.5 per cent boys and 5.6 per cent girls were above normal in height.


POOR MUSCULATURE

A child with kwashiorkor. Showing oedema of face, feet and hands, and skin lesions.

CRAZY PAVEMENT OF SKIN

washiorkor with dermatoses

With regard to weights, 55.8 per cent; boys and only 26.7 per cent girls were found to be normal, 23.5 per cent and 69 per cent of boys and girls respectively fell in the category of 'below normal' and 20.5 per cent boys and 7.0 per cent girls alone were found to be 'above normal'.

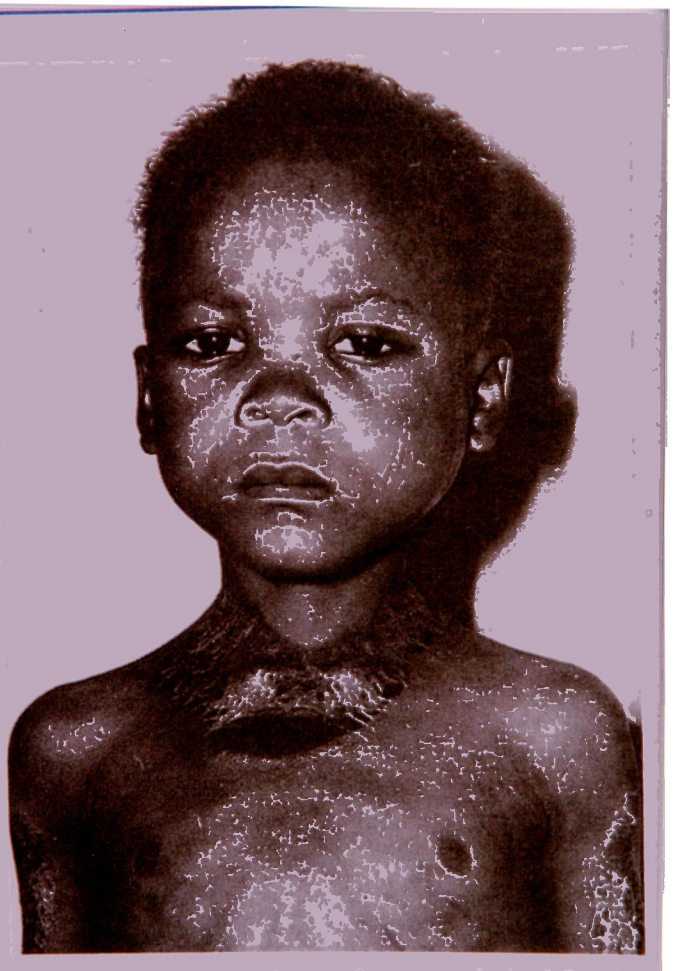
Plates 5, 6 and 7 show cases of keratomalacia, Bitot's Spots and Pellegra.

There were 44 boys and 71 girls in the age group of 6-12 years. As for heights, 25 per cent boys and 33.8 per cent girls could be categorised under 'normal'; majority of boys (54.5 per cent) and (42.2 per cent) girls were below normal. Only 20.4 per cent boys and 23.9 per cent girls were above normal in height.

The weight analysis revealed that only 25 per cent and 38 per cent of boys and girls respectively were found to be normal. Majority of boys (52.2 per cent) and girls (47.8 per cent) were found to be below normal. Only 22.7 per cent boys and 14 per cent girls were above normal in weight.

[redacted] **Keratomalacia** secondary to vitamin A deficiency. 14-month-old child with colliquative necrosis affecting the greater part of the cornea. The relative sparing of the superior aspect of the cornea is typical.

Bitôt's spots showing the white triangular plaques.



[redacted] **Pellagra in a girl of 5 years.** Skin lesion on the neck (Casal's collar) is pathognomonic.

Summary and Conclusion

V SUMMARY AND CONCLUSION

Women who are the health providers to the families and communities generally neglect their own health. They are also bypassed by the health care delivery services. As a consequence, women's health and nutritional status is poor as reflected in the mortality and morbidity statistics.

Health should became an integral component of all developmental inputs particularly when women are organised at the grassroots for convergence of services and programmes.

This study was carried out to assess the health and nutritional status of urban women. Health screening was conducted in five slums of Coimbatore Corporation, namely Karumbukkadai, Avarampalayam and Elango Nagar, Periyar Nagar, Selvapuram South and Venkitapuram adopted by the Avinashilingam Education Trust for initiating women's Self Help Groups called Indira Mahila Kendras. The screening covered 771 women and 489 children. Medical teams from Government and non-governmental streams were utilised for this endeavour.

The findings of the study are as follows :

A. Personal Details of the Women Under Study

* All the women under study were adults in the age range of 18 to 55 years.

* Out of 771, a majority of 70 per cent had more than four members in their families.

* Majority of the heads of families had no permanent job and worked in the unorganised sector having their family income below Rs. 2000 per month.

B. General Health Profile of Women

The general health status of the women was judged in terms of their height, weight and Body Mass Index (BMI).

* As for the heights, only 28 per cent women screened were on par with the ICMR 'Reference Woman'. While 44 per cent were below the ICMR standards, 28 per cent were above the standard.

* As for weights, 44 per cent women were on par with the ICMR standards for Reference Woman; 33 per cent fell below the standards and 23 per cent could be adjudged as abcve the ICMR standards.

* The Body Mass Index (BMI) showed that out of the 771 women screened, 52.6 per cent had correct BMI. While 13.2 per cent had below normal BMI, 6.8 per cent, 3.7 per cent

and 1.5 per cent women under study had Chronic Energy Deficiency (CED) of grades I, II and III respectively. On the otherhand, it was interesting to observe that there were 22 per cent women who fell in the category of obese grades I and II (18.4 per cent and 3.6 per cent respectively).

C. Nutritional Disorders prevalent among Women

* Protein Calorie Malnutrition (PCM) was found among 13.2 per cent women.

* Anaemia was rampant, affecting 73.4 per cent which is higher than the national figures.

* The other nutritional disorders were Vitamin A deficiency (8.4 per cent), Vitamin B deficiency (18.4 per cent), Vitamin C deficiency (24.9 per cent) and Vitamin D deficiency (4.6 per cent).

* Multiple nutritional disorders were also diagnosed in 22% women screened.

D. Health Problems of Women

* The health screening done with the help of the medical teams revealed that 267 women in the five slums had health problems. The different diseases diagnosed were Opthalmic (16.4 per cent); Uro (12.7 per cent); Gastro-intestinal (12.7 per cent); Myalgia (9.4 per cent); Gynaecological (9.4 per cent); Skin (8.9 per cent); Respiratory (7.8 per cent);

Ortho (7.1 per cent); Neuro (3.7 per cent); Cardiovascular (2.9 per cent); Carcinogenic (1.1 per cent); ENT (0.7 per cent) and General (6.7 per cent).

These cases were immediately referred to the specialists in the government and private hospitals, which helped in the health screening.

E. Health Status of the Children Screened

* In order to motivate the women to come forward for the health check up, their children, 489 in number (211 boys and 278 girls) were also screened.

* As for the heights of infants upto one year, only 13.5 per cent boys and 16.9 per cent girls were on par with the NCHS standards. With regard to weights, 13.5 per cent boys and 6.6 per cent girls alone were in the 'normal' category.

* Among the preschoolers, only 29.4 per cent boys and 12.6 per cent girls were on par with the standard heights; 55.8 per cent boys and 26.7 per cent girls alone could be classified as 'normal', with regard to the weights.

* In the primary level, only 25 per cent boys and 33.8 per cent girls fell in the category of 'normal' heights; 25 per cent boys and 38 per cent girls alone had normal weights.

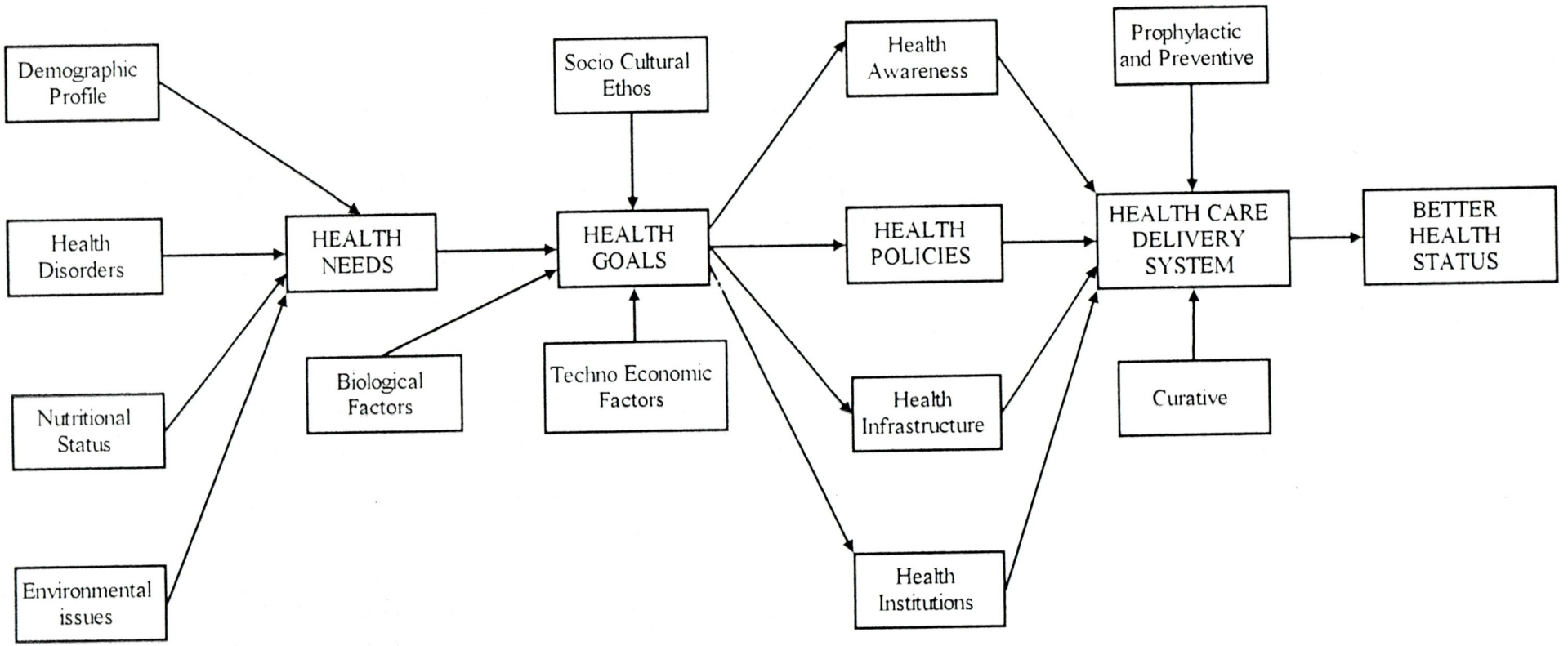
This situation warrants, immediate steps to educate women on the need to utilize fully the nutrition and health intervention programmes available for their children.

Conclusion

This pioneering effort towards mass health screening of urban poor women had prompted the researcher to suggest certain strategies to realise the dream of Health for All by 2000 A.D. As shown in the empirical model (Figure 8), the health needs are to be estimated keeping in view the demographic profile, health disorders prevalent, nutritional status and environmental issues. The health needs determine the operational health goals for each community influenced also by the socio cultural ethos, biological as well as techno - economic factors. The specific health goals for the community should include health awareness for the public specially for the women, framing workable health policies, developing health infrastructure and setting up health institutions. All these should be incorporated in the Health care delivery system intended to bring forth Better Health Status.

As the World Development Report 1993 enunciates, governments can develop a national package of highly cost - effective public health interventions and essential clinical services, which, if broadly extended to the population, could substantially reduce the national burden of diseases.

Governments should also develop standards to ensure that laws, policies and practices comply with their obligations to respect and ensure human rights for women through health practices and concerns as much as in other areas.



STRATEGIES FOR IMPROVING THE HEALTH CARE DELIVERY SYSTEM

Figure 8.

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Appendices

APPENDIX I

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN - DEEMED UNIVERSITY, COIMBATORE - 641 043.

HEALTH SCREENING OF WOMEN AND CHILDREN

(SCHEDULE FOR CLINICAL ASSESSMENT)

Date :

Name :

Age :

Sex (M/F) :

Height (in cm) :

Weight (in kg) :

Name of the Father or guardian :

Address :

Occupation of the head :

Income/month (Rs.) :

Size of the family :

APPENDIX II

CLINICAL ASSESSMENT

(Tick wherever relevant)

I. Healthy and free from any deficiency symptoms

II. a. Poor musculature
b. Deficient subcutaneous fat
c. Mild anaemia
d. Lack of interest in surrounding
e. Mild signs of not more than one of the specific nutritional disorders or differences mentioned under (8) of III

III(1) a. Nutritional oedema
b. Gross muscular wasting
c. Marked anaemia
d. Xerosis of the cornea

(2) a. Tenderness of the calf
b. Red and/or Raw tongue/Glazed tongue
c. Angular stomatitis
d. Bleeding gums
e. Angular conjuctiva

(3) a. Xerosis or pigmentation of conjuctiva
b. Bitot's spots
c. Caries
d. Dry/or rought skin
e. Crazy pavement skin
f. Hyperkeratosis

Special Remarks :

Date : Signature of the Doctor

APPENDIX - III

REFERENCE BODY WEIGHTS AND HEIGHTS OF CHILDREN AND ADOLESCENTS ACCORDING TO NCHS

Age (Years)	NCHS			
	BOYS		GIRLS	
	Height (cm)	Weight (kg)	Height (cm)	Weight (kg)
0	50.5	3.3	49.9	3.2
¼ (3 m)	61.1	6.0	60.2	5.4
½ (6 m)	67.8	7.8	66.6	7.2
¾ (9 m)	72.3	9.2	71.1	8.6
1.0	76.1	10.2	75.0	9.5
1.5	82.4	11.5	80.9	10.8
2.0	85.6	12.3	84.5	11.8
3.0	94.9	14.6	93.9	14.1
4.0	102.9	16.7	101.6	16.0
5.0	109.9	18.7	108.4	17.7
6.0	116.1	20.7	114.6	19.5
7.0	121.7	22.9	120.6	21.8
8.0	127.0	25.3	126.4	24.8
9.0	132.2	28.1	132.2	28.5
10.0	137.5	31.4	138.3	32.5
11 +	140	32.2	142	33.7
12 +	147	37.0	148	38.7
13 +	153	40.9	155	44.0
14 +	160	47.0	159	48.0
15 +	166	52.6	161	51.4
16 +	171	58.0	162	53.0
17 +	175	62.7	163	54.0
18 +	177	65.0	164	54.4

NCHS - National Council for Health Statistical Standards

Source ; NUTRIENT REQUIREMENTS AND RECOMMENDED DIETARY ALLOWANCES FOR INDIANS, ICMR, 1998.