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EVALUATION OF DISTRICT FAMILY WELFARE ACTIVITY BY 30 CLUSTER SAMPLING METHOD

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ABSTRACT

Considering the success of use of 30 cluster sampling method for monitoring and evaluation of UIP in India, the same method was adopted in the present study for the assessment of family planning performance at the district level. Out of thirty clusters selected from Pune district, 12 (40%) clusters were urban and 18 (60%) clusters were rural. There were 688 women identified while evaluation of family planning activity by cluster was undertaken.

The findings of the study revealed that there was no significant difference in proportion of women adopting permanent family planning methods in urban and rural areas. Definite higher proportion for overall users of temporary methods of contraception in urban areas was found, however, when individual methods were studied no significant urban-rural difference was observed for Nirodh Cu-T and O.C.

The advocacy of birth spacing under the health and family welfare programme, has been viewed as a key step in the sustained reduction in fertility, and the innovative measures are adopted for spreading the knowledge and use of the various methods by making them freely and widely available through an effective social marketing mechanism[1].

Like many developing countries the population policy of India also reflects the concern for birth spacing by giving prime importance to family welfare activities in the country. It has been known to one and all that because of pressures of

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targets given by the Central and State Governments, there has been tendency to somehow achieve the targets.

Official records therefore may not reflect the true picture about contraceptives users in the community. There is a need for independent assessment of the situation on continuous basis.

Considering the success of use of 30 cluster sampling method for monitoring and evaluation of UIP in India it was thought that same method could be used for assessment of family planning performance at the district level[2].

MATERIALS AND METHOD

Family planning survey was linked with coverage assessment survey for immunization for Pune district. Thirty cluster sample was drawn from Pune district of Maharashtra as has been recommended in WHO module[3]. After random selection of first house in the cluster, consecutive houses were visited till seven eligible children could be covered for immunization. For the purpose of evaluation of family planning activities criteria for inclusion of couples were - those married, living together, not currently pregnant. Information about the method used, source of supply and reasons for not adopting family planning methods was obtained. The eligible couples from all the consecutive houses were covered till all the seven children for immunization coverage were identified.

RESULTS

Out of thirty clusters selected from Pune district 12 (40%) clusters were urban and 18 (60%) clusters were rural. There were 688 eligible women identified while evaluation of family planning activity by cluster survey was undertaken. Out of these 361 (52.5%) were permanently sterilised by adopting either tubectomy or vasectomy.

Comparison of various methods of contraceptions used as per cluster survey and district figures has been given in Table 1. There was no significant differences between district figure and cluster figures for permanent methods of sterilisation and oral contraceptives whereas figures for Nirodh and Cu-T showed significant difference.

The survey for age distribution of women showed high proportion (73.9%) of women below 25 years of age in rural population whereas a high proportion (52.5%) women in the age group of above 25 was observed in urban population as has been depicted in Table 2.

TABLE 1

DISTRICT STATISTICS AND CLUSTER SURVEY STATISTICS RELATED TO PERFORMANCE OF FAMILY PLANNING

	District	Proportion Percentage	Cluster	Proportion Percentage
Total couples surveyed	493975	-	688	-
Tubectomy and Vasectomy	264581	53.6	361	52.5
Eligible for spacing	229394	-	327	-
Cu-T	12651	5.5	32	9.8
O.C.	21668	9.4	28	8.60
Nirodh	34724	15.1	20	6.1

TABLE 2

AGEW1SE DISTRIBUTION OF SURVEYED POPULATION OF WOMEN IN URBAN AND RURAL AREAS

	Urban		Rural		Total percentage
18-	11	7.7%	38	20.7%	49 (15%)
20-	57	39.8%	98	53.2%	155 (47.4%)
25-	43	30.1%	30	16.3%	73 (22.5%)
30-	23	16.1%	14	7.6%	37 (11.3%)
35+	9	6.3%	4	2.2%	13 (4.0%)
Total	143	100%	184	100%	327(100%)

Distribution of adopters of permanent and temporary methods of contraception as per urban and rural residential status has been given in Table 3.

TABLE 3

DISTRIBUTION OF ADOPTERS OF PERMANENT AND TEMPORARY METHODS OF CONTRACEPTION AS PER URBAN AND RURAL RESIDENTIAL STATUS

	Urban		Rural		Total
Total coupie	297	43.2%	391	56.8%	-
Permanent methods	154	51.9%	207	52.9%	N.S.
Eligible women for spacing	143	48.1%	184	47.1%	-
Cu-T	18	12.6%	14	7.6%	N.S.
O.C.	15	10.5%	13	7.1	N.S.
Nirodh	12	6.4%	8	4.3%	N.S.

There was no significant difference found in the proportion of women adopting permanent family planning method in urban and rural areas. There was definite higher proportion for overall users of temporary methods of contraception in urban areas. However, when individual methods were studied, no significant urban-rural difference was noted for Nirodh, Cu-T and O.C. as has been shown in Table 4.

Residence-wise sources of information of family planning methods were indicated in Table 4. Residence-wise source of supply of Cu-T, O.C. and Nirodh has been depicted in Table 5.

Information, education and communication activities carried out by health workers of PHC appeared to have reached 83 per cent of the rural population. Peer group influence appeared to be an important source of information in urban areas.

The supply of temporary methods of contraceptives also showed a distinct trend according to urban-rural residential status of the couple (Table 5). Health workers and health centre catered to 68 per cent couples from rural areas as compared to only 20 per cent from urban area. Proportion of couples purchasing Nirodh and O.C. from drug stores was significantly higher in urban areas as compared to rural areas.

TABLE 4
SOURCE OF INFORMATION OF FAMILY PLANNING

	Urban		Rural		Total Percentage
H.W.	24	53.3%	29	82.9%	53(66.3%)
Radio	-	-	-	-	-
T.V.	7	15.6%	4	11.4%	11 (13.8%)
Other	14	31.1%	2	5.7%	16 (20%)
Total	45	100%	35	100%	80 (100%)

TABLE 5
SOURCE OF SUPPLY OF CU-T, O.C. AND NIRODH

	Urban		Rural		Total Percentage
H.W.	3	6.7%	8	22.9%	11 (13.8%)
H.C.	6	13.3%	15	42.9%	21 (26.3%)
Hospital	15	33.3%	7	20.0%	22 (27.5%)
M.S.	21	46.7%	5	14.3%	26 (32.5%)
Total	45	100%	35	100%	80 (100%)

*Medical Stores

The reasons of non-acceptance of family planning methods in 98 (68.5%) couples from urban and 149 (81%) couples from rural area revealed that lack of information was responsible for 67.8 per cent and 85.9 per cent couples not adopting any method of family planning respectively. Lack of motivation was present in only 9.2 per cent couples from urban and 6.7 per cent couples from rural areas.

In spite of knowledge and motivation about family planning 21.5 per cent from urban and 11.4 per cent couples from rural areas could not avail the facility due to various obstacles like resistance from the family members, unsuitable timings of health centres etc.

The Couple Protection Rate (CPR) was calculated as per guidelines given in analytical review of CPR[4]. The district figures were 63.6 per cent as compared to cluster survey figures of 62.4 per cent. There was no statistically significant difference in these two CPRs.

DISCUSSION

In the present study overall contraceptive prevalence rate was 64.1 per cent out of which 52.5 per cent were permanently sterilized. Similar findings were observed in Ward ha district where information was obtained by random sampling method. The proportion of women permanently sterilised was 46 per cent which when compared to 52.5 per cent observed in our study.

Permanent method of sterilization as well as insertion of Cu-T involves some operative procedure and record keeping not only for acceptance of family planning but also for disbursement of incentives. The figures quoted for permanent methods of sterilization and Cu-T were therefore likely to be authentic. In the present study the difference between figures officially published by the district and found out by cluster survey were almost identical for permanent methods of sterilization and O.C. users. A significant difference was seen for Cu-T and condom. The figures as per cluster survey were higher for Cu-T and lower for Nirodh (Table 1). Out of 30 clusters two cluster around a NGO hospital showed very high figures for acceptance of Cu-T (10 out of 32 total Cu-T acceptors). If these two clusters with special promotional efforts by NGOs were excluded, the results of 28 remaining clusters were found to be comparable with the figures quoted by the district For Nirodh the high figures mentioned in the district report could be as a result of pressure for achieving the targets.

There was a tendency to inflate the figures on part of Medical Officers and Health Workers so as to get a* better rank every year with further prospects of promotion at individual level, giving rise to a need for cross checking ol data. On comparison of results of cluster survey with district figures, there seemed to be no significant difference for permanent methods of sterilization. However, the figures for Nirodh showed a significant difference showing a definite tendency to inflate the work done to achieve the targets.

Thus, there is a need for independent evaluation of performances for family planning activities. Thirty cluster sampling method can act as a tool for rapid

appraisal of family planning programme. The method used is likely to be very effective and useful because of its low cost and independent nature. It has an additional advantage of incorporation as an added component especially when vaccine coverage evaluation was going on. The proportion of women in the reproductive age group was around 20 per cent and in each household survey to get one or more women in the reproductive age group was quite possible. Collecting information from 23 households required 2.5 hours for evaluation of immunisation coverage and contraceptive distribution.

Adoption of 30 cluster survey with seven children in each cluster for evaluation of UIP was made on the basis of binomial characteristics of immunisation status. Selection of 30 clusters was on the basis of minimum sample size for application of statistical theory based on normal distribution. The sample size of seven children in each cluster was chosen based on the previous experience in smallpox immunisation.

Since, contraceptive users were also distributed binomially, 30 cluster method using seven couples in each cluster may yield similar results. If the sample size in each cluster was increased from seven to 21 (3 times) it will increase the precision twice.

Increase of sample in each cluster was possible in case of family planning as the distribution of women in reproductive age-group was about five times more prevalent than eligible child between 12 to 24 months.

Thirty cluster samples with 21 couples in each cluster appeared to yield satisfactory results. Using 30 cluster sampling methods if more surveys were undertaken to evaluate performance of family planning, appropriateness of this method could be tested in the field before incorporating it on routine basis for evaluation of on-going family planning programmes.

Lkkjka'k

भारत में सर्वाधिक प्रतिरक्षीकरण कार्यक्रम के प्रबोधन तथा मूल्यांकन के लिए अपनाई गई 30 समूहों वाली सैम्पल विधि के प्रयोग की सफलता को ध्यान में रखते हुए जिला स्तर पर परिवार नियोजन निश्पादन स्तर का आकलन करने के लिए प्रस्तुत अध्ययन में उक्त विधि का प्रयोग में लाया गया था। पुणे जिले से चुने गए 30 समूहों में से 12 समूह (40प्रतिशत) शहरी क्षेत्र के थे तथा 18 समूह (60प्रतिशत) ग्रामीण क्षेत्र से संबंधित थे। समूह–आधारित परिवार नियोजन गतिविधि का मूल्यांकन करते समय 688 महिलाओं को सैम्पल के रूप मे इस अध्ययन के लिए चुना गया था।

अध्ययन से प्राप्त परिणामों से पता चलता है किशहरी तथा ग्रामीण क्षेत्रों में परिवार नियोजन की स्थाई विधियां को धारण करने वाली महिलाओं के अनुपात में कोई विशेश अन्तर नहीं था। किन्तु शहरी क्षेत्रों में गर्भनिरोध संबंधी अस्थाई विधियों का प्रयोग करने वाले प्रयोगकर्ताओं का समग्र अनुपात निसंदेह उच्च पाया गया था, परन्तु जब विधि विशेश के बारे में अध्ययन किया गया तो ग्रामीण तथा शहरी क्षेत्र में निरोध तथा कॉपर टी और ओ सी विधियों के प्रयोगकताओं के अनुपात में कोई विशेश अन्तर नहीं पाया गया था।

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A STUDY OF "AIDS" AWARENESS IN HEALTH WORKERS WORKING IN PHC, GHARUAN, DISTRICT ROPAR

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ABSTRACT

Health education programme which is very essential for the prevention of AIDS, can be carried out through the existing infrastructure aided by mass media. As per findings of the present study what is needed is to make the health workers (who are to impart health education) aware about all the aspects of the disease, by up-dating their knowledge regularly and motivating them to carry out the programme whole heartedly for the benefit of the society to which they belong and serve.

The knowledge of the workers was found to be poor and needs improvement through training and the health education programme was to be integrated with the primary health care for the success of the programme.

AIDS (Acquired Immune Deficiency Syndrome) is a syndrome caused by HUMAN IMMUNE DEFICIENCY VIRUS (HIV). HIV infection causes deficiency in the body's immune system. This results in acquiring severe opportunistic infections and unusual cancers by the individual.

In the world, there are 5,01,361 cases of AIDS (WHO Mid. 1992) and about 10-12 million adults and one million children with HIV infection[3]. In India,

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there are 237 cases (August, 1992) and 10,362 HIV positive cases. According to WHO there are about one million HIV positive in India.

HIV infection is transmitted mainly through sexual activity, blood transfusion and from infected mother to child before or during birth.

In the absence of any treatment or availability of vaccine, the spread of AIDS can be stopped only by health education. In other words, health education is the only vaccine against AIDS[1,2].

It is for the health personnel only who are supposed to impart health education to the community regarding prevailing health programmes and methods for the prevention and control which is an essential principle of primary health care. Awareness regarding AIDS amongst health personnel would have a great impact on the members of a community to which they belong and serve.

Keeping this in view, the present study was carried out to know about the awareness regarding AIDS amongst health personnel of PHC, Gharuan, and District Ropar.

AIMS AND OBJECTIVES

To ascertain: (1) "AIDS" awareness amongst workers of PHC, Gharuan, District Ropar; and (2) Feasibility of health education programme.

MATERIALS AND METHOD

This study was carried out in PHC, Gharuan, and District Ropar. For this purpose SMO I/C PHC was contacted and informed about the details of the study and its importance. In the monthly meeting of PHC the health workers were detailed for the study. The study was carried out by interview technique with the help of PHC workers and pretested proforma in Punjabi. The persons interviewed were assured that record will not be used for any other purpose except for the present study. The data collected was compiled and analysed. Detail of workers interviewed is given as under:

M.P.W. (M)	20
M.P.W. (F)	38
HA (M)	3
HA (F)	8
B.E.E	1
Total	70

OBSERVATIONS

The following observations were made:

It was observed that maximum number of persons (92.9%) were matriculates, 5.7 per cent were graduates, 1.45 per cent were post-graduates.

However, there was no relation of this basic qualification with the knowledge of AIDS.

While answering questions about the knowledge of STDs (Table 1), 58.6 per cent mentioned only AIDS while 10 per cent named syphilis and gonorrhoea and only 8.6 per cent mentioned AIDS, syphilis and gonorrhoea. 22.8 per cent workers were not able to answer the question.

TABLE 1
KNOWLEDGE OF STDs

STD	*No. of Workers*	*Percentage*
AIDS	*41*	*58.60*
Syphilis and gonorrhoea	*7*	*10.00*
AIDS, syphilis and gonorrhoea		*6.60*
No reply	*16*	*22.80*
Total	*70*	*100.00*

Majority (60%) Table 2 came to know about AIDS through mass media and 40.00 per cent from Health Department out of which 28.0 per cent had the knowledge during their O.T. Course at SIHFW, Kharar.

While only 3 workers couid give the full form of the word AIDS, only one person was able to tell that the disease is caused by a virus, but was unable to name it.

As regards mode of transmission 44.3 per cent told about sexual acts, 14.3 per cent could tell about sexual act and blood transfusion and only 1.4 per cent were able to telt about sexual, blood and placental transmission. Forty per cent could not reply as has been shown in Table 3.

TABLE 2
SOURCE OF KNOWLEDGE OF AIDS

Source of Knowledge	No. of Workers	Percentage
Mass Media	42	60.00
Health Department	28	40.00*
Total	70	100.00

•*28 per cent from SIHFW during O.T. Course* **TABLE 3**

TABLE 3
KNOWLEDGE OF MODE OF TRANSMISSION OF AIDS

S. No.	Mode of Transport	No. of Workers	Percentage
1.	Sexual	31	44.30
2.	Sexual and blood	10	14.30
3.	Sexual, blood and placental	1	1.40
4.	No reply	28	40.0
	Total	70	100.00

About spread of disease by casual contact, 38.6 per cent replied in affirmative and 57.1 per cent in the negative and 4.3 per cent could not reply. Also 90 per cent said that AIDS patients should not bear children, 4.3 per cent said that they should and 5.7 per cent did not reply.

There were 31.4 per cent workers who said that virus was present in blood only, 10 per cent said about its presence in semen only. Ten per cent could tell about the presence of virus in blood and semen both and 48.6 per cent could not reply.

Table 4 shows various high risk groups identified by the workers, were multiple relations (18.6%), prostitutes (5.7%), drivers (5.7%), homosexuals (2.8%)

and frequent blood transfusion (nil). But 67.2 per cent were not able to answer the question

TABLE 4

KNOWLEDGE OF HIGH RISK GROUPS

Sr. No.	High Risk Groups	No. of Workers	Percentage
1.	Multiple Relations	13	18.6
2.	Prostitutes	4	5.7
3.	Drivers	4	5.7
4.	Homosexuals	2	2.8
5.	Frequent Blood Transfusion	0	0.0
6.	No Reply	47	67.2
	Total	70	100.00

No worker could mention the signs and symptoms of the disease for the purpose of clinical diagnosis. Though 80 per cent said that the virus causing AIDS could be detected through test, none could name the test.

That AIDS can be treated was commented by 48.6 per cent, whereas 42.8 per cent commented that it could not be treated and 8.6 per cent did not reply. About the availability of vaccine against AIDS 91.4 per cent replied in the negative and 8.6 per cent said that vaccine is available against AIDS.

Regarding prevention of AIDS, 47.2 per cent could not reply whereas 42.8 per cent, 8.6 per cent, 1.4 per cent gave no extra marital relations, use of sterilised needles, syringes and AIDS test before blood transfusion respectively as the steps for the prevention of AIDS has been given in Table 5.

All workers were of the opinion that one should have no extra marital or homosexual relation. Only one worker admitted of having extra marital relations. Also none admitted that he/she was addicted to injectable drugs.

Though 71.4 per cent said that they were giving health education regarding AIDS to the public, but none could specify the talking points. Health workers agreed to carry out health education programme during duty period. About

TABLE 5

KNOWLEDGE OF PREVENTIVE MEASURES AGAINST AIDS

Sr. No.	Preventive Steps	No. of Workers	Percentage
1.	No extra marital relations Sterilised	30	42.0
2.	needles and syringes AIDS test	6	8.6
3.	before blood transfusion	1	1.4
4.	No reply	33	47.2
	Total	70	100.00

Majority of workers (87.1%) said that there was a National Programme for control of AIDS but only 43 per cent could state health education as the only step being undertaken under this programme through mass media.

All the workers agreed and were ready to educate the public regarding AIDS. Only 10 per cent workers said that people would not listen to them but could not give the reasons for the same. About 68.6 per cent workers were of the opinion that people would listen to them only because of fear of the disease.

DISCUSSION

As far as the knowledge of STDs was concerned, it was not good because 22.8 per cent gave no reply at all and 10 per cent did not mention AIDS though they named syphilis and gonorrhoea. So the level of knowledge of workers regarding STDs especially AIDS needs a boost. Mass media seemed to be the best tool for health education of the workers and so also of the public. Role of Health Department is equally important as 40 per cent came to know about AIDS from their own Department and majority 28 per cent from S.I.H.F.W., Kharar during their orientation training course. Hence, all workers should be given training on AIDS either through orientation training courses or through special courses on AIDS only. Training of workers will improve their knowledge that will help them to spread the message to the community for its prevention.

Editorial

The knowledge of workers about AIDS was very poor as has been shown by the fact that out of 70 only 3 could give the full form of word AIDS and only one could tell that it was caused by a virus. None could name the virus.

Workers were not clear about the transmission of AIDS, only 1.4 per cent had mentioned all the main three i.e. sexual, blood and placental modes of transmission. Also 38.6 per cent said that AIDS can spread through casual contact. When asked about the source of infection, 48.6 per cent could not reply and only 10 per cent named both blood and semen.

About 67.2 per cent workers could not mention any high risk group and none told about the frequent blood transfusion takers as a high risk group. None could give the signs and symptoms of the disease. About 48.6 per cent made a comment that AIDS can be treated and 8.6 per cent said that a vaccine is available against AIDS. Regarding prevention of AIDS, 47.2 per cent could not answer the question though 42.8 per cent said that one should not have extra-marital relations. Only 1.4 per cent talked about AIDS test before the blood transfusion.

All the above mentioned points emphasized only one fact that the knowledge of the workers is quite poor to enable them to carry out a health education programme against AIDS.

Moreover, they were also having misconceptions and wrong information about AIDS, because majority of workers could not reply questions which should have been the main talking points in the health education, such as: knowledge of STDs (22.8%), mode of transmission of AIDS (38.6%), cause of AIDS (98.6%), name of virus (100.00%), source of infection (48.6%) and high risk groups (67.2%).

Many workers talked about the spread of disease by casual contact and also said that the treatment and vaccine is available for AIDS.

Lack of knowledge does no good rather it harms the health education programme by breeding misconceptions and wrong information in the community. Also, when people come to know about the wrong information given to them by the health workers it gives a very bad impression on the services rendered by them.

Only one worker admitted that he had extramarital relations but none made such an admission regarding homosexual relations and use of injectable drugs. However, this won't come in the way of carrying out the health education programme because in such a programme there is no need for the workers to

disclose their own practices. Only thing needed is that they communicate the messages and practices or in other words make people to amend their ways and methods regarding such practices.

Though majority (71.4%) said that they were giving health education regarding AIDS but they were unable to state the talking points that could be attributed to the inadequacy of knowledge. However, the positive aspect is that all the workers were ready to carry out health education programme during their routine duties and were also confident that people would listen to them because they have faith in whatever they talk about Only 10 per cent said that people would not listen to them but could not give the reasons for the same. Majority (68.6%) were of the opinion that people would give an ear to them only because of fear of the disease.

So, health education programme, which is very essential for the prevention of AIDS, can be carried out through the existing infrastructure, aided by mass media. What is needed is to make the health workers (who are to impart health education) aware about all the aspects of the diseases, up-dating their knowledge regularly and motivating them to carry out the programme wholeheartedly for the benefit of the society to which they belong and serve.

SUMMARY AND CONCLUSIONS

Awareness of health workers was inadequate about all the aspects of AIDS i.e., cause, spread, clinical features, treatment prevention, national programme for the control of AIDS.

Workers (except one) were hesitant to talk about their personal matters, i.e., illicit relations, and drug abuse etc. This aspect will be more pronounced while dealing with the common man.

The knowledge of workers needs improvement and this can be done through specific training courses on AIDS for the workers, keeping in mind the fears associated with the disease. Hesitancy to talk particularly about the personal matters cannot come in the way of a health education programme. People should change their behaviour - particularly sexual and not that they should disclose to workers what they want to keep secret And this could be achieved through a proper health education programme. All the workers were ready to carry out health education of the people as far as AIDS is concerned as a part of their routine duty and majority were also confident that people were happy with their work and ready to listen to whatever they talk to them about various health programmes including AIDS.

To conclude, the knowledge of the workers was found to be poor and needs improvement through training. And that health education programme was feasible within the framework of present infrastructure. It should be integrated with the primary health care and workers are to be kept motivated for the success of the programme.

People should be motivated and encouraged, in order to not only at the recipient end but also take active part in the process and help the workers in doing their jobs well. This would surely ensure community participation and community commitment.

Lkkjk'k

स्वास्थ्य शिक्षा कार्यक्रम, जो ''एड्स'' की रोकथाम के लिए बहुत ही महत्वपूर्ण है, का संचालन जन माध्यमों की सहायता से विद्यमान सेवा ढांचे के अर्न्तगत किया जा सकता है। प्रस्तुत अध्ययन से प्राप्त निष्कर्षों में यह दर्शाया गया है कि स्वास्थ्य कार्यकर्ताओं (जो स्वास्थ्य शिक्षा प्रदान करने के लिए उत्तरदायी है) को इस रोग के सभी पक्षों के बारे में जानकारी करके, नियमित रूप से उनके ज्ञान का अद्यतन करके तथा समाज के हित में कार्यक्रम का पूरी निष्ठा के साथ संचालन करके इसकी रोकथाम की जा सकती है।

यह पाया गया है कि कार्यकर्ताओं को इस संबंध में पर्याप्त जानकारी नही है और उन्हें प्रशिक्षण दिए जाने की आवश्यकता है तथा कार्यक्रम की सफलता के लिए प्राथमिक स्वास्थ्य परिचर्या को स्वास्थ्य शिक्षा कार्यक्रम के साथ समन्वित करने की आवश्यकता भी है।

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ROLE OF HEALTH SERVICES RESEARCH: CONTEXT EVALUATION IN CURRICULUM INNOVATION

S.C. Mohapatra* and V.P. Singh**

Abstract

The module of medical education; in the present context, particularly in our country does not go hand in hand with the health care need, utilization pattern, as well as service management. Are we sailing in a wrong westernized model? Is our system of medical education faulty? Do our health care services need further probing to understand the cleavage between the education we provide and the task we expect from the health care providers?

In the present study, the issue was carried out through the National Medical Teachers' Training Unit of Institute of Medical Sciences, Banaras Hindu University; towards the introspection of medical education system and the health services.

In the present context we can no longer regard the organization of health care as merely a way of bringing physician and patient together of "delivering cure and care". Because of the new perspectives, our attention, in both developing and developed countries, has been moving from our individuals to populations, pathophysiology to behaviour, microbes to environments and treatments to care system. Thus, a whole range of new Health Services Research (HSR) methods based on Epidemiology, Biostatistics and Behavioural and Social Sciences is developing.

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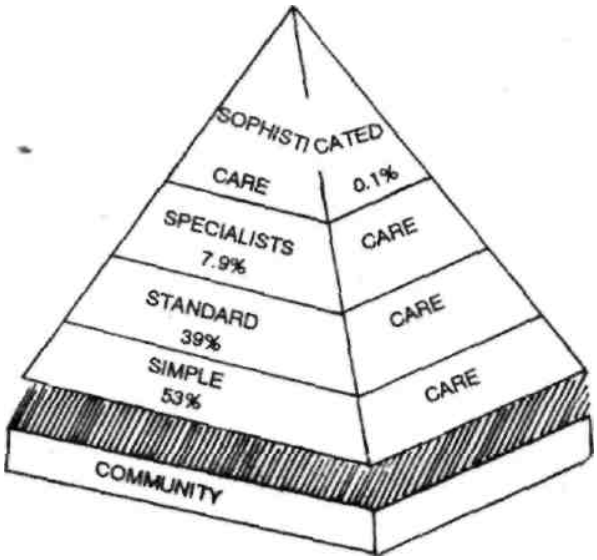
HEALTH SERVICES RESEARCH (HSR)

The term Health Services Research aims at an indepth study of health care delivery system to identify the health needs of the people and the type of care they use or search for. The necessity of health services research arises because the health service of most countries has been failing to meet the felt needs of majority of people. The same criticism can be labelled at institutions responsible for training health personnel[1]. In order to bridge the gap between the medical education and the health infrastructure what we need, are the factual informations on the mortality and morbidity in a population, facilities available in our health system and our capability to provide the best possible health care with the available scarce resource.

The importance of health services research in relation to the medical education is obvious. If a community is studied regarding the health care they need it will appear that the health services necessary for them makes a form of pyramid (Fig. 1). About 53 per cent people need simple care in the form of home remedy. Standard care from the medical institutions such as primary health centres and district hospitals are required for only 39 per cent. People actually



(HEALTH CARE DEUVERY CONE)

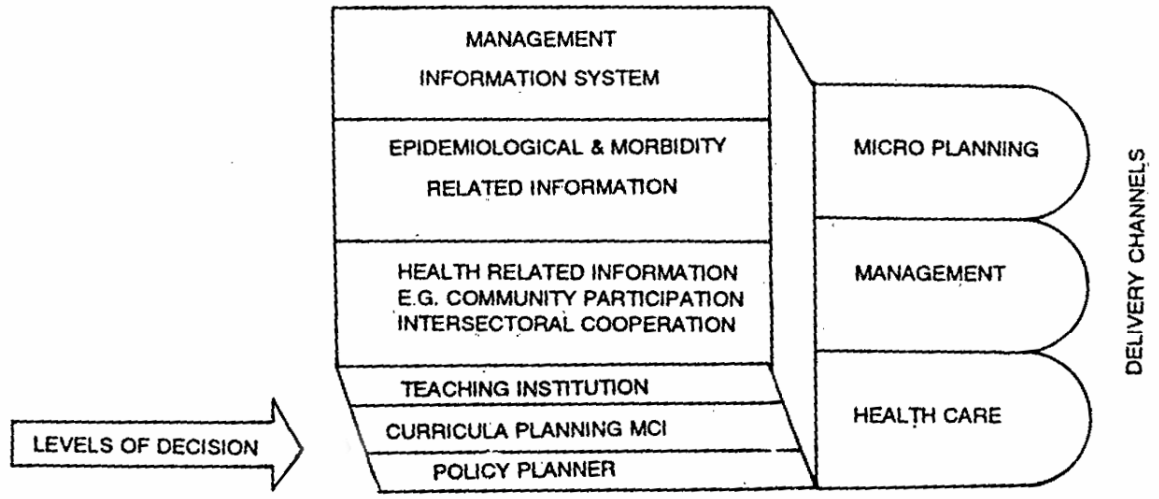
FIG. 1

needing specialists care at the teaching hospitals, district hospital or specialist practitioners constitute only 7.9 per cent while only 0.1 per cent need some sophisticated care at apex institutes. On the contrary during the medical education, we inculcate a sophisticated hospital orientation in the minds of our undergraduates with a rush for postgraduation, super specialisation, settling abroad etc.

It would be ideal to identify the area(s) of the health care delivery system which needs research or collection of information. Three dimensional frameworks has been identified. Health Services Research has three major components, e.g. management information, epidemiology and morbidity related information and health related information (i.e. community participation, intersectoral cooperation etc.)(Fig. 2). Each component has different variables for collection of information these informations would be necessary to be utilized by different levels of decision makers such as teaching institution, medical council or curricula planners as well as policy makers. A feedback from the information will, therefore, modify the teaching of the grassroot health care providers and health implementation system which would in return modify the health care delivery channels in terms of micro planning, management and health (not medical) care delivery system at the "standard" health care units.

HSR VIS-A-VIS MEDICAL EDUCATION

From the observation it will become further clear that even in the primary health centres conditions like fever, respiratory diseases, gastrointestinal disorders like diarrhoea and injuries constitute 9 (Table 1) 65 to 71 per cent of all illnesses. Similar conditions also constitute about 43 per cent of all indoor cases of the district hospital. The private practitioners in 88 per cent occasions also treat conditions like diarrhoea dysentery etc. In other words, in health service delivery system, at majority situations a medical graduate has to face conditions like fevers, upper respiratory tract infections, diarrhoeal diseases, etc. Do we give proportionate importance to these conditions in our medical curriculum? The answer is probably no. Does this not mean that we want to satisfy our ownselves than the need of the community at large? Leading to frustration of medical graduates and impact failure of health care delivery system. The analysis of the proportionate role matrix of doctors at the primary health centre (Fig. 3) shows that 33.3 per cent of this work time is spent on headquarter visits and meetings etc. followed by family welfare programme (24.7%) and station administration and management (9.2%). In fact medical care (8.6%) and MCH care (7.5%) combined together (16.1%) are the only areas which need the expertise taught through the present medical education system. Conversely, 83.9 per cent role played by a doctor at primary health centre was rendered without any basic training. Should they be included in Medical Education?



COMPONENT OF HEALTH SERVICE RESEARCH

FIG. 2

TABLE 1

PROPORTIONATE MORBIDITY PATTERN OF HEALTH SERVICES INFRASTRUCTURE

Major conditions	Health Infrastructure			
	Primary Health Centre			Dist. Hospital
	OPD	Indoor	Emergencie	Indoor
Gastrointestinal Disorders	16.7%	11.6%	15.8%	9.9%
Fever Respiratory Diseases	45.1%	11.7%	10.3%	10.1%
Wounds and Injuries	8.9%	41.8%	26.3%	22.7%
Percentage out of Total	70.7%	65.1%	52.4%	42.7%

Further, the medical graduates at the PHC normally do not refer a case unless and until they are almost helpless. When referral system was initiated in one of the PHCs in Varanasi the medical officers referred only 33 cases (0.29%). With the builtup of referral system, it was observed that 56.3 per cent, 18.7 per cent, 14.6 per cent and 10.4 per cent cases need a referral to general medicine, general surgery, obstetrics, gynaecology and casualty including forensic medicine, respectively. This further means that the cases to be referred to specialists centres, at the middle of the health service pyramid, for the care by the specialists (Fig. 4) also is screened regularly and properly. Thus, the medical officers must be trained to identify their limitations and the cut off point as well as the place of referral during their medical curriculum. Loading the medical graduates with a lot of details of medical care, syndrome, and detail operation steps has probably made the situation so complicated. Is it not high time for us to identify the limitation of our undergraduate teaching? Probably some of the micro-details might have to be deleted and include certain practical issues; a medical graduate has to face at the place of his work: may it be a PHC, Army hospital, private practice etc.

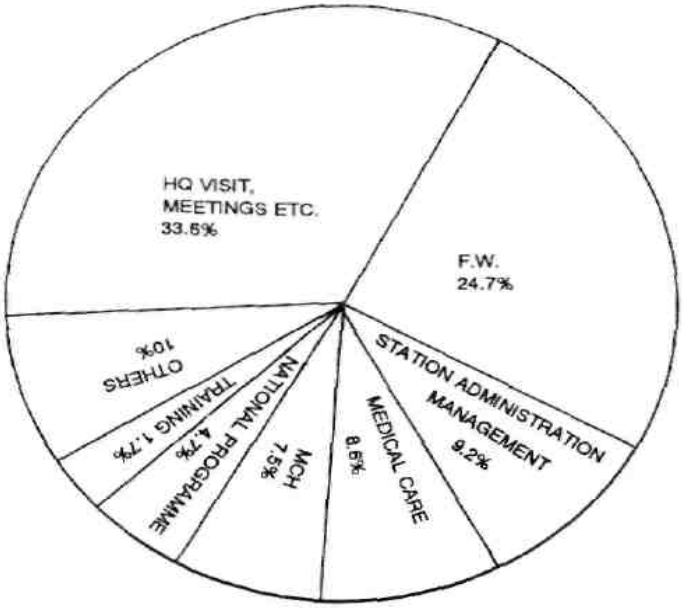


FIG. 3

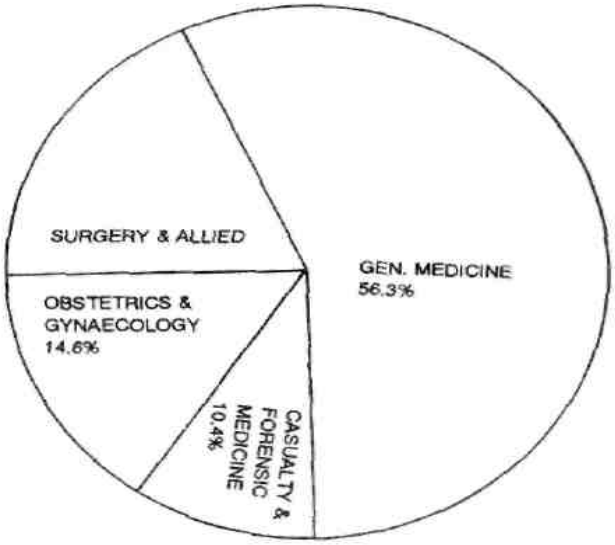
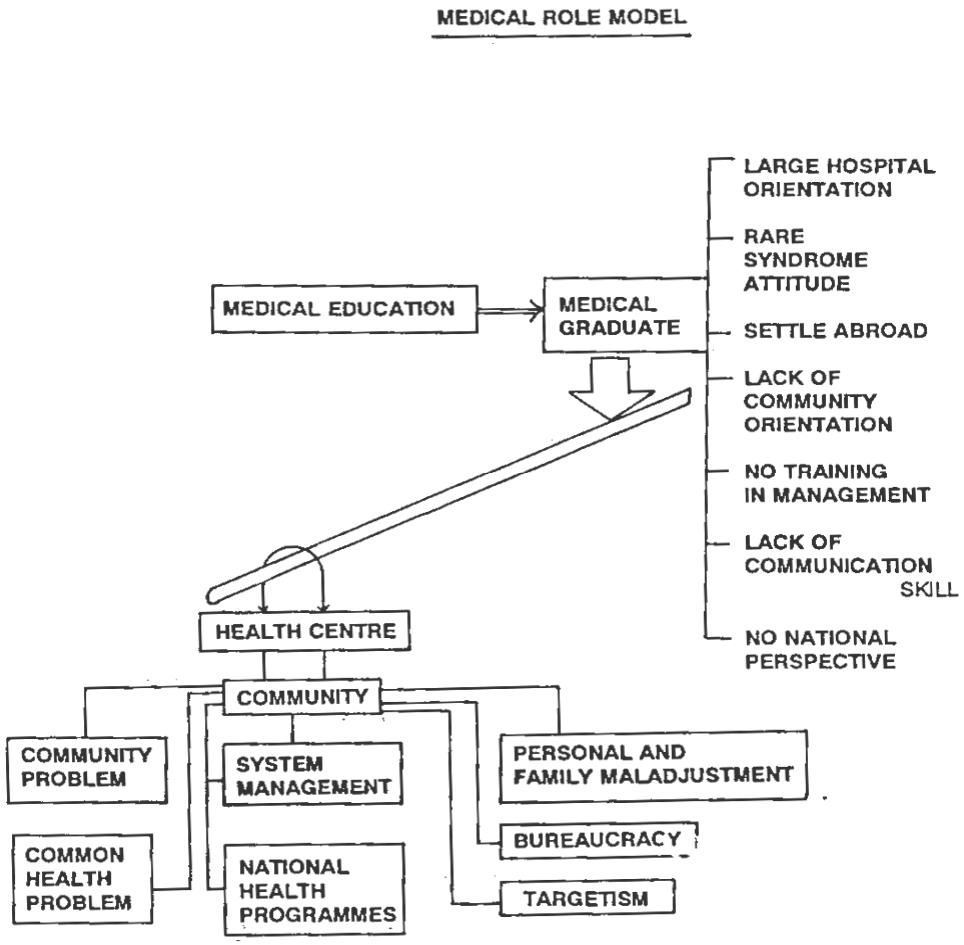


FIG. 4

PROPORTIONATE ROLE MATRIX AT PRIMARY HEALTH CENTRE

CURRICULUM MODIFICATION NEEDS

Understanding the curriculum for undergraduate medical education, if not befitting to the Physicians Role Model at the health infrastructures, it must identify, whether a change in the present medical education was necessary or not and if necessary, in what respect? Eight issues/components are generally suggested[5]. (Fig. 5)



These changes are needed in the system of education which is an "English Model". Even in England the feedbacks from medical school, was not relevant to the community[8]. The community based teaching suggested by the Ramathibodi Teaching Hospital, Matridol University, Bangkok[7] in this regard has laid down the objectives (Fig. 6).

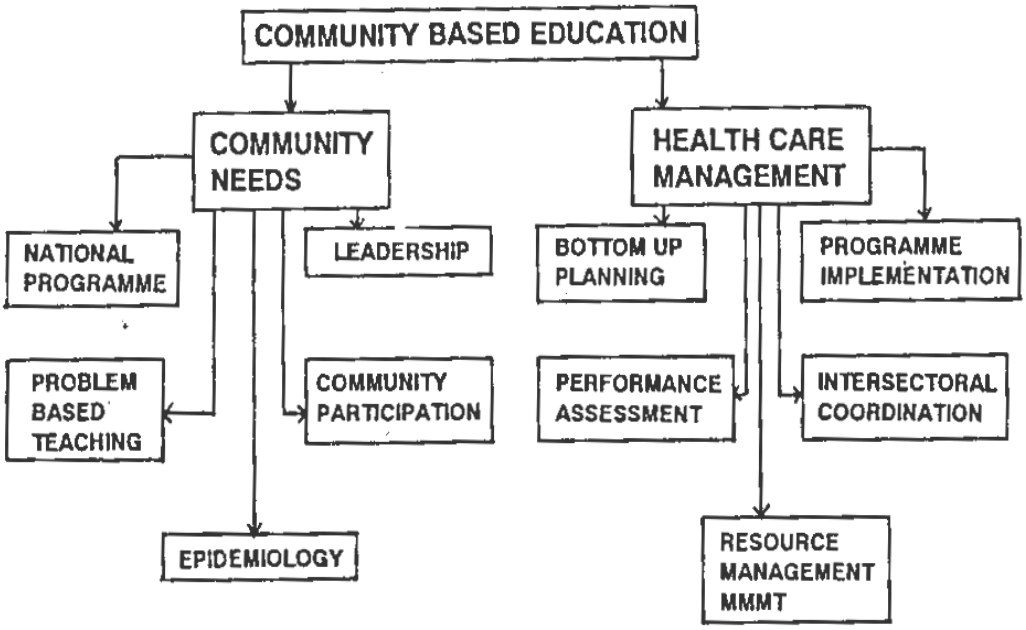


FIG. 6

The primary objectives of the teaching activities in community health are:

a. To offer an integrated and progressive sequence of learning

Experiences which will give students the knowledge and skill needed for a critical examination of the health care needs of a defined population and for the design of health care programmes to meet their needs.

b. To prepare students and junior doctors to perform effectively as

First class health centre physicians, giving the best possible comprehensive and integrated health care - curative, preventive and promotive to the people of the district using the limited resources available at such health centres.

INNOVATIONS

Keeping the above facts in view a number of countries have undertaken innovative steps for modification of medical curriculum. The Council for International Organisations of Medical Sciences" (CIOMS) was also set up in earlier part of seventies. As yet no dent has been made. The ROME programme of India was also one of those experimentations which failed. Some other innovative trials were Fliendne Biefang's mode! of Germany, Cerkovnyj's innovative trial of USSR, Belchior's trial of Brazil and so on. Thus, it is high time to prepare a model in order to provide Health For All by the Year 2000.

Lkkjka'k

चिकित्सा शिक्षा संबंधी माड्यूल, विशेषकर हमारे देश की वर्तमान स्थिति के संदर्भ में हमारी स्वास्थ्य परिचर्या संबंधी आवश्यकताओं, सेवाओं की उपयोगिता शैली तथा सेवाओं के प्रबन्धकीय पक्षों के संदर्भ में मेल नहीं खाता! क्या हम पाश्चात्य मॉडल के आधार पर गलत दिशा में चल रहे है? क्या हमारी चिकित्सा शिक्षा प्रणाली दोशपूर्ण है? जो शिक्षा हम प्रदान करते हैं, क्या उसे समझने के लिए हमें स्वास्थ्य परिचर्या सेवाओं पर और अधिक अन्वेषण करने की आवश्यकता है?

प्रस्तुत अध्ययन का संचालन, चिकित्सा शिक्षा प्रणाली और स्वास्थ्य सेवाओ का अन्तरअवलोकन करने के उद्वेश्य से बनारस हिन्दू विश्वविद्यालय के आयुर्विज्ञान संस्थान के अन्तर्गत राष्ट्रीय चिकित्सा शिक्षक प्रशिक्षण यूनिट के माध्यम से किया गया था।

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PRESCRIPTION AND INVESTIGATION AT THE REFERRAL CENTRES OF ESIC

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ABSTRACT

Seventy prescription slips of the patients of ESIC were referred to the out-door of referral centres - diagnostic centres and ESI hospitals. The prescriptions were analysed on the quantitative aspects of investigations. Delphi technique was employed to examine the appropriateness of the prescriptions and investigations. It was found that the number of tests advised by ESI doctors was appropriate but there was a heavy over-prescription. That is, the average number of drugs actually advised by ESI doctors was much higher than that of recommended by other experts or specialists.

The Employees State Insurance Corporation (ESIC) is a premier social security organisation in India that covers around four per cent of the country's population. It has developed a referral system in which the patients are seen first at dispensary (except in emergency) and then depending upon the need further referral is made for secondary or tertiary care to a diagnostic centre or a hospital. Efficiency in this referral system can provide health care in a cost effective way. It can rationalise the use of expensive resources at the secondary and tertiary level of health care and at the same time increase the value of primary care delivered at the first point of contact. Currently, the system has some constraints and inadequacies. The problems like over-referral, over-prescription and over-investigation have been particularly stressed in personal discussion with the programme managers. These could increase the workload and the cost. Therefore, the management of ESIC has expressed need to determine the possible solutions to minimise such problems.

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The laboratory investigations have undoubtedly been playing a significant role for diagnostic purposes or for prognostic purposes in the management of illness. Under-investigation may lead to wrong diagnosis while over-investigation may give rise to adverse effects on the patients and as already mentioned may increase the cost of care. The same holds true for the prescription of drugs after the diagnosis has been made. The patients should receive the right type of drugs, in right combinations, in the right dosage and for the right period of time.

The present paper is only a part of a larger study on analysis of referral system in the ESIC. It was aimed at the analysis, of quantitative aspects of prescriptions and investigations at the referral centres of ESIC - diagnostic centres and ESI hospitals. Some studies have been done on the pattern of prescribing among doctors but probably no study has covered the dimension of the number of laboratory investigations and the drugs prescribed, i.e.. their number, appropriateness or they were more than required.

OBJECTIVES

Only twc important aspects of the referral system in the ESI scheme have been covered under this study. The first has been the quantitative aspects of investigations at the referral centres and the other was quantitative aspects of the prescriptions given at the referral centres. This study brings out the results of the analysis of quantitative aspects of investigations and prescriptions made in the referral centres of ESI scheme.

DATA AND METHOD

The data required for analysis of quantitative aspects of investigation and prescription was as follows:

1. The total number of tests done in laboratory during the period of illness, right from the onset of the disease tills the recovery. These could be either for diagnostic or prognostic purposes.

2. The total number of drugs advised to the patients during the episode of illness.

3. A standard drugs treatment schedule depicting the optimum number of drug and their dosage to be advised in the commonly occurring diseases.

These needs could be met if the medical records of the patients were well maintained and the details regarding illness, treatment the investigations and the

Referrals were carefully recorded. But unfortunately, these details were lacking in the records at dispensaries - the referring units. Therefore, an alternative method for the study of these aspects was adopted - the prescription slips of the patients attending out-door services of the referral centres were utilised.

This paper reports the analysis of the number of drugs prescribed and the number of investigations advised to the patient at his or her first visit to the referral centre. Information was collected from the prescription slips with the patients but again constraints existed; not many of the prescription slips were providing information on symptoms, clinical findings or diagnosis. Therefore, the study was limited to only those prescription slips which had such information recorded. The data that were recorded included patient number, the speciality, the diagnosis, the number of drugs prescribed and the number of tests advised at the first visit of the patient to the specialists of referral centres.

Because of time constraints, seventy such prescription slips were collected from the dispensaries where the patients report after their visit to the referral centres. These slips were from various disciplines; Medicine (30), Paediatrics (8), Surgery (9), Orthopaedics (6), ENT (6), Skin (4), Psychiatry (3), Gynaecology (2) and Ophthalmology (2).

The analysis on appropriateness of investigations and prescriptions was done by employing Delphi technique. The panel of two to three specialists from each of the above mentioned disciplines was formed. These specialists were taken from various institutions in Delhi such as Lok Nayak Jai Prakash Narain Hospital, Kalawati Children's Hospital, Ram Manohar Lohia Hospital. Each specialist was provided with the list of cases selected as above with the information about the patient's age, sex, complaints and diagnosis only. They were asked to give their expert opinion regarding the number of investigations and the drugs required in each case.

The average number of tests and drugs recommended by the panellists in each case was calculated. Then these were matched with the actual number of tests and the actual number of drugs advised by ESI doctors at diagnostic centres or hospitals.

FINDINGS

A. *Investigations.* It was observed that in forty-five cases out of the total of seventy, no tests were advised by ESI doctors. It may be assumed that these cases were referred to the referral centres for opinion only. In the case of remaining twenty-five cases, it may be noted that these were matching on the number of investigations actually advised and recommended by the panellists in

the case of only four (out of 25) cases (Appendix). Further, analysis of data showed that the number of investigations prescribed by ESI doctors were 3.2 compared to only 3.0 by the panellists. However, this difference was found to be not significant statistically (P>.10).

Out of 25, seventeen slips were from the discipline of medicine. Therefore, the prescription practice of investigations for the discipline of medicine was analysed separately. In this case, the averages by ESI doctors were 3.4 compared to 3.0 recommended by the panellists. This difference was also found to be insignificant (P>.10).

B. *Prescription of Drugs.* The findings related to the number of drugs recommended by the experts in the panel were matched with the actual number of drugs advised by ESI doctors in the sample. These have been presented in Appendix 2.

It was observed that in nine cases out of 70, there was matching in the number of drugs prescribed. A further analysis showed that instead of an average of 2.1 drugs recommended by the panellists, the prescribed average number of medicines was 3.9 by the ESI doctors. That is, the number of drugs prescribed by the ESI doctors was almost the double. The pairedt-test was applied to test the significance of this difference. This average was found to be highly significant (P<.001). The cases were also analysed separately for disciplines of Medicine, Paediatrics and Surgery; the number of cases for other disciplines were very small. In the discipline of Medicine, the average number of drugs advised was 4.7 against the recommended 2.5 drugs (by panellists). It was highly significant (P<.001). In paediatrics, the doctors of ESI advised on average 2.9 drugs per case while the experts recommended 1.2. It was also found significant (P<.01). Similarly, in the discipline of surgery, the difference of averages - 2.6 drugs advised by ESI doctors against the recommended 2.0, was also significant at (P<.10) level. The cases of other disciplines were put together as the number in those was not large, and were analysed similarly. The average number of drugs advised by ESI doctors in this group was 3.9 while panellists recommended only 2. The paired t-test showed the difference in averages to be highly significant (P<.001).

CONCLUSIONS AND SUGGESTIONS

This is only a kind of preliminary study where an attempt was made on quantitative analysis of investigation and prescription on a small sample because of limitation in data and constraints of time. It indicated heavy over-prescription and no over-investigation. The scope of this study may be considered as limited because it was based on limited data which could be completed from the

Prescription slips only. A more detailed study where the complete episode of illness may be taken into consideration would be very useful. It may also increase the scope of the study by including information on the doctor's prescribing behaviour which intum depends upon a number of variables such as knowledge, experience, attitude, the patients clinical conditions and the patients insistence for investigations or preference for certain drugs.

Certain corrective measures may be taken to mend the practice of over-prescribing. These could be as follows:

1. The findings of this study may be discussed with the ESI doctors and specialists and their ideas may be invited.

2. The specialists and the dispensary doctors of ESIC should be instructed to prescribe optimum number of drugs and within the pharmacopoea.

3. A periodic orientation of the physicians about the prescription and investigation may be arranged. This would provide a sort of check and in addition updating of their knowledge about the diseases and the drugs.

4. A standard drug treatment schedule for the various commonly occurring diseases may be developed by a committee of the experts. This could be used by the doctors.

Lkkjk'k

कर्मचारी राजकीय बीमा निगम के रोगियों की 70 नुस्खा पर्चियों (प्रेसक्रिपशन स्लिप) को नैदानिक केन्द्रों तथा ईएसआई अस्पताल जैसे रैफरल केन्द्रों को रेफर किया गया था। इन नुस्खा पर्चियों का विष्लेषण अन्वेषणों के मात्रात्मक पक्षों के सन्दर्भ में किया गया था। नुस्खों तथा अन्वेषणों की उपयुक्तता की जांच करने के लिए ''डेलफी'' तकनीक को प्रयोग में लाया गया था। यह पाया गया कि ईएसआई डाक्टरों द्वारा सुझाये गए टेस्टों की संख्या तो सही थी, किन्तु नुस्खों में जो दवाईयां लिखी गई थी उनकी मात्रा अपेक्षाकृत बहुत अधिक थी। इसका अभिप्राय यह हुआ कि ईएसआई डाक्टरों द्वारा वस्तुतः सुझाई गई दवाईयों की औसत संख्या दूसरे विशेषज्ञों द्वारा सुझाई गई दवाईयों की मात्रा से अपेक्षाकृत बहुत अधिक थी।

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Appendix 1: Investigations

TABLE 1

NUMBER OF TESTS ACTUALLY ADVISED BY ESIC DOCTORS AND RECOMMENDED BY THE PANELUSTS

S.No.	Discipline	Number of Laboratory Tests	
		Actually Advised	Recommended by Panellists
1.	Medicine	8	3
2.	Medicine	2	1
3.	Medicine	5	2
4.	Medicine	2	0
5.	Medicine	2	1
6.	Medicine	2	4
7.	Medicine	2	4.5
8.	Medicine	3	3.5
9.	Medicine	3	3
10.	Medicine	3	5.5
11.	Medicine	3	1
12.	Medicine	4	3
13.	Medicine	5	4
14.	Medicine	3	5
15.	Medicine	4	4
16.	Medicine	4	2.5
17.	Medicine	2	4
18.	Paediatrics	5	4
19.	Paediatrics	2	7
20.	Surgery	1	3
21.	Ortho	1	0
22.	Ortho	5	5
23.	Ortho	1	1
24.	ENT	6	2
25.	ENT	1	2
Total		79	75

Appendix 2: Prescriptions

TABLE 2

NUMBER OF DRUGS ACTUALLY ADVISED BY ESIC DOCTORS AND RECOMMENDED BY THE PANELLISTS

S.No.	Discipline	Number of Drugs	
		Actually Advised	Recommended by Panellists
1.	Medicine	4	2.5
2.	Medicine	2	3
3.	Medicine	7	4
4.	Medicine	5	2
5.	Medicine	2	2.5
6.	Medicine	3	1
7.	Medicine	2	2
8.	Medicine	3	2
9.	Medicine	8	3
10.	Medicine	2	3
11.	Medicine	7	3
12.	Medicine	8	3
13.	Medicine	4	2.5
14.	Medicine	4	3
15.	Medicine	4	2
16.	Medicine	5	2
17.	Medicine	8	3
18.	Medicine	2	2
19.	Medicine	5	2.5
20.	Medicine	6	2
21.	Medicine	3	2
22.	Medicine	5	1.5
23.	Medicine	3	3
24.	Medicine	4	3
25.	Medicine	9	3
26.	Medicine	9	3
27.	Medicine	3	3
28.	Medicine	3	2
29.	Medicine	5	2
30.	Medicine	5	2.5

Contd.

S.No.	Discipline	Number of Drugs	
		Actually Advised	Recommended by Panellists
31.	Paediatrics	6	3.5
32.	Paediatrics	3	-
33.	Paediatrics	4	0.5
34.	Paediatrics	1	1.5
35.	Paediatrics	1	-
36.	Paediatrics	3	2
37.	Paediatrics	2	0.5
38.	Paediatrics	3	1
39.	Surgery	5	3
40.	Surgery	2	2
41.	Surgery	3	1
42.	Surgery	3	2
43.	Surgery	2	2
44.	Surgery	1	0
45.	Surgery	3	2
46.	Surgery	2	3
47.	Surgery	3	3
48.	Orthopaedic	3	1
49.	Orthopaedic	2	2
50.	Orthopaedic	2	1
51.	Orthopaedic	2	-
52.	Orthopaedic	2	2
53.	Orthopaedic	6	3
54.	ENT	2	3
55.	ENT	7	3.5
56.	ENT	5	4
57.	ENT	8	2
58.	ENT	3	2.5
59.	ENT	5	-
60.	Skin	3	2
61.	Skin	2	1
62.	Skin	9	3
63.	Skin	4	3
64.	Psy	5	3
65.	Psy	4	3
66.	Psy	6	3
67.	Eye	2	-
68.	Eye	2	-
69.	Gynaecolog	3	2
70.	Gynaecolog	3	2
	Total	277	148

Appendix 3

TABLE 3

AVERAGE NUMBER OF DRUGS PER CASE ACTUALLY ADVISED AND RECOMMENDED BY THE PANELLISTS

s. No.	Discipline	No. of cases	Total number of drugs advised		Average number of drugs advised		Significance (Paired t-Test)
			Actu-ally	By panelists	Actually	By panelists	
1.	Medicine	30	140	75	4.7	2.5	P<.001
2.	Paediatrics	8	23	9	2.9	1.2	P<0.01
3.	Surgery	9	24	18	2.6	2.0	P<0.1
4.	Others	23	90	46	3.9	2.0	P<0.001
Total		70	277	148	3.9	2.1	P<0.001

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HEALTH STATUS OF UNDER-FIVES IN A LUDHIANA SLUM

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ABSTRACT

A random cross-sectional survey of 237 under-live years old children in 205 families out of 902 under-fives in 1512 families living in the "Ash Heap Slum' of Ludhiana, revealed majority of the children to belong to migrant families from three out of the five BIMARU States, mostly from Bihar. About half the children had illiterate fathers. The mean per capita family income was Rs. 176 per month. Only 27 per cent of the children were fully immunised while 28 per cent had received no immunisation. About 19 per cent of the children had severe malnutrition, with males and females suffering equally. Diarrhoea! diseases were the major cause of under-five morbidity. Provision of basic sanitation and safe water in the urban slum is therefore of a vital necessity.

About 200 million people live in urban India, out of which 30 per cent are below the poverty line. They live in slums without basic health facilities. Around 60 per cent of them are women and children[1]. Poor environmental conditions, compounded by poverty, malnutrition and deficient health care, make them susceptible to a host of infectious diseases. Children are the worst victims of these circumstances.

Ludhiana, a highly industrialised city in North India with a population of two million, has more than 200 slums. The slum dwellers constitute 2-3 lakh people. The "Ash Heap Slum", with 5439 people including 902 under-five years old children living in 1512 families as on 31.12.1992, is situated 4 kms. from Christian Medical College on Chandigarh Road in Moti Nagar area of Ludhiana. A few

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Years ago it used to be a low-lying area with ditches. To fill up the ditches, ashes of various factories in the city were dumped here, hence the name "Ash Heap Slum. This slum has not been recognised by the local municipality and therefore no basic services are being provided.

AIMS AND OBJECTIVES

The present study was undertaken to find out the health status of under-five children in the "Ash Heap Slum", and to observe their immunisation and nutritional status in relation to selected socio-economic variables.

METHOD

A cross-sectional survey was carried out, covering 205 families selected at random from the total 1512 families living in the "Ash Heap Slum". All the families were visited under direct supervision. A pre-tested questionnaire was administered to the mothers of the under-five children and information on health as illness during past one year, breast feeding practices, vaccination status and socio-economic conditions was obtained. The under-five children in the families were weighed.

RESULTS

The study group comprised of 237 under-five children.

Age and sex distribution of the children has been presented in Table 1. About 64 per cent were in the age group of 1-3 years. The observed sex ratio in this urban slum (958 females per 1000 males) was higher than that of urban Ludhiana (815/1000) and urban Punjab (870/1000) found during 1991 census[4].

The mean per capita family income per month of these children was Rs.176. This was higher than that (Rs.160) reported in other slums of the country.

Migrants from the States of Uttar Pradesh, Bihar and Rajasthan constituted 91 per cent of the sample. The maximum number were from Bihar (51.5%), followed by Uttar Pradesh (23.6%) and Rajasthan (16.0). About 49 per cent of the fathers were illiterate. The highest proportion of illiterates (86.8%) was amongst the migrants from Rajasthan, while the highest proportion of literates (69.6%) was amongst those from Uttar Pradesh as has been depicted in Table 2.

About 89 per cent of the children studied were breast-fed for more than six months. This duration was more than that found in the slums of Bombay, Calcutta and Madras where 71.9 per cent, 20.9 per cent and 36.4 per cent of the children respectively were breast-fed for more than six months.

TABLE 1

AGE AND SEX DISTRIBUTION OF CHILDREN UNDER STUDY

Age Group (months)	Female No. (%)	Male No. (%)	Total No. (%)
1-11	21 (43.7)	27 (56.2)	48 (20.3)
12-23	27 (47.4)	30 (52.6)	57 (24.0)
24-35	20 (42.5)	27 (57.5)	47 (19.8)
36-47	23(51.1)	22 (48.9)	45 (19.0)
48-59	25 (62.5)	15 (37.5)	40 (16.9)
Total	116(49.0)	121 (51.0)	237(100)

Figures in brackets indicate percentages. X^2 + 4.37, df = 4, p - 0.36.

TABLE 2

DISTRIBUTION OF CHILDREN ACCORDING TO THE STATE OF ORIGIN AND EDUCATION OF THE FATHER

Domicile	Educational Status		Total
	Literate	Illiterate	
Uttar Pradesh	39 (69.6)	17 (30.4)	56 (100) (23.6)
Bihar	69 (56.6)	53 (43.4)	122 (100) (51.5)
Rajasthan	5 (13.2)	33 (86.8)	38 (100) (16.0)
Punjab	3(50.0)	3 (50.0)	6(100) (2.5)
Others	4(26.7)	11 (73.3)	15 (100) (6.3)
Total	120 (50.6)	117(49.4)	237(100) (99.9)*

*Due to rounding off.
Figures in brackets indicate percentages.
X^2 = 34.6, df = 4, p = 0.0000.

Diarrhoea! diseases (61.6%) were found to be the major cause of morbidity in the children. This was higher even than that in a slum in Calcutta, the so-called home of diarrhoea! diseases, where respiratory infections were responsible for 25.1 per cent of the disease episodes followed by diarrhoea! diseases (23.1%)[7]. However, other studies also reported diarrhoeal diseases to be the major health hazard amongst children of slums dwellers as has been given in Table 3.

TABLE 3
DISTRIBUTION OF CHILDREN ACCORDING TO ILLNESS DURING PAST ONE YEAR

Diseases	Female No. (%)	Male No. (%)	Total No. **m**
Diarrhoea	75 (64.6)	71 (58.7)	146(61.6)
Fever/ARI	4<3.4)	6 (6.6)	12 (5.1)
No illness	37 (31.9)	42 (34.7)	79 (33.3)
Total	116 (99.9)*	121 (100)	237 (100)

*Figures in brackets Indicate percentages. *Due to rounding off. X^a-1.65, df-2, p-0.4*

Only 27 per cent of children were fully immunised for age. About 28 per cent had received no vaccines. Complete immunisation coverage in the present study was higher than that found in Sarojini Nagar block of Lucknow district (17.2%) as well as that of other slums in the country (17.0%)[5,8], and much higher than that found in rural Jhansi (1.9%)[9]. In the 12-23 months age-group, only 26 per cent were fully immunised for age while 28 per cent had received no vaccines. There were no significant differences in immunisation coverages in the different age-groups as has been shown in Table 4.

About 19 per cent of the children were found to be suffering from severe malnutrition according to Gomez classification as has been shown in Table 5. The prevalence of severe malnutrition (19%) in both the sexes) in the present study has been found to be much higher than the national average (9.9%) as reported by the National Nutrition Monitoring Bureau[10] and also higher than the levels found in urban Calcutta (5.9% in males and 11.3% in females) and amongst males in urban Jabalpur (18.2%), but is less than that amongst females in urban Jabalpur (24.5%)[M]. It was observed to be highest (58.3%) amongst infants (0-11 months of age) in this stum as has been shown in Table 6. The maximum number of

severely malnourished children in the slum under study were 52.5 per cent found to be amongst the children of migrants from Bihar as has been given in Table 7.

TABLE 4
IMMUNISATION STATUS OF THE CHILDREN

Age Group (months)	Immunisation Status			Total
	Complete for age	Incomplete for age	Not done at all	
0-11	9(19)	21 (44)	18 (37)	46 (100)
12-23	15 (26)	26 (46)	16 (28)	57 (100)
24-35	13 (28)	25 (53)	9(19)	47 (100)
36-47	14(31)	18 (40)	13 (29)	45 (100)
48-59	13 (32)	15 (37)	12 (30)	40 (99)*
Total	64 (27)	106 (45)	68 (26)	237 (100)

Figures in brackets indicate percentages.
**Due to rounding off.*
X^S - 5.97, df - 8, p - 0.31

TABLE 5
NUTRITIONAL STATUS OF THE CHILDREN ACCORDING TO SEX

Nutritional Grade	Female No. (%)	Male No. (%)	Total No. (%)
Normal	8 (6.9)	22 (18.2)	30 (12.6)
Mild malnutrition	40 (34.5)	40 (33.0)	80 (33.7)
Moderate malnutrition	46 (39.6)	36 (29.8)	62 (34.6)
Severe malnutrition	22 (19.0)	23 (19.0)	45 (19.0)
Total	116 (100)	121 (100)	237 (99.9)*

Figures In brackets Indicate percentages.
'Due to rounding off.
X - 7.67, df - 3, p > 0.05.*

TABLE 6
NUTRITIONAL STATUS OF THE CHILDREN ACCORDING TO AGE

Age Group (months)	Normal	Nutritional Status			Total
		Malnourished			
		Mild	Moderate	Severe	
	8 (16.7)	10 (20.8)	2 (4.2)	28 (58.3)	48 (20.2) (100)
12-23	11 (19.3)	15 (26.3)	24 (42.1)	7 (12.3)	57 (24.1) (100)
24-35	6 (12.8)	23 (48.9)	15 (31.9)	3 (6.4)	47 (19.8) (100)
36-47	3 (6.7)	16 (35.6)	24 (53.3)	2 (4.4)	45 (19.0) (100)
48-59	2 (5.0)	16 (40.0)	17 (42.5)	5 (12.5)	40 (16.9) (100)
Total	30 (12.7)	80 (33.7)	82 (34.6)	45 (19.0)	237 (100) (100)

Figures in brackets Indicate percentages

. X^1» 82.23. df = 12, p - 0.0000.

SUMMARY AND CONCLUSIONS

The "Ash Heep Slum" of Ludhiana city was found to be populated mostly by migrants from the States of Bihar, Rajasthan and Uttar Pradesh were significantly, three out of the five "BIMARU* States, with the maximum number being from Bihar[12]. The mean monthly per capita income of the families was Rs.176. Only 51.2 per cent of the fathers were literate. Vaccination coverage in the under-fives was low. The practice of prolonged breast feeding was marked in the families. With very poor environmental conditions and lacking basic facilities in these slums, the children mostly suffer from diarrhoea! diseases. The prevalence of severe malnutrition in this population was higher in comparison to levels reported from other slums. Severe malnutrition amongst the slum children was equally high in both the sexes and most prevalent in the first year of life. This, compared with the situation obtained in the local population in rural Ludhiana where severe malnutrition was not observed, where the male children suffered iess from malnutrition as compared to the females, and where moderate malnutrition was most prevalent in the latter half of the third year of life, demonstrates the higher vulnerability of the slum children even in infancy and equally in both

sexes". According to an other researcher *'...The health problems of this section of population (the urban poor) are directly related to their poverty, the polluted and stressful urban environment they live in...*[5].

TABLE 7
NUTRITIONAL STATUS OF THE CHILDREN ACCORDING TO STATE OF ORIGIN

State of Origin	Nutritional Status				Total
	Normal	Malnourished			
		Mild	Moderate	Severe	
Uttar Pradesh	6 (10.7)	26 (46.4)	16 (28.6)	8 (14.3)	56 (100)
Bihar	18 (14.7)	31 (25.4)	44 (36.1)	29 (23.8)	122 (100)
Rajasthan (99.9)	5 (13.2)	13 (34.2)	15 (39.5)	5 (13.1)	38 (100)
Others	1 (4.8)	10 (47.6)	7 (33.3)	3 (14.3)	21 (100)
All	30 (12.7)	80 (33.7)	82 (34.6)	45 (19.0)	237 (100)

Figures in brackets indicate percentages. *X*-11.99, df- 9, p - 0.2137.*

A decade ago the Krishnan Committee drew attention to the need for strengthening of health services in urban areas with particular reference to urban slums[14]. Experience over the first half of this century in the west has shown that the infant mortality, the major causes of which were diarrhoea and respiratory infections, was reduced largely due to better nutrition and improvements in the overall living conditions, hygiene and sanitation, and that modem medicine, as we know and practise it, can hardly take any credit for this marked improvement since this occurred even before the advent of modern chemotherapy or effective immune prophylaxis[15]. There exists, therefore, a strong case for recognising and identifying the urban slums for provision of priority care, particularly, with respect to provision of basic facilities like safe water and sanitation.

Lkkjk'k

लुधियाना नगर की गन्दी बस्तियों में रहने वाले कुल 1512 परिवारों मे पांच वर्ष से कम आयु वर्ग के 902 बच्चों में से 205 परिवारों के इसी आयु वर्ग के 237 बच्चों के बारे में एक क्रास सैक्शनल रेण्डम सर्वेक्षण किया गया था। इस सर्वेक्षण के परिणामस्वरूप यह पाया गया कि इनमें से अधिकांश बच्चे 5 बीमारू राज्यों में से तीन राज्यों, विशेष रूप से बिहार के प्रवासी परिवारों के थे। प्रति परिवार माध्य आय रू0 176/– प्रतिमाह थी। केवल 27 प्रतिशत बच्चे ही ऐसे थे जिन्हें पूर्ण रूप से प्रतिरक्षीकरण सेवाएं प्राप्त हुई थी। जबकि लगभग 28 प्रतिशत को प्रतिरक्षीकरण सेवाएं बिल्कुल प्राप्त नहीं हुई थी। लगभग 19 प्रतिशत बच्चे गंभीर कुपोषण से ग्रस्त पाये गये थे। कुपोषणग्रस्त बच्चों में लड़के–लड़कियों का अनुपात समान पाया गया था। पांच वर्ष से कम आयु के बच्चों में बीमारी का मुख्य कारण अतिसार रोग होना पाया गया था। इसलिए शहरी स्लम क्षेत्रों में बुनियादी स्वच्छता और सुरक्षित पेयजल की आपूर्ति एक महत्वपूर्ण आवश्यकता है।

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LEGALLY INDUCED ABORTION IN INDIA

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ABSTRACT

The objective of this study was to reevaluate the legally induced abortion (LIA) in the perspective of the national family planning programme. The cases of LIA increased from 3, 88,405 to 5,84,870 during 1980-88. A large proportion of the acceptors were in their twenties. About 35-50 per cent LIA cases were performed because of failure of contraceptive methods. Not more than 15 per cent LIA were performed in the second trimester of the pregnancy. Around 50-56 per cent acceptors did not opt for sterilisation or IUD following LIA during these years. Acceptance of UA by a large number of younger women has shown that the concept of a small family is gaining importance. Couples of reproductive age group need to be educated about the proper use of the contraceptive methods.

The Government of India introduced a piece of social legislation, the Medical Termination of Pregnancy Act (MTP Act), along with minor amendment in the Indian Penal Code so as to adjust to mis new statute in 1971. The MTP Act (Act No. 34 of 1971) is 'an Act to provide for the termination of certain pregnancies by registered medical practitioners and for matters connected therewith or incidental thereto (Preamble of the MTP Act). Under Sub-section 2 of Section 3 of this Act, a pregnancy may be terminated by a registered medical practitioner before 12 weeks of gestation (Clause a), or by two registered medical practitioners when duration of the pregnancy exceeds 12 weeks but does not exceed 20 weeks (Cl. b), on the grounds that the continuance of the pregnancy would involve risk **to** the life of the pregnant women or grave injury to her physical or mental health (Sub Cl. i), or a substantial risk for the child to be seriously, physically or mentally, handicapped (Sub Cl. ii). The anguish caused by the pregnancy resulted from rape (Expl. I), or from the failure of contraceptive methods used by any married woman **or** her husband (Expl. II) May be presumed to constitute a woman a grave injury

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to the mental health of the pregnant woman. In determining such risk of injury to the health, as mentioned above, account may be taken of the pregnant woman's actual or reasonably foreseeable environment (Sub S.3).

This social legislation, as provided an additional facility in the event of contraceptive failure and has thus made the implementation of family planning programme easier and acceptable to people. Thereafter, studies of attitude towards abortion, characteristics of acceptors and psychosocial factors influencing decision for acceptance of MTP were conducted to examine the effect of this legalization. The study in Delhi showed that a proportion of women of reproductive age were willing to resort to LIA once or more than once to limit their family size. This indicated that legalization of abortion has provided an opportunity for the non-terminal method users to have it as an additional facility to ensure effective birth control. Therefore, a need was felt to reevaluate the legally induced abortion (LIA) with particular reference to the age of acceptors, grounds for LIA, duration of pregnancy and use or non-use of contraceptives following LIA in the perspective of fertility reduction objective of the national family planning programme. The present study reviews the UA, to that effect, during the period from 1980-81 to 1987-88.

MATERIALS AND METHOD

The source of data was the year book: family welfare programme in India for the period from 1981-82 to 1988-89. The cases of LIA studied were covering the area of 3.29 million sq. kms. Having population over 843.9 million of whole of India. Of these, 437.6 million were males and 406.3 million females. Since one or the other kind of data was not available from a. few States in each year, the data presented were the available total data of a particular aspect in that year in India.

RESULTS

The number of institutions approved for LIA increased from 3,294 to 6,126 during 1980-88. The total number of LIA performed was also increased from 3, 88,405 to 5, 84,870 during this period. The number of death due to LIA ranged from 4 to 52 over these years, resulting not more than 0.1 per thousand LIA cases in the country.

The Fig. 1 shows that a large proportion (32.6-34.6%) of the LIA acceptors were in the age of 25-29 years. The percentage of 20-24 and 30-34 years old LIA acceptors remained within the range of 22-24 per cent during 1980-84 thereafter, the percentage of the former age group increased to 27.5 per cent and that of the latter declined to 20.6 per cent in 1988. However, the percentage of the LIA

acceptors whose age were 35-39, 40-44 and 45+ years were in the range of 9-11 per cent, 1.8-3.1 per cent and 0.7-0.4 per cent, respectively. The percentage of the LIA acceptors who were 15-19 years old and less than 15 years old was 4.8-6.4 per cent and 0.1-0.5 per cent, respectively, during the period 1980-88. About 6-24 per cent cases did not have the record of age of the acceptors over these years.

PERCENTAGE OF LIA ACCEPTORS BY AGE

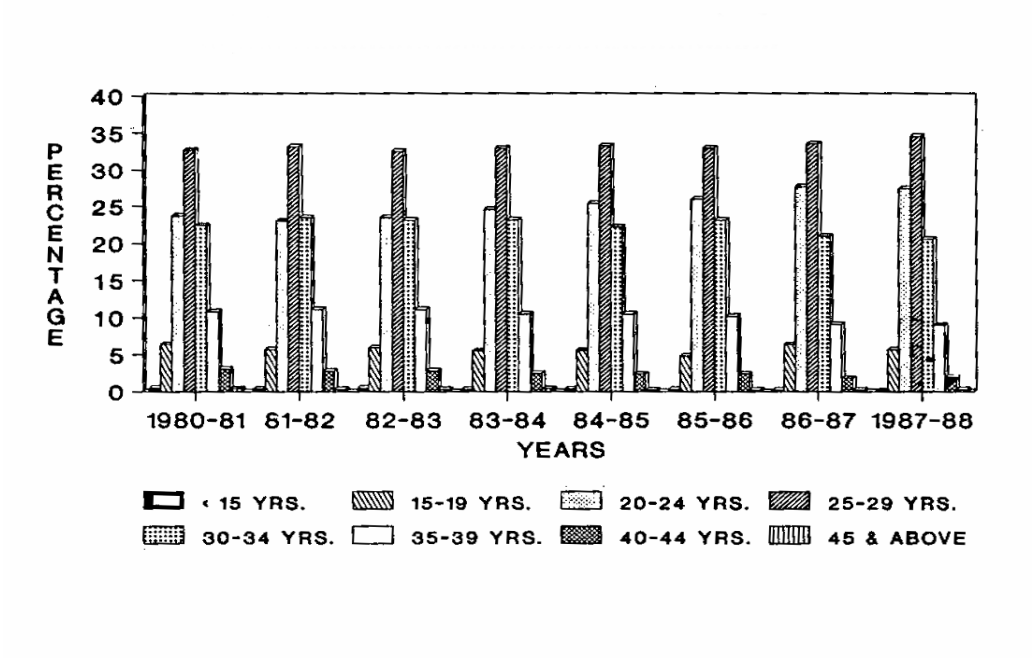

FIG. 1

Less than 10 per cent LIA cases were due to the danger to the life of the pregnant woman (except 11.5% in 1987-88) and substantial risk of a child to be born seriously handicapped. About 10-20 per cent cases of LIA were due to grave injury to the physical and mental health of the pregnant women. However, 35-50 per cent LIA cases resulted from the failure of the contraceptive methods, registered during 1980-88. The cases which lacked records of reasons for UA were 10-30 per cent only have been shown in Table 1.

The duration of the pregnancy has been given in Table 2, it was observed that about 85 per cent cases of LIA were performed in the first trimester of the

pregnancy and not more than 15 per cent of cases were in the second trimester during this period. This proportion of the first and second trimester LIA cases was constantly sustained over the years. Around 4-14 per cent cases did not have the records regarding this parameter over these years.

About 50-56 per cent LIA acceptors did not opt for sterilisation or IUD immediately after abortion as has been depicted in Table 3. However, the percentage of sterilisation following LIA increased from 24 to 30 during 1980-84 and thereafter, remained constant upto 1988. Less than 20 per cent UA acceptors opted for IUD insertion during this period.

DISCUSSION

The findings of this review revealed that a large proportion of LIA cases were performed because of the failure of contraceptive methods during 1980-88. This appeared to have resulted from the use of less effective methods such as 'rhythm' method which quite often practised by the people who may not have full knowledge of this term[4]. Inadequate user's knowledge about choice and use of the effective contraceptive methods seemed to be another factor for high failure rate. In China, 89 per cent acceptors were reported to have used contraceptive at the time they became pregnant. There was 16 per cent condom failure and 41 per cent IUD failure, particularly in younger women. A high percentage of LIA during the first trimester of the pregnancy suggested acceptors knowledge about the demerits of UA in the later stage of the pregnancy; yet a proportion of acceptors took the risk of LIA at the second trimester, probably because of the delay in decision making or due to non-availability of facility in time in some rural areas. It has been observed that inspite of hurdles imposed by the legal and referral system, acceptors rarely opted for abortion in the second trimester of the pregnancy in U.K.[8]. Further it has been opined that in case early termination was not available, most of the acceptors would resort to late abortion in Philippines, probably because of economic pressure. However, low and steady acceptance of LIA as has been found in this review did not project any alarming situation in context to the total population of the country.

Non-acceptance of sterilisation or IUD by a large proportion of LIA acceptors indicated more chance of repeated abortion due to non-use or use of less effective contraceptive methods following LIA over these years. Most of the LIA acceptors in Delhi city used less effective contraceptive methods for spacing the birth of the next child[4]. A survey in Singapore showed that only 12 per cent LIA acceptors opted for IUD and 6.5 per cent for sterilisation. A high acceptance of sterilisation and IUD following LIA was also reported in some of the studies in the urban family planning centres in India. Acceptors who had prior experience of LIA appeared to be highly motivated to switch over from less effective to effective

Contraceptive methods following LIA, particularly, when they had been exposed to a short counselling at the time of preliminary examination in the clinic before abortion. However, in the present study, lack of motivational factors seemed to be the cause of minimum option for terminal or effective contraceptive methods following UA.

TABLE 1

PERCENTAGE OF UA CASES BY REASON OF TERMINATION

Reasons	Years							
	1980-81	81-82	82 83	83-84	84-85	85-86	86-87	1987-88
Danger to life	6.0	8.0	6.6	5.1	6.3	9.6	9.5	11.5
Injury to health	16.1	15.6	17.8	18.4	15.0	18.0	18.5	17.5
Injury to mental health	13.7	12.5	13.3	13.5	13.3	11.4	12.8	12.2
Rape	2.1	1.4	1.2	1.6	2.6	2.0	1.2	0.9
Congenital anomaly of child	5.8	4.9	5.6	5.5	6.7	6.9	9.2	9.6
Contracep-tive method failure	48.9	43.6	49.4	50.4	40.3	39.3	39.5	35.6
Environ-mental reason	7.4	13.7	6.1	5.5	15.8	12.8	9.3	12.7
Reason not available	10.2	15.7	19.8	27.9	20.2	23.7	30.0	25.8

TABLE 2

THE PERCENTAGE OF UA CASES BY DURATION OF PREGNANCY

Years	Upto 12 Weeks	12-20 Weeks	(Not available)
1980-81	86.0	14.0	4.7
1981-82	84.8	15.2	12.5
1982-83	85.0	15.0	7.3
1983-84	86.7	13.3	12.8
1984-85	85.6	14.4	12.3
1985-86	85.8	14.2	12.2
1986-87	85.6	14.4	14.2
1987-88	84.1	15.9	6.4

'Calculation based on total number of acceptors for which duration of pregnancy break up is available.

TABLE 3

PERCENTAGE OF UA CASES WITH REFERENCE TO USE OR NON-USE OF CONTRACEPTIVE METHODS FOLLOWING ABORTION

Years	With Sterilisation	Wrth IUD	Without Sterilisation/IUD
1980-81	24.9	19.5	55.6
1981-82	26.1	17.1	56.8
1982-83	29.1	10.2	54.7
1983-84	30.3	16.9	52.8
1984-85	31.8	**17.4**	50.8
1985-86	30.3	17.3	52.4
1986-87	29.6	18.6	51.8
1987-88	29.2	18.8	52.0

Acceptance of LIA by the majority of women in their twenties and early thirties indicated their efforts to limit the family size. At this age, they might have a desire for completing their individual family with two or three children or for spacing the birth of the next child. The use of non-terminal contraceptive methods and subsequent acceptance of LIA by women at the age of 35-39 years or above strongly suggested the absence of any follow up and motivation for accepting terminal method even after LIA. However, it appeared that LIA was accepted as an additional facility to the use of the less effective contraceptive methods.

In conclusion, it may be stated that rise of LIA cases were not found to be significant in context to the growth of population from 685.2 to 843.9 million during the last decade. The trend towards acceptance of a small family by younger women even after taking advantage of LI A was found to have well set on. However, couples required to be educated about the proper choice and use of contraceptives.

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इस अध्ययन का उद्वेश्य राष्ट्रीय परिवार नियोजन कार्यक्रम के परिप्रेक्ष्य में विधिमान्य गर्भपात (लिगली इन्ड्यूस्ड एबोरशन) की स्थिति का पुर्नमूल्यांकन करना था। वर्श 1980–88 की अवधि में विधिमान्य गर्भपात केसों की संख्या 3,88,405 से बढ़कर 5, 84, 870 हो गई थी। इस विधि को स्वीकार करने वालों में अधिकांश लोग 20 वर्श की आयु वर्ग के थे। लगभग 30 से 35 प्रतिशत गर्भपात केस गर्भनिरोधक विधियों के असफल रहने के कारण हुए थे। गर्भधारण की दूसरी तिमाही में विधिमान्य गर्भपात कराये जाने वाले केसों की संख्या 15 प्रतिशत से अधिक नहीं थी। लगभग 50–56 प्रतिशत उपयोगकर्ताओं द्वारा नसबन्दी अथवा आई.यू.डी. को स्वीकार किया था। इतनी बड़ी सख्या में युवा महिलाओं द्वारा विधिमान्य गर्भपात को स्वीकार करना इस बात को दर्शाता हैकि छोटे परिवार के आदर्श की अवधारणा को निरन्तर महत्व मिल रहा है। प्रजनन आयु वर्ग के दम्पत्तियों को गर्भनिरोधक विधियों के उचित प्रयोग के बारे में शिक्षित किए जाने की आवश्यकता है।

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PATTERNS OF SEEKING MEDICAL CARE AMONG SCHEDULED CASTES AND NON-SCHEDULED CASTES IN RURAL AREAS

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ABSTRACT

This article attempts to focus on the factors that influence the utilisation of health facilities by scheduled caste population in selected villages of Meerut district, Uttar Pradesh. The levels of utilisation of health services by scheduled caste population and their acceptability and satisfaction from the existing health care delivery system have been studied. In addition, this article analyses the perceived morbidity among the scheduled caste as compared to non-scheduled caste population in the study area. The sample of the study consists of 1052 respondents, including 845 scheduled caste and 207 non-scheduled caste, selected from seven villages of Meerut district.

The factors that influence the utilization and acceptance of health facilities by an individual or group of people is a fairly complex phenomena. It cannot be explained through a simple matrix of few variables such as the socio-economic characteristics of individuals or his faith in given system of medicine or his positive perception about a given health facility and *or* his level of satisfaction from the services etc. It involves series of variables which are related to either health systems to community or beneficiary exclusively or jointly. In India the scheduled caste population as a strata of social stratification has althrough suffered discrimination, hatred, indignities, inequalities, humiliation, exploitation etc., due to their low social origin. Post-independence efforts to get them off from these disadvantages and integrate them into the overall socio-political scenario of the country have resulted in comprehensive gains particularly in the area of their educational attainments, improvement in socio-political status, etc. Despite all such measures, psychological barriers between scheduled castes and other castes persist. There is a feeling that scheduled caste section of the Indian

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Population have three sets of feelings which lead them towards alienation. These three sets of feelings are (a) feeling of meaninglessness, (b) feeling of powerlessness, and (c) feeling of social isolation. These cognitive feelings however vary from person to person, from one stratum to other depending upon the extent to which this stratum has achieved social and economic development. However, these feelings are real to the extent that they get manifested in their behavioural patterns.

For rural people the roots of illness usually extend into the realm of human conduct and cosmic purposes. In many situations, the ideal cure of a specific disease may not always be found in tonic or dosage of allopathic drug, but in pilgrimages performed and rituals observed both meant to wash away the sins. In this context Scheduled Caste (SC) families show higher tendency to relate commonly preventable diseases and sicknesses to supernatural phenomena. However, this is not always true in case of Non-Scheduled Caste (NSC) population groups. Suchman (1966) in his study conducted on the Washington Heights Community of New York hypothesized that those people who belong to community groups which are highly exclusive ethnically, will be found to have low levels of knowledge about disease, higher scepticism about medical care and greater dependency in illness. In terms of management of sickness, such groups tend to be traditional, dependent, closed and local and feel comfortable to take popular and non-scientific approaches to illness and sickness. Some other behavioural observations show that they tend to seek lay diagnosis and help, tend to delay treatment, lay stress on folk-remedies and self-medication and usually find it difficult to adjust to hospital routines. Scheduled caste population in India is a hereditary group, which manifest almost all the behavioural patterns specified by Suchman in his ethnically exclusive group of population.

Numerous studies during post-independence era in India have analyzed the extent to which constitutional measures taken by Government of India have actually been able to reduce social disabilities in the form of social discrimination among scheduled castes and whether there has been any appreciable improvement in their social and economic status. These studies have highlighted the problems such as socio-cultural discrimination, economic exploitation, administrative harassment, structural deficiencies and status discrepancies, etc. Most of these studies were concerned with the nature and magnitude of welfare measures taken and or their influence on the quality of life of scheduled caste population. There are very scanty references about their health services utilization, the pattern of acceptance of governmental health infrastructure by them in comparison to the non-scheduled caste population groups in rural areas in India. There are not many studies that describe the health culture of this section of population. Even the perceived morbidity patterns and the problems being encountered by these population groups for utilizing the available health system

Are also not yet properly documented.

The present paper is an attempt to assess the self-perceived health status of scheduled castes and manner in which health is being maintained by them. It also assesses the levels of utilization, acceptability and satisfaction from within the existing health delivery system. An attempt has also been made to assess the perceived prevalence of morbidity rates among scheduled caste and non-scheduled caste groups.

MATERIALS AND METHOD

The study was conducted in a rural block of Meerut district in Uttar Pradesh. This district has heavy concentration of scheduled caste population in comparison to other districts in the State. One block out of 8 blocks in the district was randomly selected. Of the 57 villages in this block, only 7 villages were selected. These villages had around 90 per cent concentration of SC population. Among the selected villages, 9 per cent households were randomly selected and interviewed. From seven villages, 845 SC respondents were interviewed by utilizing semi-structured schedule. Of the total sample of around two per cent of SC respondents were either non-cooperative or had left their households. A matching sample of non-scheduled caste (NSC) respondents was also taken from the already selected villages. This helped the study in making suitable comparisons wherever they are found significant and necessary. The study findings reflected below are based on responses received from 845 scheduled caste respondents and 207 non-scheduled caste respondents.

FINDINGS

A. Socio-economic Status of Scheduled Caste and Non-scheduled Caste

Of the total SC respondents, 51.4 per cent were male and 48.5 per cent were females. The majority of SC respondents (71.9 per cent) and NSC respondents (70.5 per cent) were in the age group of 20-49 years. More than 80 per cent respondents in both the castes were married. The major occupation among SC respondents was labour (68.8 per cent) whereas among NSC it was agriculture (45.5 per cent) and service (34.8 per cent). About 66 per cent of SC respondents and only 40 per cent of NSC respondents had monthly income of less than Rs.600. The study showed that 64 per cent of the SC population was illiterate in comparison to only 38 per cent among NSC. Jatavas among SC population were dominant sub-caste in these seven villages. The overall socio-economic status of scheduled caste in comparison to their counterpart's *viz.* non-scheduled caste was found to be backward on educational, occupational and income considerations.

B. Perceived Health Status

Rural people irrespective of their caste affiliations rate their personal health status as "weak". However, within these two castes, SC respondents have placed their health status lower than NSC respondents. It was also found that higher number of SC (21.4 per cent) respondents in comparison to 5.8 per cent NSC respondents consider their health status including their family members worse than others. More than 50 per cent of NSC perceived their health status better than the other families in the village while in case of SC only 25.9 per cent perceived their health status to be better than others. In health maintenance activities, SC attach high importance to provision of essentia! food items with least or no consideration for protein rich diet. The non-scheduled caste group lays stress on protein rich diet and perceives milk and butter can further improve their health status. This finding shows that scheduled caste population in general have a poor outlook towards their own health.

C. Perceived Morbidity Patterns

The morbidity rates have been worked out on the basis of total population of sampled households which is 5140 in case of scheduled caste and 1333 in case of non-scheduled caste population. The findings show that 738 persons were found sick at the time of interview among scheduled caste population and 141 among non-scheduled caste population. This indicates that SC group has higher morbidity load (14.36) than NSC group (10.58).

The females have also higher morbidity than males in both the groups. The variation in morbidity load based on sex could be due to their susceptibility to sickness because of their lower nutrition intake. Within the same sex, the morbidity rate was significantly higher among SC males than NSC males. However, among females the differences are not significant. The higher morbidity among SC males could be due to their occupational hazards as most of them are engaged as labourers in the agricultural fields.

It was also found that of the total morbid persons, about 25 per cent in case of SC and 20 per cent in case of NSC were children below five years of age. Thus, scheduled caste families being mostly agricultural labourers tend to ignore the sickness among their children as they mostly carry them to their places of work.

TABLE 1

MORBIDITY PATTERN OF SC AND NSC POPULATION BY SEX

Scheduled Caste				Non-scheduled Caste			
Sex	Total Pop.	Sick Pop.	Morbidity Rate	Total Pop.	Sick Pop.	Morbidity Rate	Percentage
Male	2775	388	13.8	706	68	9.63	3.102*
Female	2365	350	14.80	627	73	11.64	2.013*
Total	5140	738	14.36	1333	141	10.58	3.591

*Significant are 5% level of significance.

D. Seeking Medical Care

In most cases, more than two-third of the sickness episodes were treated by private doctor. Second preference for seeking medical care has been given to **the** Government doctor or other para-professional workers (Table 2). The main reasons for seeking the services of private practitioners were their availability at the time of the need; higher levels of satisfaction and comparatively being cheaper in terms of providing drugs and consultations. This shows that irrespective of caste, rural people tend to seek the services of private practitioners rather than government facilities.

Further for 66 per cent of episodes among both the group respondents have spent up to nine rupees per episode for recovery from sickness.The money is spent essentially in terms of payment made for consultations and medicines. Rural people in India do not bifurcate curative care in any further divisions except episode curing or per visit charges.

TABLE 2

PERCENTAGE DISTRIBUTION OF SICKNESS POPULATION BY SOURCE OF TREATMENT

Source of Treatment	Scheduled Caste (N=738)	Non-scheduled Caste (N=141)	Percentage
No Treatment	14.09	10.64	1.198 NS
Government Doctor	8.13	10.48	
Private Doctor	75.34	72.33	
Vaktya Not	0.95	3.55	
recorded	1.49	-	
Total	100.0	100.0	

Almost all the respondents, irrespective of their caste, reported to have accurate knowledge about the availability of private medical facilities and in particular private doctor than the governmental or any other agency in and around their respective villages. Among government facilities, the multi-purpose health worker was better known than the PHC medical officer or health assistants in their respective areas.

Irrespective of the caste-group, more than 80 per cent of respondents neither knew about the location and facilities available of the PHC nor were they able to specify the distance from the villages to these governmental institutions. About 40.2 per cent of SC and 50.2 per cent of NSC were aware that sub-centre was functioning within three kilometers of the villages. Thus SC population tends to have higher awareness about sub-centre rather than that of PHC due to its easy geographical proximity.

The study has also shown that effective visits during last two months to PHC by scheduled caste population have been 5.8 in comparison to 6.2 visits by NSC population. Such effective visits have been, however, highest to multi-purpose health workers, male as well as female. Thus, awareness of the actual visits made to government health facilities and institutions was poor among SC and NSC respondents. Among specific reasons for making visits to health functionaries are for (i) taking medicine; (ii) utilizing immunization services; and (iii) for seeking medical consultations. Those who utilized government health facilities, the visits were generally made for purposes of seeking cure of serious ailments followed by utilizing MCH facilities including family welfare. About 28.2 per cent of SC respondents stated to have utilized FP/MCH services at government health centres in comparison to 19.3 per cent among NSC group.

About one-third of SC respondents and one fourth of NSC respondents stated that it is uneconomic to seek health care from governmental health institutions as they provide only medical consultations with unpredictable supply of medicine. Secondly around 11.5 per cent of SC respondents and 13.4 per cent of NSC claimed treatment provided from such institutions is ineffective and thus the respondents tend to avoid utilizing the government health facilities. Even seven per cent of SC and 9 per cent of NSC stated that the health functionaries working in these governmental institutions are either not available or even when they are available, their behaviour is rude. Thus, the government health institutions are perceived as ineffective for providing the treatment and uneconomical from the point of view of the patient and finally exhibit a low level of interpersonal communication between the providers and the consumers of services. However, irrespective of caste, more than two-third of sampled respondents in both segments were satisfied with the behaviour of doctors.

Utilization of MCH Services: The study also investigated the nature and type of pre-natal, natal and post-natal care utilized by SC and NSC mothers.The responses were elicited from 404 mothers from SC households and 88 mothers from NSC households.

About 78.3 per cent of SC mothers and 69.3 per cent of NSC mothers did not register themselves at any clinic during their pregnancy.The percentage of

mothers registering at different clinics have been very less and scattered from first month of pregnancy till even 8th and 9th month also. Significant differences among SC and NSC mothers were observed in utilizing the facility of tetanus toxoid (TT) injections and taking folic acid tablets from government institutions during ante-natal period. Only around 39 per cent of SC mothers received TT injection in comparison to about 60 per cent of NSC mothers. Similarly, about 30 per cent of SC mothers received folic acid tablets in comparison to 56 per cent of NSC mothers.

Thus NSC mothers have utilized the MCH services better than SC mothers. In case of NSC mothers, around 19.3 per cent deliveries were conducted in government hospital/clinic, whereas in case of SC mothers, only 3.8 per cent deliveries occurred in government hospital/clinic/PHC (Table 3).

The highest number of these deliveries was conducted by untrained Dais in both the caste groups. However, trained Dais was also taking up the responsibility of conducting deliveries which were well accepted by both the caste groups. They have conducted 36 per cent of deliveries among SC and 32 per cent among NSC families (Table 4).

TABLE 3

PERCENTAGE DISTRIBUTION OF SC AND NSC MOTHERS BY PLACE OF DELIVERY

Place of Delivery	SC	NSC	Total Population
Parent's home	2.4	-	2.4
In-law's home	10.6	2.2	9.1
Own house	81.1	69.3	79.0
Government clinic	1.4	3.4	1.8
Hospital	2.2	15.9	4.6
PHC	0.2	-	0.2
Any other	0.9	7.9	2.2
Not recorded	0.7	1.1	0.8

TABLE 4

PERCENTAGE DISTRIBUTION OF SC AND NSC MOTHERS ACCORDING TO THE PERSON WHO CONDUCTED DELIVERY

Person who	SC	NSC	Combined
No one	0.2	-	0.2
Female relative	4.9	3.4	4.6
Untrained Dai	42.0	32.9	40.4
Trained Dai	36.1	31.8	35.3
ANM	4.4	6.8	4.8
Private Doctor	7.9	12.5	8.7
Government Doctor	2.2	11.3	3.8
Not recorded	1.9	1.4	1.8

The respondents who had actually utilized government health facilities were further probed for their actual experiences while utilizing a given facility and **if** they have certain reactions about the same. Thus the responses were taken from those respondents only who had actually utilized the facilities. The crucial areas **in** which responses gathered were related to the behaviour of the medical officer while interacting with the patients, the behaviour of other staff members towards patients, the extent of availability of medicines as and when required and the distance of health facilities from the villages and their overall level of satisfaction of a given visit to Primary Health Centre. These reactions could be treated as important determinants of acceptability and utilization of rural health services. Each of these issues is required to be rated on a three-point scale.

It can be seen that more than 50 per cent of the respondents reported that the behaviour of the doctor towards his patients was very cordial. However, almost half of the respondents from both the caste groups reported that the behaviour of other staff members of the PHC was rude towards the patient. About the availability of medicines in PHC, one-third of the respondents claimed that medicines were always available. Nearly 40 per cent of respondents claimed that medicines are never available in PHC.While analysing the distance of PHC. 58.9 per cent of the respondents feel that the distance to PHC is very far. However, the overall impression about the visit to PHC shows that one-third of the respondents claimed that visit to PHC is always impersonal. This leaves around 60 per cent of

Respondents who appear to be satisfied with a visit to primary health centre.

TABLE 5

PERCENTAGE DISTRIBUTION OF SCHEDULED CASTES (SCs) AND NON-SCHEDULED CASTES (NSCs) RESPONDENTS REGARDING VARIOUS ASPECTS RELATING TO UTILIZATION AND ACCEPTABILITY OF GOVERNMENT HEALTH SERVICES

Waiting time	Very high	Reasonable	Very low
SC NSC	43.0 29.6	21.5 25.2	35.5 45.2
Availability of Medicine	Never	Sometimes	Always
SC NSC	38.03 46.37	30.74 25.70	31.23 27.93
Behaviour of Doctors	Very good	Can't say	Rude
SC NSC	54.4 58.2	27.6 20.9	18.0 20.9
Doctors Listen	Most often	Sometimes	Never
SC NSC	26.92 18.85	34.16 31.15	38.92 50.00
Behaviour of other staff	Cordial	Neutral	Rude
SC NSC	27.2 29.7	23.6 19.1	49.2 51.2
Distance from the villages	Very far	Manageable	Not very far
SC NSC	53.9 53.9	9.9 11.4	36.2 34.7
Visits to sub-centre or PHC is mostly impersonal	Always	Sometimes	Never
SC NSC	31.23 36.62	31.60 30.98	37.17 32.40

CONCLUSIONS

Even though SC and NSC population group in rural situation live in two separate strata of society, but no pointed differences were observed in these sections of society. As a matter of fact the present study showed that the health culture among rural people is equally shared by scheduled castes and non-scheduled caste groups. No striking differences were found to be existing either in perception or in health practices which could be attributed to a particular caste only. However, the shade differences in perceived morbidity pattern, in utilization of health and MCH services between two castes can be explained in terms of socio-economic disparities. The study also shows that relationship between physical illness and existing medical care is an extremely complex phenomenon and simple provision of health services may not be adequate to cut across or eliminate poverty. The hope of the future lies in preparing for extra-health measures as a means to improve the acceptability and utilization of governmental health care facilities.

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प्रस्तुत लेख में उत्तर–प्रदेश के मेरठ जिले के अर्न्तगत चुने हुए गांवों मे रह रहे अनुसूचित जाति के लोगों द्वारा स्वास्थ्य सुविधाओं की उपयोगिता को प्रभावित करने वाले घटकों पर प्रकाश डालने का प्रयास किया गया है। अनुसूचित जाति के लोगों द्वारा वर्तमान स्वास्थ्य परिचर्या वितरण प्रणाली के अन्तर्गत उपलब्ध स्वास्थ्य सेवाओं के उपयोगिता स्तर और स्वीकार्यता स्तर तथा इन सेवाओं के प्रति उनके तुष्टि स्तर जैसे घटकों के बारे में अध्ययन किया गया था। इसके अतिरिक्त अध्ययन क्षेत्र में रह रहे गैर–अनुसूचित जाति के लोगों की तुलना में अनुसूचित जाति के लोगों की बीमारी की अवधारणा संबंधी पक्ष का विष्लेषण करने का प्रयास भी किया गया है। इस अध्ययन के अर्न्तगत मेरठ जिले से चुने गए सात गांवों से 1052 उत्तरदाताओं को सैम्पल के रूप मे रखा गया था, जिनमें 845 उत्तरदाता अनुसूचित जाति से संबंधित थे तथा 207 उत्तरदाता गैर–अनुसूचित जाति वर्ग के थे।

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TEACHING PRIMARY HEALTH CARE IN THE MEDICAL COLLEGES AND OTHER INSTITUTIONS

A.A. Parulkar*

ABSTRACT

This article attempts to list out a few steps to implement primary health care by the workers at different levels. In addition, this article clarifies the concept of primary health care by depicting diagrams so as to enhance the understanding of students about simple definition of primary health care. It serves as notes for trainers and trainees for teaching and learning purposes.

After the declaration of primary health care at *Alma Ata* on September 12, 1978, inclusion of the same in the syllabus of medical and para-medical courses was inevitable. This is necessary to take the Primary Health Care to every nook and corner of the country. It is an integral part of both the country's health system and overall economic and social development.

To implement Primary Health Care by all levels of workers, effective training of medical and para-medical staff as well as medical and para-medical students is essential. Unless they understand and are motivated, they will not be able to practice and implement it.

It is difficult to recite everything while teaching or training. The definition of Primary Health Care appears very simple but in reality it is a jargon of words as far as students, trainees and staff are concerned. To make it simpler different ways and methods can be adopted while teaching.

It is well known that diagrammatic presentation gives better visual impression which is longer lasting than reading the text.

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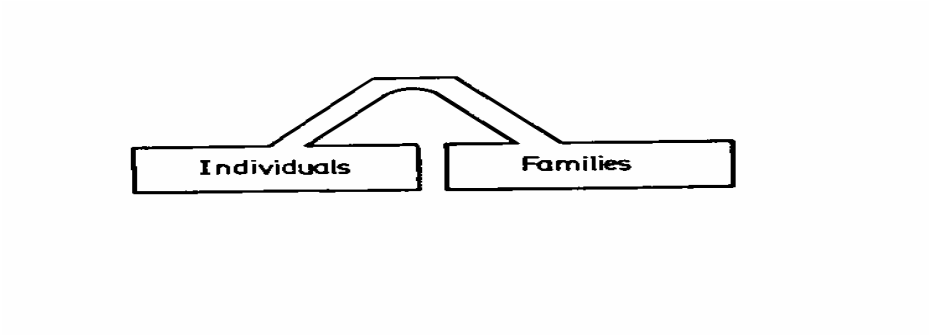
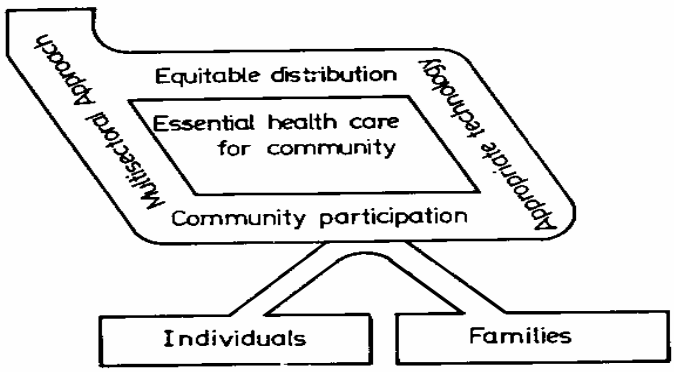
I have tried a diagrammatic construction of definition of Primary Health Care while elaborating various points and aspects of it at Dr. V.M. Medical College, Solapur.

Step I: It starts with, it being an essential care for the community especially for the individuals and families.



Step II: For better implementation and proper utilisation of this care the approach has to be from following points of view.

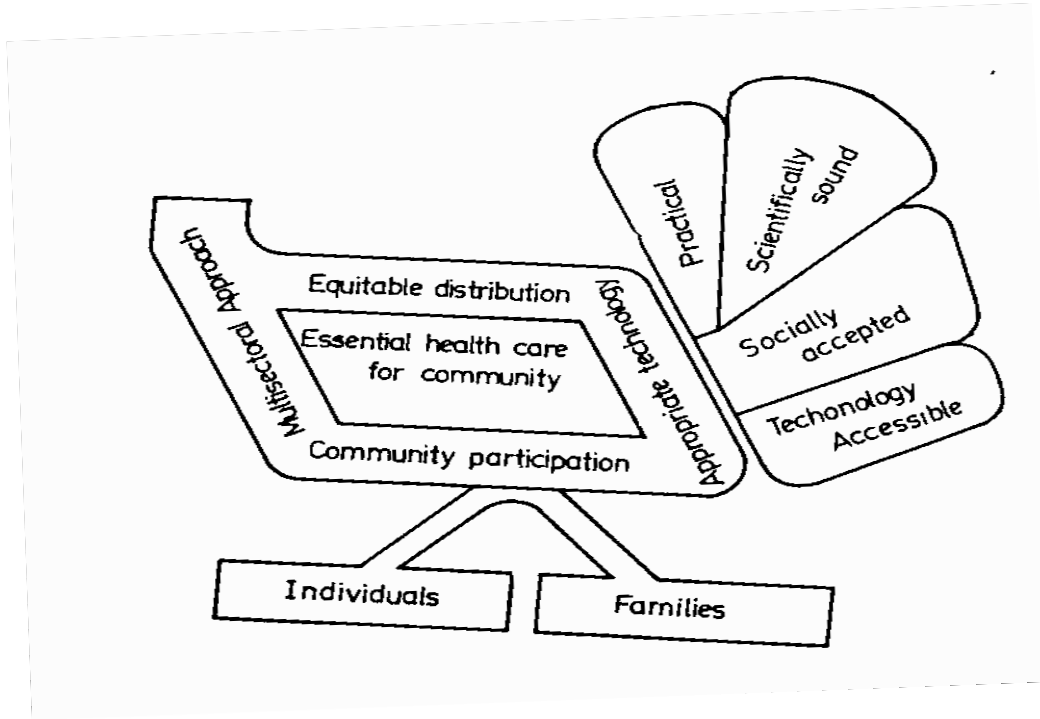
1. Community participation
2. Appropriate technology
3. Equitable distribution
4. Multisectoral approac



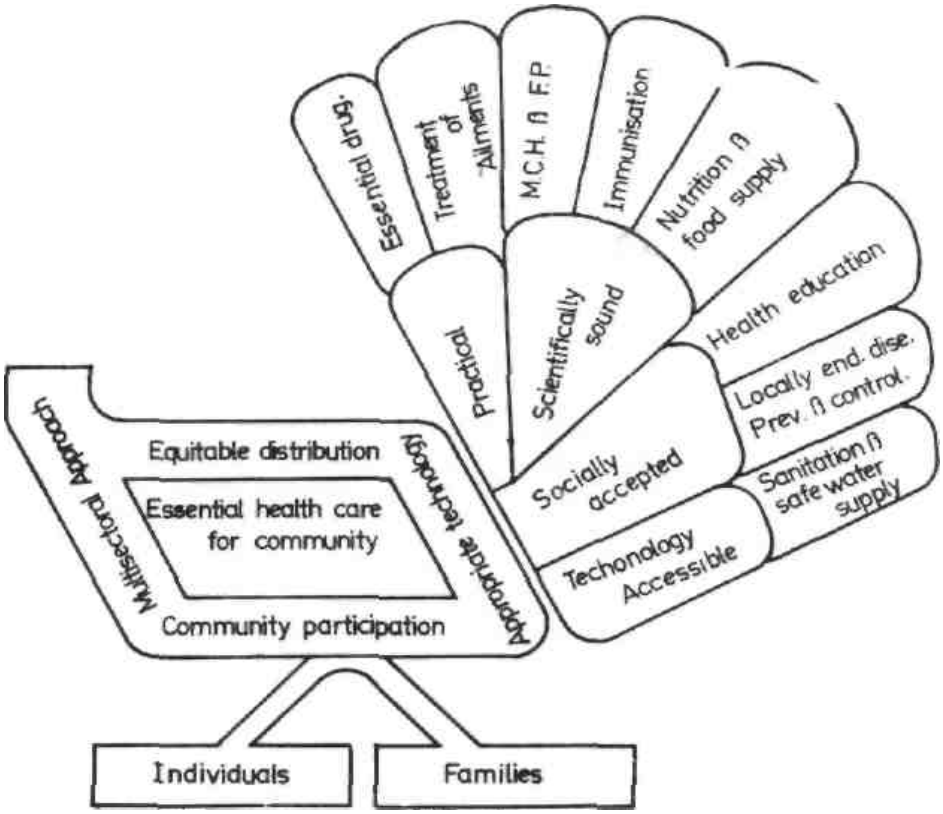
Step III: After elaborating on these approaches for the importance of maintaining quality, feasibility and acceptability by the community and the field staff, more

points are added -

1. Universally accessible technology
2. Socially accepted
3. Scientifically sound
4. Practical



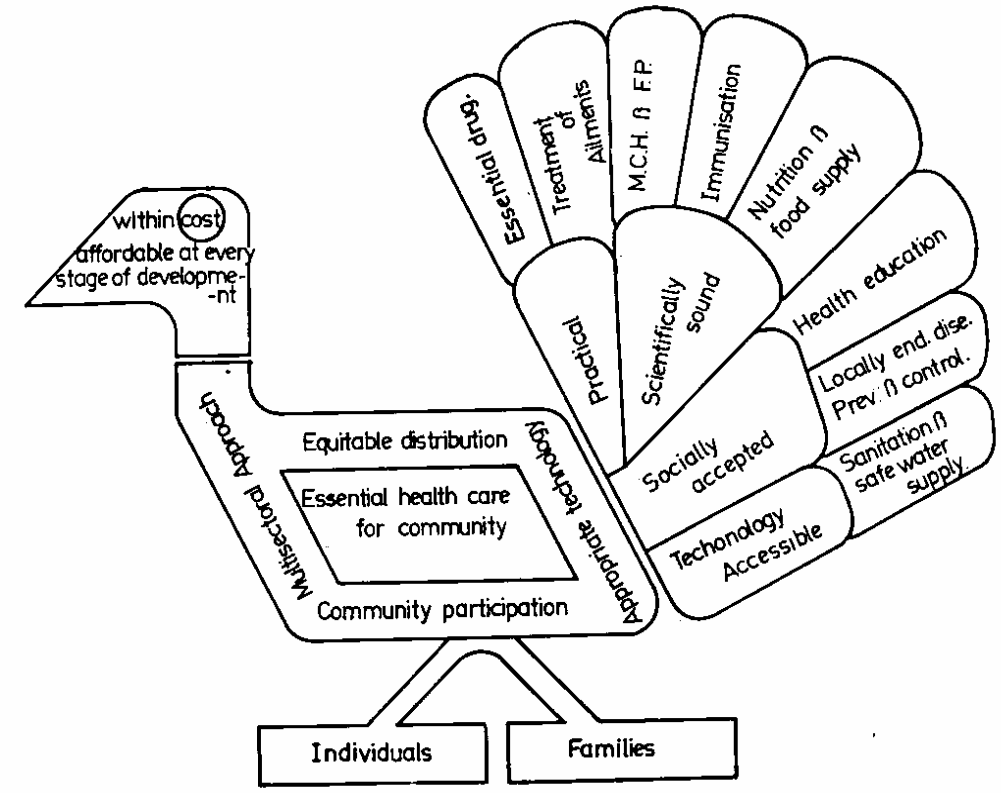
Step IV Services to be made available at the centres are described further. These services are the elements of primary health care.



These services can be remembered if a word ELEMENTS is used as a mnemonic, where each letter of the word indicates one service.

E - Essential drugs.
L - Locally endemic diseases (prevention and control)
E - Health Education
M - Maternal and child health (Family planning)
E - Immunisation (Pronouncesion as E)
N - Nutrition and food supply
T - Treatment for day-to-day ailments
S - Sanitation and safe water supply

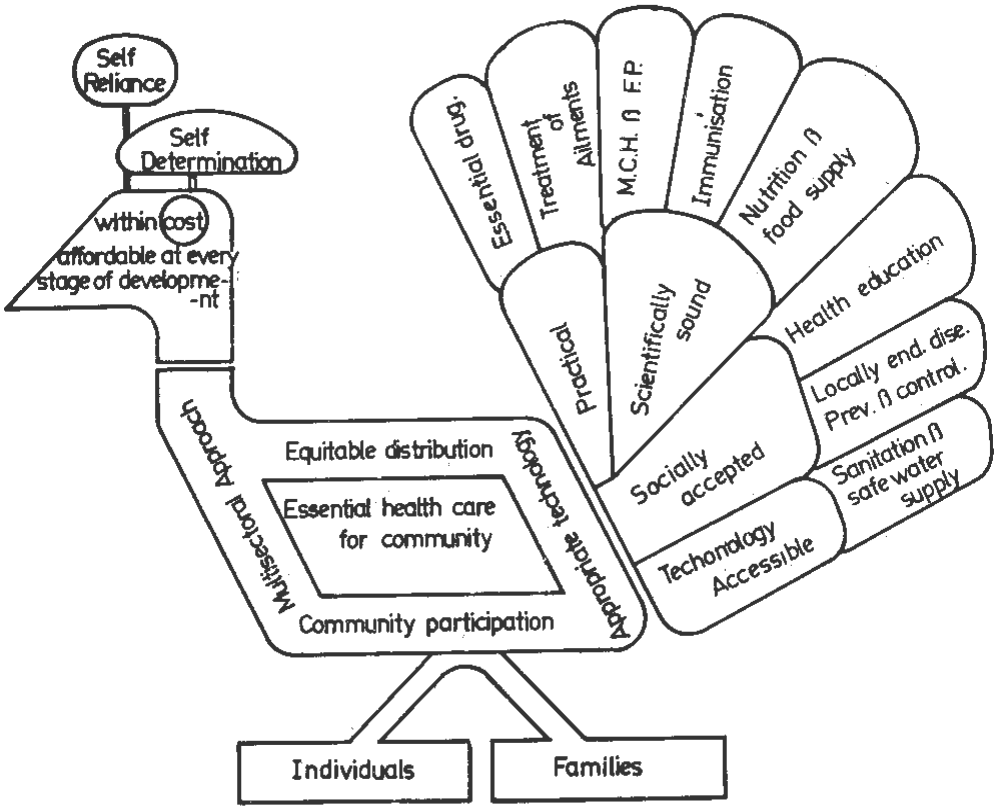
Step V: To provide effective and good quality services "COST" is an important factor. Naturally, it has to be within the affordable limits at every stage of development.



Step VI: It is emphasised that primary health care cannot rely on other community or country for any resources or finances. It will create hurdles in the continuity of the care. Hence every community and/or country must have self-reliance and self-determination to achieve the goals of primary health care.

Thus a peacock emerges out of the diagrammatic presentation. Peacock reminds us of rain which brings in prosperity. Primary Health Care ultimately aims towards positive health and prosperity.

This method has been tried by me while teaching undergraduate, postgraduate, nursing students and in the refresher courses of field staff at Dr. V.M. Medical College, Solapur, Maharashtra State (India).



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प्रस्तुत लेख में विभिन्न स्तर के स्वास्थ्य कार्मिकों के माध्यम से प्राथमिक स्वास्थ्य परिचर्या को क्रियान्वित कराने के संबंध में कुछ सुझाव प्रस्तुत किए गए हैं। इसके अतिरिक्त इस लेख में आरेखों के माध्यम से प्राथमिक स्वास्थ्य परिचर्या की अवधारणा को स्पष्ट करने का प्रयास भी किया गया है जिनका उद्देश्य छात्रों को प्राथमिक स्वास्थ्य परिचर्या की सरल शब्दों में व्याख्या देकर इस अवधारणा के प्रति उनकी समझ को बढ़ाने का प्रयास किया जा सकता है। यह लेख पठन–पाठन के उद्देश्य से प्रशिक्षणार्थियों और प्रशिक्षकों दोनों के लिए नोट्स के रूप में काम करता है।

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SUSTAINABILITY OF PRIMARY HEALTHCARE

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ABSTRACT

This paper examines the applicability of the concept of sustainability in health care sector. The primary health care is sustainable when it fulfils the canons of equity, accessibility, affordability, availability and acceptability. The key issues in the sustainability move around financial outlays: cost analysis; Centre State relations and division of responsibilities in economic perspectives. In addition, the policy related issues discussed in this paper are the political, multi-level linkages, contribution of stake holders, etc. The indicators of the project sustainability dealt herewith are related to infrastructure and selected performance.

The concept of sustainability has been used in different contexts, including those of development, environment and programme management. Contextual differences have given rise to various interpretations of sustainability. The concept has, consequently, been referred to as project sustainability, programme sustainability, sustainable development and sustainable environment.

While contextual differences - manifested, for instance, in terms of time frame, macro/micro aspects, or the points of view of donor and beneficiary - may arise, the basic determinants of sustainability are constant.

Among the various definitions of project sustainability, the one most relevant to government programmes is that it is the contribution of skills, and the transfer of knowledge, to organizations and communities, enabling them to initiate and continue new approaches after the project grant period. This use of the term sustainability is very similar to the usual meaning of the term "institutionalization."

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When applied to the health sector, sustainability implies that once a certain level of health services has been reached by improving the knowledge and skills of health functionaries, the community, and the service delivery system, the same level is maintained after the specific project funding ends. Moreover, this level is also sustainable in the future, and within the broadest framework of equal accessibility - not just availability - of services to all sectors and segments of the population.

To sum up, a Primary Health Care (PHC) project is sustainable when it exhibits the following ongoing characteristics:

i. It maintains the level of infrastructure created for the delivery of primary health services;

ii. It re-orients staff from time to time and build motivation, taking into account new approaches and technology;

iii. It is community-oriented, encouraging the beneficiaries to develop self-reliance; it also motivates the community to utilize available services, and provide the necessary support to maintain the level of services even when government support is unsteady; and

iv. It generates the financial resources required to maintain services even after withdrawal of the project grant.

With this background of definitions and scope, an attempt has been made in this paper to discuss the sustainability of primary health care. The sustainability of primary health care has been treated as an approach and strategy as well as a service delivery programme. The paper also covers indicators of sustainability for some specific programme components; and key issues for the primary health care programme as a whole.

Primary Health Care: Definitions and Parameters

For an examination of primary health care from the perspective of sustainability, the most relevant definition of primary health care is the universally accepted one in the joint report (1978) by WHO and UNICEF.

Primary Health Care is essential health care made universally available and accessible to individuals and families in the community by means acceptable to them through their full participation and at a cost that the community can afford. It forms an integral part of both of the country's health system of which it is the nucleus and also part of the overall socio-

economic development of the country.

This definition implies that primary health care means much more than the mere extension of basic health services. It has social and developmental dimensions that, if properly applied, will influence the way in which the rest of the health system functions. The report also states that primary health care addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services. It explains that these services will evolve from and reflect, the economic conditions and social values of the country and community; but will include at least the promotion of nutrition and adequate supply of safe water, basic sanitation, maternal and child health care including family planning, immunization against major infectious diseases, prevention and control of locally endemic diseases, education with regard to prevailing health problems and injuries, methods of prevention and control, and appropriate treatment of common diseases.

Thus the term primary health care, in its wider sense, is increasingly being used to replace the narrower term used in the sixties by WHO, by placing emphasis on several activities which are not just physician oriented.

Primary health care is an all pervasive and more effective approach to the provision, consolidation and distribution of social and economic justice in health care. Besides the aspects of accessibility, acceptability, equity, affordability and availability, which are intrinsic to the health care service approach, it rests on community participation, a viable referral system, and inter and intra-sectoral coordination.

KEY ISSUES IN THE SUSTAINABILITY OF PRIMARY HEALTH CARE

After Independence (1947) the infrastructure of the Indian health services was framed on the basis of recommendations made by the Bhore Committee Report (1946), along with a national family planning programme, several national health programmes such as smallpox, eradication, malaria, filaria control, leprosy control and tuberculosis control.

The use of technical expertise, close monitoring and active surveillance brought malaria cases down from 64,67,215 in 1976 to a low level of 20,17,823 in 1989. Smallpox was eradicated in 1977[2], and mortality due to major diseases, including cholera, tuberculosis, respiratory infections and diarrhoeal diseases has been greatly reduced[3]. These remarkable achievements can be attributed to the advent of antibiotics, vaccines, essential drugs and pesticides, reaching the community through continuously developing trained manpower and ever increasing physical infrastructure.

In the course of time, several preventive and promotive schemes, such as National Malaria Control, Leprosy Control, Tuberculosis and Family Welfare Programmes were introduced. The result is that in 1990 the Crude Death Rate (CDR) is below 10, while it was 27.4 in 1941-51; infant mortality has reduced from 127 in 1978 to about 95 in 1991. Ufe expectancy has gone up from 33 years in 1947 to 58 years in 1990.

On the other hand the National Family Planning Programme, introduced in 1969, has not been able, as of 1991, to reduce the Crude Birth Rate (CBR) below 31.7. The National Health Policy has incorporated the Health for All (HFA) by 2000 AD goals, but it is quite clear that we are far from reaching these targets.

The problems of sustainability in the health sector are manifold and should be viewed against several issues, including the rising costs of physical infrastructure, medical treatment and the newer high technology investigations.

The identification of strategies to ensure sustainability in developing countries such as India is complicated by the large variations in administrative and political processes, socio-economic structures and lack of hard, comparative data. Sustainability demands changes in the political and administrative set-up; behavioural change; and empowerment of the community to monitor programmes and participate in decision-making.

ECONOMIC AND FINANCIAL ISSUES Outlays

While financial allocations to the. health sector have increased considerably between the first and the Eighth Five Year Plans, the increase is in absolute terms. An analysis of allocation in terms of proportion illustrates that it has, in fact, been reduced.

To sustain the desired level of growth, the outlays allocated to the health sector should be increased, or at least remain the same, taking into account the effects of inflation. The percentage of plan outlays has gradually reduced over the years, white community demands have increased.

Financial constraints have a different significance at national and project levels. To cope with macro and micro-level financial constraints, different mechanisms for the mobilization and management of resource allocations may be required.

Cost Analysis

In spite of its immense importance in decision-making, cost analysis has remained **a** neglected aspect of primary health care. Periodic exercises in cost analysis help determine costs incurred on various programmes in the health sector; and on this basis, decisions may be made about cost allocation to primary health care.

Breakdown off Outlay

The division of outlays into rural/urban allocations, or clinical/preventive allocations, needs to be re-analyzed. One of the consequences of lopsided allocation is, for example, the establishment of post-graduate institutions in each State at the cost of adequate funding for primary health services.

The breakdown of outlays also needs continuous accommodation to situations which call for a shift in resources. Recent attempts at initiating primary health care for the urban poor should, for instance, be viewed in the light of the rapid rate of urbanization, and the inequality of health care services available in cities.

Centre-State Division off Responsibility

The pattern of funding under centrally sponsored schemes does not encourage the States to recognize their responsibility. For example, large numbers of male health workers [Health Worker (M)] were trained because the training component was centrally sponsored. However, the posts for HW (M) were not filled, as they were to be funded by the State Governments.

Similarly, the reduced performance of the malaria and leprosy programmes when they were placed in Category II (50:50 funding), indicates that programme sustainability has suffered when the role of the State Governments has been enlarged. In the case of the leprosy programme, it was ultimately reverted to the category of a totally centrally sponsored programme.

POLICY RELATED ISSUES

The Political Context

Inconsistencies in the political situation may have grave implications for the thrust of primary health care. The perfect example is the family planning programme, which had a tremendous setback in 1977-78.

Again, the well conceived and efficiently implemented national Health Guide (HG) Scheme was similarly affected between 1977 and 1986, and the programme is yet to be restored to normalcy. The HG Scheme, which received international recognition, aimed at the delivery of care through village level volunteers exposed to a moderate training period. The scheme at its best was a bright example of community participation and self-sufficiency.

Multi-level Linkage Perspectives

There are informal professional groups, at NIHFW for instance,[4] which view primary health care from a multi-level perspective. An attempt is made to see how primary health care is conceived and implemented at different levels of organization. Sustainability is viewed as a philosophy, a strategy, an approach or a programme, within the framework of perceptions of international agencies, national and State Governments and the local community level.

One of the policy debate groups involved in health care has addressed is whether sustainability should be approached through selective or comprehensive primary health care; and whether it should be approached through vertical or horizontal primary health care. The multi-level and multi-dimensional perspective of primary health care is a key issue for its sustainability.

In Inida, the required level of coordination among, and integration of health-related sectors such as nutrition, education, rural development, and environment and sanitation, does not, for the most part, exist at district and block levels.

Thus a key issue in the sustainability of health care is the creation and maintenance of a coordination mechanism in the National Health Policy.

Hospitals and Primary Health Care

Considerable resources are deployed to hospital-oriented services and care, at the cost of preventive, promotive and rehabilitative primary health care. Subordinating medical technology to the people forms the cornerstone of the philosophy of primary health care. In the vision of this new relationship between the people and medical technology, hospitals have traditionally played a negative role. Their orientation has been toward the urban, privileged class; they have often been responsible for mystifying medicine; and they have served market forces by catering to high technology. The balance between the curative aspects of hospital services, and the preventive, curative and promotive aspects of primary health care is essential for sustainability.

To this end, hospitals will have to grow beyond their present operation in isolation, as self-sufficient institutions. They will have to address the control of disease in **a** particular group or area. Within the overall framework of the primary health care system, hospitals should be involved in all aspects of public health, including clean water, healthy food **and** environment

The Contribution of Stakeholders

In the health sector, the stakeholders are the Centre (because health is a State subject in India); health professionals; and the community. Their concern for global primary health includes UN agencies such as WHO and UNICEF among the stakeholders. These UN agencies have played a role in ensuring the sustainability of health programmes such as smallpox eradication and the Universal Immunization Programme (UIP). However, their limited project focus can disturb real national priorities.

Among the stakeholders, health professionals may exert the most influence on policy-makers to create a bias in favour of a curative establishment. Hence more professional awareness and a long-term movement toward commitment is necessary.

As far as the community level is concerned, it is only in the States of Kerala and Goa that without any special or specific strategies, the health parameters of the States match the health care levels of Western countries. Thus the link between literacy levels, consumer awareness, and health care level is an issue of sustainability.

Finally, the stakeholders to be taken into account in health policy are not from the health sector alone. Agencies, including voluntary organizations working in the areas of education and rural development, indirectly contribute towards health development.

Self-Reliance - Community Participation for Sustainability

Self-reliance is an important factor for the sustainability of primary health care. The questions that arise, however, are: do States/provinces accept the concept? Again, do blocks/districts see self-reliance in terms of resource mobilization, identification of their community health needs, and the link between the two?

When a programme is isolated from the community, it becomes irrelevant. It assumes a different image in the eyes of the people from those of the "providers" of health services. The bridging of this gap is a critical issue for the

Sustainability of primary health care

The communication of knowledge to programme recipients is an essential component of a health care system. The community, for instance, needs to be motivated to adopt a healthy lifestyle. The process of information, education and communication (I EC) for self-care and action is necessary for programme sustainability. Such an effort is a long-term process and involves several agencies outside the health area.

Field experience clearly indicates that the involvement of communities is not possible through mere governmental efforts; but through the operation of involving voluntary grassroots organizations from health and related sectors.

Research-based Policy

In certain programmes, faulty assumptions have been made about the rate of change in community behaviour. The achievements of the family planning programme, for instance, do not match with the overall impact on fertility moderation. This may be attributed to inaccurate assumptions about change in community responses.

The family planning programme became time-bound and target-oriented from the fourth plan (1969) onwards, when the Crude Birth Rate (CBR) was about 41 (Census, 1961). Highly ambitious targets in terms of CBR reduction and couple protection, were projected by the fourth and fifth plans, without introducing equally strong processes of behavioural change among beneficiaries. Illiteracy, poverty, early marriages and so on have hindered the achievement of these targets.

Finally, sustainability is dependent on adequate surveillance, monitoring and epidemiological changes in the health and disease profile, which implies a continuous modification of control programmes. Unfortunately, not enough emphasis has been laid on epidemiological research and development of appropriate technology.

RESOURCE MANAGEMENT

Manpower Development

Doctor-Population Ratio: Sustainability is dependent on adequate manpower development. After Independence, the need was felt for more doctors; but not enough attention was paid to the development of support manpower. Consequently, while India has one doctor for a population of 2.500, nurses - an important component of manpower - fall short of the desired numbers. Similarly,

norms for the development of technical, para-professional and auxiliary manpower have not been accurately defined.

Multi-purpose Worker Scheme: In 1974, with the decision to integrate programmes and workers, the multi-purpose worker scheme was introduced. However, except for integration at the primary health centre level, the basic administrative changes suggested by the scheme at the district and State levels have not been implemented.

While certain programmes, such as TB control, have been integrated with the general health services, the sustainability of these programmes is bound to remain dependent on adequate outreach and delivery of health services.

Medical Education The present system of medical education prepares doctors mainly to treat disease. Unless the preventive, promotive and curative aspects of primary health care are built into medical education; and the various elements of primary health care are sufficiently represented in the community health services, where the students undergo field training, medical schools cannot prepare students competent enough to push for sustainable primary health care.

Training. The sustainability of health programmes may be determined by the level of transfer of technical skills and their practices, through a process of training and re-training. The long-term plan to develop training institutions is the only answer. Developing State health institutes may help provide continued medical education to health workers.

Management of Logistics and Supplies

Several major problems exist in the area of managing logistics and supplies of essential drugs, equipments, vaccines, contraceptives and oral rehydration salts.

Important preventive and promotional programmes on vitamin A prophylaxis and iodized salt lack the support of adequate production and supply. For instance, vitamin A drops may not be available for months at a time at primary health centres. However, since vaccine production has been monitored under the technology mission, it is expected that erratic vaccine procurement may not affect the programme in the future. A sustained production of drugs and vaccines, as well as simple items such as spirit lamps, blood pressure instruments and delivery kits, and their timely supply and distribution, will sustain various promotional health programmes. The management of transport, particularly with escalating costs of petrol, is also essential for the adequate supervision of these programmes.

Finally, for both short-term and on-going preventive and promotional programmes, targetting is important for the deployment of resources. National health policy goals have projected both intermediate and long-term targets. This has a bearing on sustainability, as resource allocations may shift from one target campaign to another at a point of time.

Monitoring

Sustainability is inextricably linked with continuity; hence, continued supervision and micro-level monitoring are important. Primary health care is a continuous process of effort and on-going supervision as well as referral are key features in the maintenance of primary health care. The micro-level monitoring of programme activities should also lead to re-allocation of national resources at the macro-level, in favour of previously neglected rural areas and urban slums.

Referral System

The provision of an effective referral support system is central to the development of the existing health care network. At present, the referral system is not operating effectively in the States. Health institutions at district and taluk levels - hospitals, primary health centres and sub-centres - seem to operate as independent unrelated units. As a result, the envisaged health system, and its sustained implementation, has not been evolved.

Outreach Services

Several studies, conducted by the Operations Research Group (ORG) in Baroda have indicated that the outreach of existing health services in the States, particularly in rural areas and urban slums, is very poor. Health workers and doctors rarely visit their villages; people do not know the workers assigned to their villages. Medical officers have reported that most field workers live at primary health centre headquarters and do not visit the villages. This is a major operational issue for the service delivery of primary health care.

INDICATORS OF PROJECT SUSTAINABILITY

The indicators of primary health care project sustainability can be broadly divided into three areas.

Infrastructure Related Indicators

It is expected that once the requisite infrastructure has been created, a minimum level of services will continue to be provided to the community. Some of

the key indicators for service delivery and their achievement for the country whole are as follows:

		(as on 1.1.1989)
i.	Bed-population ratio	1 : 1349
ii.	Doctor-population ratio	1 : 2500
iii.	Nurse-population ratio	1 : 3679
iv.	ANM-population ratio	1 : 6824
v	Trained Birth Attendants -population ratio	1 : 941
vi.	Population served by primary health centres	1 .48150
vii.	Population served by sub-centres	1 : 7203
viii	Population served by community health centres	1 : 549579

Treatment of Common Diseases and Injuries

This component is covered by the infrastructure deployed for delivery of services. The total population of the country is covered by the health infrastructure in rural as well as in urban areas.

Supply of Safe Drinking Water and Basic Sanitation

This programme, though not implemented by the health department, has significant implications for health. Some indicators for sustainability are: (i) Per cent of the population covered by safe drinking water; and (ii) Per cent of the population covered by sanitary latrines and sewage disposal system.

PROGRAMME PERFORMANCE INDICATORS

Continuation of the coverage achieved for various programmes over a certain period is an important indicator of project/programme sustainability. This is possible if sufficient awareness has been created in the community about the utility of services provided under the different programmes, so that people either demand or utilize such services. In this process, the media can play a very important role. Some of the key indicators for assessing the sustainability of national programmes, and in particular, the family welfare programme, have been listed. However, macro-level programme performance indicators may not be sufficiently linked with conditions of sustainability. A true assessment of sustainability is possible when such indicators also reflect regional differences and micro-level situations. Such information on programme performance is available

At State and district levels.

Malaria Eradication Programme

Table 1.1

Incidence of Malaria, 1965-88

	1965	1976	1988
Annual incidence of malaria	0.1 miliion	6.47 million	1.78 million
Deaths due to	Nil	59	209

The annual incidence of malaria has been reduced from 75 million in 1958 to 0.1 million in 1965. There were no deaths due to malaria. But these achievements were not sustained. In fact, after 1976, the annual incidence again declined, but deaths continue to be high because of an increase in P.f. (Plasmodium falciparum) infection.

Maternal and Child Health Care Programme

Universal Immunization Programme (UIP)

The indicators for assessing the programme performance should be immunization coverage of infants (0-1) with three doses of DPT, Polio, BCG and Measles vaccines (See Table 1.3 for data on current status of the programme).

Maternal Care

Ante-natal Care (ANC): The quantitative indicator is in terms of the percentage of pregnant women attended by trained personnel to provide tetanus toxoid (TT), and iron and folic acid tablets during pregnancy. This coverage has been about 70 per cent*. To evaluate the efficiency and quality of service delivery, the indicators should, ideally, include:

(i) Percentage of pregnant women registered for ANC.

(ii) Percentage of ante-natal cases given TT.

*Second evaluation of the strategies for Health for All by the Year 2000. Country Report: India, March 1991, Government of India, Ministry of Health and Family Welfare, New Delhi.

(iii) Percentage of ante-natal cases given iron and folic acid supplementation.

(iv) Percentage of high risk cases screened and referred.

(v) Percentage of women who had detailed ante-natal check-up, including testing of urine, wt, Hb., BP and physical examination.

However, only information on percentage of women given TT and iron and folic acid supplementation is currently available.

Natal Care: The indicators are: (i) Institutional deliveries; and home deliveries by trained personnel and others.

The exact percentage of deliveries by trained personnel is not accurately known. It is estimated that domiciliary deliveries are about 75 per cent; of these, about 66 per cent are conducted by untrained personnel, although the proportion of institutional deliveries is more than 90 per cent in metropolitan cities such as Madras, Bombay and some States/Union Territories, including Goa, Kerala, and Pondicherry.

Post-natal Care: The indicator is the percentage of mothers contacted for post-natal care within 40 days of delivery.

However, no reliable data in this regard are available at present.

Child Care

The relevant indicators are as follows: (see also Table 1.3)

(i) Percentage of newborns with a birth weight < 2500 gms;

(ii) Percentage of children suffering from grade III and grade IV malnutrition; and

(iii) Percentage of children given Vit. A for control of blindness.

All India information on the above indicators (except distribution of Vit. A) is either not available or is very old (1975-80). Only some occasional studies provide a little information.

Family Planning

Table 1.2

Percentage of Couples Effectively Protected with Contraception (1988-89)

26 Permanent Methods		Spacing Methods 26				Total
Vas.	Tub.	IUD	OP	CC	Others	
3.8	42.9	31.2	4.1	18.0	-	100

The effective couple protection rate, as on March 1989, is 41.9 per cent (All India average), although in some of the States/Union Territories, it is as high as 60.3 per cent (Pondicherry) or 55.1 per cent (Maharashtra).

There are many programmes other than the ones discussed here; but these are the key programmes, affecting a major proportion of the population. The other programmes of primary health care such as safe drinking water and environmental sanitation are looked after by the Public Health Engineering Department.

In the absence of an efficient health management information system (HMIS), further information on health programmes is not yet available. Efforts are being made to gradually computerize the complete health information system, so that data, at least on basic indicators, is made available. This would help examining the sustainability aspects of primary health care programmes.

The ultimate indicators in terms of birth rate, infant mortality rate (IMR), and death rate, for example, are available, though only periodically, through the sample registration system (SRS) which is not taken care of directly by the health sector.

FINANCIAL/ECONOMIC INDICATORS

Among the indicators relevant to sustainability, perhaps the most important ones are the financial or economic indicators. These could be overall, macro and/or micro-indicators.

i. Allocations on health sector as proportion or percentage of other developmental sectors.

ii. Within the health sector, the proportion or percentage of allocations for primary health care and related aspects.

iii. Per capita expenditure on health care by different sources.

iv. Indicators worked out from micro-studies reflecting community finances/user charges.

NOTES

1. CBHI Health Information.

2. Mortality due to smallpox came down from 1,57,487 in 1950 to zero cases in 1977. CBHI Health Information.

3. Cholera deaths came down from 86,997 in 1950 to 309 in 1980. TB deaths also came down to 9,382 deaths in 1989.

4. At NIHFW (National Institute of Health and Family Welfare), New Delhi, health management modules for all levels have been developed for the delivery of primary health care by different functionaries.

5. Monitoring studies of private voluntary organizations in health, coordinated by NIHFW.

6. India had 3,31,630 doctors registered with the Medical Council in the year 1987. Taking into account those not registered with the Council, the doctor: population ratio is 1:2500.

7. See Health Information - India, 1990, CBHI, DGHS, Ministry of Health and Family Welfare, Government of India. According to this source, there are 24,505 general nursing midwives; 1,32,923 ANM/HW; and 15,817 health visitors (F).

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प्रस्तुत लेख में, स्वास्थ्य परिचर्या सेक्टर की पोषणीयता संबंधी अवधारणा की समीक्षा करने का प्रयास किया गया है। प्राथमिक स्वास्थ्य परिचर्या को तभी अवलम्बनीय माना जा सकता है जब यह समानता, मूल्यांकनात्मकता, वहनीयता, सुलभता तथा स्वीकार्यता जैसे सामान्य सिद्धान्तों पर आधारित हो। वहनीयता संबंधी प्रमुख मुद्दे वित्तीय प्रावधान, लागत विष्लेषण, केन्द्र–राज्यों के परस्पर संबंधों तथा आर्थिक संदर्भों में दायित्वों के सही विभाजन आदि से जुड़े हैं। इसके अतिरिक्त प्रस्तुत लेख में जिन नीतिगत विशयों पर चर्चा की गई है उनका संबंध राजनीतिक मुद्दों, बहुस्तरीय सम्पर्क तथा देश की आर्थिक समृद्धि से जुड़े व्यक्तियों के योगदान आदि से है। परियोजना–वहनीयता संबंधी जिन संकेतकांकों (इंडीकेटर्स) पर यहां चर्चा की गई है उनका संबंध अवसरचनात्मक ढांचे तथा कार्य–निष्पादन आदि से है।

Table 1.3

Goals and Achievement Levels for HFA and Population Stabilisation

Selected HFA Goals for Pooulation Stabilization Indicators	Levels around Alma Ata Declaration	Levels around declaration of National Health Policy	National Health Policy Goals	Achievement levels	National Health Policy Goals	Achievement levels	National Health Policy Goals for HFA and Population Stabilization
	1977-78	1983	1985	1985	1990	1990	2000
Infant Mortality Rate	125	105	106	97	87	95*	60
Perinatal Mortality	63.7	53.6	NA	NA	NA	NA	30.35
Crude Death Rate	14.2	11.9 (1983)	12.0	11 .7	10.4	10.8	9.0
Pre-school Child (1 -5 years) Mortality	24	10	20.24		15.20	10	
Maternal Mortality Rate	4.5	4.5	3.4		2.3		Below 2
Life Expectancy of Birth (years)	52.6 (1976-81)	56.0 (1981-86)	55.1		57.6	58.6* (1986-91)	64

Selected HFA Goals for Population Stabilization Indicators	Levels around Alma Ata Declaration	Levels around declaration of National Health Policy	National Health Policy Goals*	Achievement levels	National Health Policy Goals	Achievement levels	National Health Policy Goals for HFA and Population Stabilization
	1977-78	1983	1985	1985	1990	1990	2000
Babies with birth weight below 2500 gms percentage		30	25		18		10
Crude Birth Rate	33.3 (1978)	33.7	31	32.7		32.0* (1987)	
Effective couple protection (Percentage)	22.5	25.9	37.0	32.1	42.0	39.0*	60.0
Net Reproduction Rate		1.48 (1981)	1.34		1.17		1.0
Growth Rate (Annual)		2.24	1.90 (1971-81)	1.66	2.1*		1.22
Family size		4.47 (1981)	3.8				2.8

Selected HFA Goals for Population Stabilization Indicators	Leveb around Alma Ata Declaration	Levels around declaration of National Health Policy	National Health Policy Goals	Achievement levels	National Health Policy Goals	Achievemen t levels	National Health Policy Goals for HFA and Population Stabilization
	1977-78	1983	1985	1985	1990	1990	2000
Pregnant mothers receiving ante-natal care (percentage)		40-50	50-60		60-75		100.0
Deliveries by trained attendants (percentage)		30.35	50.0		80.0		100.0
Immunization Status** (percentage) coverage							
- TT for pregnant women		20.00	60.0		100.0		100.0
TT (for school children)							
- upto 10 years		20.0	40.0		100.0		100.0
- upto 16 years		-	60. 0		85.0		100.0

*SRS Estimate

**India's Population Policies and Perspectives. Planning Commission, New Delhi, 1989.

Selected HFA Goals for Population Stabilization Indicators	Levels around Alma Ata Declaration	Levels around declaration of National Health Policy	National Health Policy Goals	Achievement levels	National Health Policy Goals	Achievement levels	National Health Policy Goals for HFA and Population Stabilization
	1977-78	1983	1985	1985	1990	1990	2000
DPT (Children)		25.0	70.0	70.0			100.0
Polio	5.0	50.0		80.0			100.0
BCG	65.0	70.0		100.0			100.0
Measles							.
Typhoid		2.0	70.0	85.0			85.0
DT (5-6 years)	20.0	80.0		85.0			85.0

Source: Family Welfare Programme in India Year Books (1977-78, -79,84-85, 86-87, 88-89), Government of India, Ministry of Health and Family Welfare, New Delhi.