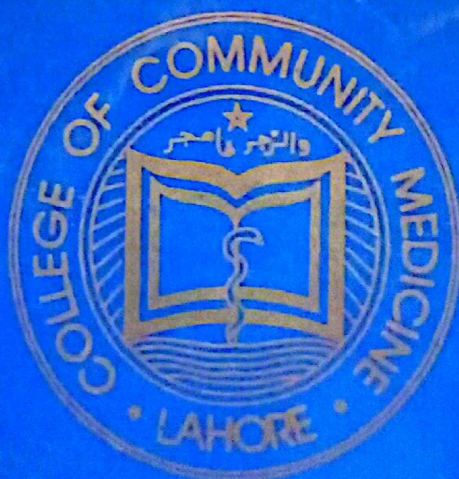


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EDITORIAL

ENVIRONMENTAL POLLUTION

Earth is one of the nine planets and has been endowed by the Creator with a numberable gifts, amongst which the basic ones are : air, light, water and soil. These basic gifts are essential for life and constitute what is called "ENVIRONMENT" ; There are a number of influences which render the environment suitable for living beings and keep them in a special order and specific proportion. A disruption in this heavenly established order and proportion is called "POLLUTION".

The causes of disruption are manifold; and include :

- (i) Industrial Pollutants.
- (ii) Smokes from Automobiles.
- (iii) Nuclear Wastes.
- (iv) Deforestation.
- (v) Excessive use of Pesticides and Fertilizers.
- (vi) Population pressure and Urbanisation.
- (vii) Municipal Sewage.

Industries are consuming 37% of World's energy and are pumping pollutants in the atmosphere; these untreated noxious Pollutants, when find their way in the water and air, pose a great threat to the human, animal, marine and plant life. The burning of fossil fuels in the industrial units result in the production of SO_2 , NO_2 , CO_2 , etc. The first two oxides are highly soluble in water and during rain they react with water and form acid like H_2SO_4 , HSO_4 , HNO_3 , HNO_2 . The acids, so formed, increase the acidity of soil, destroy forests and crops, corrodes building, monuments, statues, bridges, fences and railings as well as contaminate breathing air, drinking water and food.

The developed and endowed nations cover 20% of total land and constitute 15% of worlds population but consume 80% of total energy resources and 70% of the total food of the world. They have 80% of total world's industrial units and hence are contributing 15 times more to environmental pollution. Moreover their roads are studded with 70% of the total automobiles of the world and this is no less a factor in environmental pollution. But, as is evident from Rio-Earth Summit 1992, the developed nations are not ready to finance the anti pollution projects and they consider the pollution a menace originating from third world.

The Inhabitants of industrial areas are suffering from a number of diseases. A recent survey by Public Health Engineering Department reveals that the residents of Kala Shah Kaku an Industrial zone near Lahore are suffering from chronic cough (53%) vomiting and diarrhoea (67%) and eye disorders (27%), simply because the regulation laid down for this purpose are not rigidly followed.

Every country in the world including Pakistan is under an international obligation to keep 20 - 25% of its land area under forests in order to keep its economic and environmental needs. Depletion of forests is a natural disaster which so far has not been recognised by the governments. Moreover forestry has always been a low priority for the planners. Storms desertification, silting of dams and soil erosion are the direct consequences of deforestation. Forest burning is disturbing the atmosphere by increasing the concentration of CO₂ and reducing that of O₂.

A hope for better education, living and employment opportunities in the urban areas, is attracting a large number of rural masses to the cities at the rate of 3.6% per annum in the developing countries including Pakistan. It has adversely affected the environment and resulted in a steep fall in the quality of life in urban areas. The environmental pollution caused by this phenomenon is creating a number of hazards like over crowding, deficiency of water, inflation, unemployment etc. Smokes from ill maintained vehicles, untreated Municipal sewage and garbage are among other causes of pollution.

The atmosphere surrounding the earth and protecting it from the malignant effects of ionizing radiations of sun consist of a number of distinct layers. The second layer, known as stratosphere, consists of a vital layer called Ozone; this Ozone layer is a molecule of three atoms of Oxygen (O₃) and permits visible light and helps in the process of photosynthesis. But at the same time it stops and absorbs the lethal ultraviolet and cosmic radiations of Sun, thus making the life possible over the earth. Recent research reveals that the thickness of Ozone layer is decreasing day by day and a hole has appeared in this layer near Antarctica (South Pole). Deforestation, forest burning and industrial pollutants like CFC, CO₂, CO and SO₂ are the major factors responsible for this depletion. These pollutants when reach the Ozone layer remove one atom of Oxygen from Ozone molecule leaving behind stable O₂ molecules which settle down over earth. In this way the Ozone layer is getting thinned permitting more and more ionizing radiations which are carcinogenic for eyes and skin and responsible for early cataract.

The aforesaid factors are causing not only Ozone depletion but also creating greenhouse effects accelerating the global warming and other climate changes. Research shows that there is an increase of 1°C of temperature over last 30 - 50 years. If the situation remains the same, then during the next 30 - 50 years there would be an increase of 3°C - 4°C in the atmospheric temperature. Consequently it will lead to the melting of polar ice, rise in sea level, conversion of fertile lands into deserts, acute shortage of grains and a change in the age old pattern of rainfall. We see that for the last two decades there is over flooding in some areas while in other areas there is drought.

From this discussion it is clear that preservation of the environment is absolutely essential if the life is to continue in a natural, undisturbed healthy manner. The effort and struggle is to be made at all levels, Personal, National and International.

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CHARACTERISTICS OF A COMMUNITY PRACTICING FAMILY SPACING — A COMMUNITY STUDY

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Summary

A project was organized by Maternal and Child Welfare Association of Pakistan to demonstrate family planning acceptance through comprehensive MCH services. It was seen that amongst 6162 preconceptional Married Women in the Reproductive AGE (MWRA), there were 1513 family planning acceptors with contraceptive acceptance rate of 24.6%. Contraception acceptance was directly related with the number of living children. (4 children have strong association with contraceptive acceptance). Use of contraception was directly related with the number of living sons. Three sons had stronger association than 0, 1 and 2. Family planning acceptance rate was higher in Christians than in Muslims. This may probably be due to greater access to family services for the former group because mostly they work outside home. Income per capita per month had shown indirect relationship for accepting family planning programme, indicating the effect of strong MCH and FP programme. Educational status of MWRA, upto metric (including under metric), while education of husbands upto post metric have shown highest rate of FP acceptance. This indicates that women required less education/schooling as compared to males who required (post metric education) higher level of education to accept family spacing programmes. No relationship has been found with the occupation of women working outside home and family planning acceptance, due to very small number of (only 3%) working mothers in the area.

Introduction

An integrated Family Planning and MCH Project was organized in October 1990 by Punjab Maternity and Child Welfare Association of Pakistan in collaboration with Pathfinder International, for demonstrating the greater effectiveness of Family planning acceptance through comprehensive MCH Services. Family planning was basic component of service offered by the project. Ten health units, house in one building were organized in Liaqatabad - Kotlakhpat area of Lahore.

Field work was started in January, 1991, with initial house to house survey of the specified geographically marked 10 sectors of the area, in order to have baseline data of the population. Table 1 shows some demographic information collected during the survey.

All married women in the reproductive age (MWRA) were registered. All those who were not pregnant, were registered as "Preconceptional mothers" for family spacing education and motivation. While the remaining who were pregnant at the time of survey were registered for antenatal care.

All the MWRA were then followed regularly. Out of this group those who accepted any method of family limitation (permanent or temporary) were taken on F. P. card as "Family Planning Acceptors".

Table 1: Demographic and Vital Information of the area under study for the year, 1990.

1.	No. of families	= 8,329
2.	Total population of area	= 51,279
3.	Total married women of reproductive age (15 - 44)	= 7,274
4.	Average Family Size	= 6.15
5.	Crude Birth rate	= 44.38/1000 pop.
6.	Crude Death Rate	= 7.29/1000 pop.
7.	Population Growth Rate	= 3.7%
8.	Infant Mortality Rate	= 76.41/1000 L.B.
9.	Maternal Mortality Rate	= 3.51/1000 L.B.
10.	Contraceptive acceptance rate	= 16.0%

In this manner all the married women in pre-conceptional period were registered and classified either as (1) Family Planning Acceptors or as (2) Non Acceptors. Both these groups were followed regularly during the period of study.

The objective of the investigation was to conduct a study in the specified population of the married women of reproductive age who accepted, and those who did not accept the family planning service, for delineating the role of age, number of living children, number of living male children, education, income per capita, religion and occupation, in affecting the extent of family planning acceptance, so as to identify areas where more, or different inputs could be included in the existing MCH programme, to improve its effectiveness with reference to family spacing.

The Team

The field team consisted of 10 lady health visitors/nurses, ten trained birth attendants, two public health nursing supervisors and one medical doctor. Overall planning, direction and supervision were done by a management committee. Field work directions and continued staff training were the responsibility of the project director, and deputy project director (honorary workers). They met once a month with the team and reviewed the work. Transport was liberally provided for field and supervisory work. Services of a driver were available.

The Sample

All non-pregnant MWRA who were registered during the survey, were regularly followed up.

Table 2: Distribution of MWRA (Pre-conceptional mothers) according to Acceptance of Contraceptive Method

Family Spacing Programme	M W R A	
	No. of Women	Percentage
Acceptors	1513	24.6
Non Acceptors	4649	75.4
Total	6162	100.0

Table 2 shows that out of a total of 6162 non-pregnant MWRA 1513 (24.6%) accepted the family spacing programme, whereas 4649 (75.4%) constituted the non-acceptors group. This gives a contraceptive acceptance rate of 24.6% as compared to 12.5% at National level (1).

Methodology

All non-pregnant married women of reproductive age (15-44 years) were offered family spacing counselling to accept family planning. Those who accepted were encouraged to come over to MCH Complex for consultation, interaction and for replenishing Family Planning supplies. In case client did not turn up on the due date, contact was made at home within one to two weeks.

Similarly non-pregnant married women, who were non-acceptors were registered and followed regularly for family spacing education, either at center or at home in case of clinic failures. They were also educated and prepared for family life and motherhood. The benefits of spacing and desirable fertility were explained. Advice and support were rendered according to their needs and circumstances. All those who opted for child birth were provided full MCH coverage at the center or at home. At the time of registration the requisite socio-biologic attributes of the mother were recorded and then regularly updated during follow-up visits.

Results

Table 3: Contraceptive Acceptance Rate as related to the age of MWRA

Age (year)	Non Acceptors	Acceptors	Total	Acceptance Rate	S. E.
15 - 19	226	10	236	4.24%	1.66 Sig.
20 - 24	1020	171	1191	14.36%	1.44 Sig.
25 - 29	1287	372	1659	22.42%	1.54 Sig.
30 - 34	1112	477	1589	30.02%	1.85 Sig.
35 - 39	699	326	1025	31.80%	2.64 Insig.
40 - 44	305	157	462	33.98%	
Total	4649	1513	6162	24.55	

Table 3 shows that contraceptive acceptance rate is directly related with age of the mother. Acceptance rate is 4.24% amongst MWRA with age between 15-19 years as compared to 14.36% amongst age group 20-34. Difference between the two is statistically significant. Similarly Acceptance Rate is 24.42% and 30.02% amongst age groups 25-29 and 30-34 and this difference between acceptance rates is highly significant statistically.

This pattern reflects the trend toward greater contraceptive use amongst age group 30 years and above identifying the need for women who require more education and motivation for spacing.

Tab. 4: Distribution of F.P. Acceptors according to Contraceptive Methods accepted

Contraceptive Method	No of Acceptors	Percentage
Sterilization	563	37.2%
Condom	432	28.6%
IUD	332	21.9%
Injection	104	6.9%
Pills	68	4.5%
Other	14	0.9%
Total	1513	100.0%

Table 4 shows that 37.2% accepted sterilization, 28.6% condoms, 21.9% IUD. 6.9% injectable hormones, 4.5% oral pills and 0.9% other miscellaneous methods like foam, jelly etc.

Tab. 5: Contraceptive Acceptance Rate amongst MWRA as related to number of living children.

No Children	Acceptors	Non Acceptors	Total	Acceptance Rate	S. E.
0	5	056	511	0.97	1.07 Sig.
1	66	727	793	8.32	1.63 Sig.
2	156	713	869	17.95	1.90 Sig.
3	233	726	959	24.29	2.08 Sig.
4	299	613	912	32.78	1.87 Insig.
5+	756	1364	2118	35.39	
Total	1513	4649	6162	24.55	

Table 5 shows that contraceptive acceptance rate is directly related with the total number of living children. The acceptance rate was 0.97%, 8.32%, 17.95%, 24.29%, 32.78%, 35.98% for 0, 1, 2, 3, 4 & 5 + number of children, respectively.

The difference between various acceptance rates for upto 4 children is significant but is insignificant for 5+ number of children, which shows that 5 children or more have no added relationship with the contraceptive acceptance rate.

Similarly, in a study in Bangladesh, highest contraceptive acceptance rate was found amongst mothers with four or more living children (2). (Acceptance rate 38.8% in target area, 12.5% at national level)

It has been seen that older women with large families are most likely to use contraception. This pattern is common in countries with weak or only recently established family spacing programmes (3).

Table 6: Contraceptive Acceptance Rate amongst MWRA as related to number of living male children

No of Living Male Children	Acceptors	Non Acceptors	Total	Acceptance Rate	S. E.
0	85	1125	1210	7.02	1.21 Sig.
1	304	1322	1626	18.69	1.53 Sig.
2	434	1034	1468	29.56	1.92 Sig.
3	388	640	1028	37.74	2.25 Sig.
4 +	302	528	830	36.38	
Total	1513	4649	6162	24.55	

Table 6 shows that number of living male children has direct relationship with the contraceptive acceptance rate. Contraceptive acceptance rate was 7.02%, 18.69%, 29.56%, 37.74% & 36.89% for 0, 1, 2, 3, 4+ number of living male children,

respectively. The highest rate is amongst mothers having 3 living male children.

Similarly in a study in Matlab area, Bangladesh the highest contraceptive acceptance rate was found in mothers having 2 or 3 living male children (2).

This pattern indicates the value of male child in a society like Pakistan, where sons are expected to support in old age and provide security (4).

Table 7: Contraceptive Acceptance Rate amongst MWRA as related to religion

No of Living Male Children	Acceptors	Non Acceptors	Total	Acceptance Rate	S. E.
Muslims	1203	3818	5021	23.95	1.45 Sig.
Christians	310	831	1141	27.16	
Total	1513	4649	6162	24.55	

Table 7 shows that among Muslim women acceptance rate was 23.95 % as compared to 27.16% in Christians the difference between the two is statistically significant (S. E. = ± 1.45).

This indicates access to family spacing programmes for Christians on equal basis as Muslims but the higher rate amongst Christians probably may be due to more working mothers amongst them.

Table 8 shows that income per capita has shown indirect relationship with acceptance of family spacing programme. Acceptance rate was 33.61%, 25.44% & 17.40% when income per capita per month was below Rs. 200, Rs. 200-400 and above Rs. 400, respectively. The differences between them are statistically significant, but in inverse ratio. This might be due to more older women with large family size, who are less likely to accept family planning methods especially when residing amongst the underprivileged lower income group, but their per capita income has been increased due to the income contributed to the family income by their children.

Table 8: Contraceptive Acceptance Rate amongst MWRA as related to income per capita, per month

Income Capital/ Month	Acceptors	Non Acceptors	Total	Acceptance Rate (%)	S. E.
Below 200	447	883	1330	33.61	11.53 Sig.
200-400	713	3090	2803	25.44	
Above 400	353	1676	2029	17.40	1.18 Sig.
Total	1513	4649	6162	24.55	

Table 9: Contraceptive Acceptance Rate as related to the educational status of wife.

Educational Status	Acceptors	Non Acceptors	Total	Acceptance Rate (%)	S. E.
Illite-rate	871	3037	3906	22.29	1.21 Sig.
Upto Matric	572	1416	1988	28.77	
Post Matric	70	196	266	26.32	2.88 Sig.
Total	1513	4649	6162	24.55	

Table 9 shows that amongst illiterate, upto metric and post metric group of MWRA, acceptance rate was 22.29%, 28.77% and 26.32. This shows that regarding contraceptive acceptance rate difference between the illiterate and upto metric was statistically significant, while between upto metric and post metric difference was insignificant.

This may be either due to very small number of women with metric and postmetric education living

Characteristics of a Community Practicing Family Spacing

in an area where majority of women are either illiterate or under metric, or due to strong programme affiliating contraceptive use among the less educated. Similar findings have been observed in a UN analysis of WFS.

Similar results were also seen in a study in Lahore, Pakistan during 1985-86 (5). In a study in Thailand, the highest contraceptive acceptance rate was found amongst women with four years of education as compared to those with education less than or more than four years (6).

Table 10: Contraceptive Acceptance Rate amongst MWRA as related to the education statue of husbands

Educational Status	Acceptors		Total	Acceptance Rate (%)	S. E.
	Non	Acceptors			
Illite- rate	539	2002	2541	21.21	1.16 Sig.
Upto Metric	752	2091	2843	26.45	1.82 Sig
Post Metric	222	556	778	2.53	
Total	1513	4649	6162	24.55	

Table 10 shows that contraceptive acceptance rate was 21.21%, 26.45% & 28.52% when husbands were illiterate, upto metric and post metric, respectively. Difference between the illiterate and upto metric is statistically significant, while difference between upto metric and post metric group is statistically insignificant. This may be either due to smaller size of sample with post-metric education or due to the effect of area of residence, of the population under study.

Similar results have been seen in a study in Lahore (1985-86), which showed that the higher the educational status of the husband, the higher is the contraceptive acceptance rate in the couple (5).

Table 11: Contraceptive Acceptance amongst MWRA as related to their occupational status

Educational Status	Acceptors		Total	Acceptance Rate (%)	S. E.
	Non	Acceptors			
Working Outside home	45	142	187	24.06	3.17 Insig.
Not working Outside home	1468	4507	5975	24.57	1.82 Sig
Total	1513	4649	6162	24.55	

Table 11 shows that amongst women who were working outside home, contraceptive acceptance rate was 24.06% as compared to 24.57% amongst those not working outside home, and the difference between the two is statistically insignificant. This may be due to a small size of working mothers in the area under study, as they constitute only 3% of the total sample.

Recommendations

1. Very young married women of reproductive age require more F.P. counselling for education and motivation for spacing.
2. Older women with large families are currently using contraception reflecting only recently established F.P./MCH programme. There is a greater need to provide extensive and timely F.P. counselling for spacing and limitation to those who are in their early and middle reproductive age as compared to those who are in late reproductive years.
3. Choice of contraceptive methods accepted has identified the need for staff training for educating and motivating mothers to IUD acceptance from choice at No. 3 to No. 2, resulting in much better and effective spacing. (See Table 4).

4. We have to strive hard for sensitization and motivation for gradual change towards fewer number of children.
5. Similarly change of behaviour from 3 males to 2 males are identified as priority.
6. Higher acceptance of family spacing amongst lower and middle income group may be due to strong MCH - F.P. programme in the area. Hence we must continue to provide MCH/FP services to the communities we serve.
7. Few years of schooling for wives and higher level for husbands is required for accepting F. P. programme. Education of people will help dramatically in acceptance of family spacing programme as has happened in many other countries.
8. Present study can be used to evaluate the impact of F.P./MCH project in near future in the specified community, and its effect on the health of mothers and children in the coming years.

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UTILIZATION OF GOVERNMENT HEALTH FACILITIES IN DISTRICT LAHORE A COMPARATIVE STUDY OF RURAL AND URBAN AREAS

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Summary

A community based survey was conducted to identify the awareness and satisfaction of the people about Government Health Facilities (GHF) in two rural and one urban area. House wives were asked about the utilization of GHF for the whole family. Reasons for nonutilization were also identified. The study reveals that almost everybody was aware of the presence of GHF, but only three fourth of the population utilized them (alone or in combination with other services). Ineffectiveness of medicine, was the leading cause in both rural and urban areas, along-with improper attitude of medical staff including doctors, unavailability of medicine and long waiting hours.

Introduction

The International Conference on Primary Healthy Care at Alma Ata, USSR in 1978 urged all the governments to formulate policies for initiating and sustaining primary health care in order to achieve the target of health for all by the year 2000^[1].

Government of Pakistan had already embarked on Primary Health Care services prior to the 1978 Allama Ata declaration. As a result of rapid development in health sector, a total of 733 hospitals, 3,714 dispensaries, 4,244 BHUs, 4,027 MCH Centers, 455 RHCs, 230 TB Centers and 71,897 beds existed in 1990 in Pakistan^[2].

The ultimate objective of better health of population can never be achieved, merely by the provision of health services, unless the population is urged to utilize them as well. There could be several reasons for non-utilization of health care facilities. In a developing country like Pakistan, these range from inefficient health care delivery system to general skepticism in the public about the use of health care facilities. Lack of community involvement has been described as one of the prime reasons for low levels of health services utilization. "Community involvement" is hardly taken into account in most national health planning

or it is quoted merely as an empty phrase. The importance of a "Bottom to top" transfer of ideas and proposals to form the basis for planning is not well recognized by planners and decision makers. Mechanisms for involving people in implementing strategies are not clearly defined^[3].

The number of people who actually use the service can be obtained relatively easily with properly designed recording systems, especially if voluntary health workers are also integrated into the system. The measurement of this type of coverage reflects both geographical and other kinds of accessibility, such as economic and cultural. Information about those who use the services, by comparison with the total population, can provide some information, by inference, about those who do not use them. Information on non-users and the reasons for non-use can really only be obtained from community based surveys^[4].

Present study was conducted with an aim to assess the utilization of different health care facilities by two rural and one urban community in district Lahore, during 1988-89.

Objectives

In villages "Bhunike" and "Ali Hussain Abad" and urban area of "Usmania Colony", the objectives of the study were:

1. To assess the knowledge of public about the existence and utilization of different health facilities at urban and rural level;
2. To compare the utilization of Government Health Facilities with other health facilities in the three areas;
3. To identify the factors for non-utilization of Government Health Facilities.

Material and Methods

Selection of area

Two rural ("Bhunike" and "Ali Hussain Abad") and one urban ("Usmania Colony") communities were selected from district Lahore.

Table 1: General Profile of the Three Areas including in the Study

Description	Name of the Area		
	BH	AHA	UC
Distance from Lahore	542	327	146
Population	3071	2118	1116
No. of Household	75 km	25 km	within Lahore
Level of Literacy	Majority illiterate	Majority illiterate	Majority illiterate
Main Occupation	Cultivation	cultivation factory work	small business low grad job
Houses made of	clay	clay & bricks	bricks
Source of Water	hand pumps	hand pumps & donkey pumps	tap water available
Sanitation System	No arrangement	No arrangement	proper facilities
Socio-econ. Status	low	low but higher than Bhunike	lower to middle class

Selection of Subjects

House wives of each household of the three areas were selected for interview. Housewives were given priority over men because they spend most of the time in their home and are in better contact

with other members of the family, especially children and sick persons.

Questionnaire

After discussion with relevant public health experts and medical sociologists, a core set of questions related to health care utilization practices was developed. There were four open ended and 13 pre-coded, close ended questions. These covered the knowledge of persons about the existence of health care facilities, utilization of these facilities were recorded verbatim or approximately so and were categorized prior to data analyses. All the interviews were conducted by experienced interviewers. The instrument was extensively pilot-tested before being finalized.

Number of filled questionnaires obtained from each of the three areas was as follows:

- | | | |
|-----------------------------------|-----|--------------------|
| (i) Bhunike households. | 440 | 81.2% of the total |
| (ii) Ali Hussain Abad households. | 240 | 76% of the total |
| (iii) Usmania Colony households. | 125 | 85.6% of the total |

Results and Discussion

Table 2 gives the knowledge of people about the existence of Government Health Facilities in the three areas. Only a minor number of persons in rural areas (3% in BH and 5% AHA) were not aware of the existence of GHF, while everybody knew about the existence of GHF in urban area.

Table 2: Knowledge about the Existence of Govt. Health Facilities in the three areas.

Level of Knowledge	BH		ANA		UC		Total	
	No.	%	No	%	No	%	No	%
Aware	428	97	228	95	125	100	781	97.0
Unaware	12	3	12	5	0	-	24	3.0
Total	4540	100	240	100	125	100	805	100

Table 3 gives the frequency of persons utilizing GHF in the three areas. Among those who were aware of GHF, only 59.6% (95% CI = 53.4% to

65.8%) utilized the facilities in village AHA, while the frequency of utilization was 79.4% (95%CI = 75.6% to 83.2%) in BH, and 83.0% (95%CI = 76.4% to 89.6%) in UC. There was statistically significant difference between the utilization of GHF in the two villages ($X^2 = 31.4$, $P < .001$), while the difference for the utilization of GHF between UC and BH was not statistically significant ($X^2 = 2.03$, $P = NS$).

Table 3: Utilization of Government Health Facilities in the three areas.

Level of Utilization	BH		AHA		UC		Total
	No	%	No	%	No	%	
Utilizing	340	79.4	136	59.6	104	83.0	580
Not Utilizing	100	20.6	104	40.4	21	17.0	201
Total	440	100	240	100	125	100	781

Table 4 gives the details of reasons for non-utilization of different GHF the three areas.

Table 4: Reasons for non-utilization of GHF in the three areas.

Reasons for non-utilization	BH		AHA		UC	
	No	%	No	%	No	%
Not aware of facilities	12	12	12	11.5	0	-
Long distance	11	11	24	23.1	0	-
Long waiting hours	13	13	5	4.8	2	9.5
Improper attitude of doctors	9	9	13	12.5	5	23.8
Medicine not provided	12	12	9	8.7	6	28.6
Treatment facilities	4	4	10	9.6	1	4.8
Medicine ineffective	39	39	31	29.8	7	33.3
TOTAL	100	100	104	100	21	100

As evident from Table 4, ineffectiveness of medicine was reported as major reason for non-utilization of GHF in all the three areas (39.4%

95% CI = 29.8% to 49.0% for BH, 29.8% 95%CI = 21.0% to 38.6% for AHA and 33.3% 95% CI = 13.1% to 53.3% for UC). Improper attitude of doctors (9.5%) and non-utilization of GHF. In AHA 23.1% of people complained that long distance was a major reason for non-utilization of GHF. The comparison between the reasons for the non-utilization of GHF between the two rural areas was highly significant ($X^2 = 12.95$, $df = 6$, $P < 0.001$). The difference between the two rural areas and the urban significant ($X^2 = 1.41$, $P = NS$ for the two rural areas and $X^2 = 0.04$, $P = NS$ for urban and rural areas).

Table 5 gives the frequency of persons showing satisfaction from the services of GHF in the three areas. A total of 59.6% persons in UC (95%CI = 52.1% to 68.5%) were satisfied from the services of facilities, while 50.6% of persons showed satisfaction in BH (95% CI = 45.3% to 55.9%). The only significant difference for the level of satisfaction was between the two rural areas ($X^2 = 3.68$, $P = 0.055$).

Table 5: Satisfaction among the utilizers of GHP in the three areas under study

Level of Satisfaction	BH		AHA		UC		Total	
	No	%	No	%	No	%	No	%
Satisfaction	172	50.6	82	60.3	62	59.6	316	54.5
Not Satisfied	168	49.4	54	39.7	42	40.4	264	45.5
TOTAL	340	100	136	100	104	100	580	100

Dissatisfied persons were asked about the reasons for dissatisfaction. Table 6 gives details of various reasons for dissatisfaction. Ineffectiveness of medicine was again mentioned as the most frequent cause of dissatisfaction in all the three areas (34.5%, 95%CI = 27.3% to 41.2% in BH, 66.7%, 95%CI = 54.1% to 79.3% in AHA and 38.1%, 95%CI = 23.4% to 52.8% in UC). Improper attitude of doctors was the second most common reason for dissatisfaction. Significantly more people in AHA mentioned ineffectiveness of medicine as major reason for dissatisfaction as compared to other rural area ($X^2 = 17.3$, $P < .001$).

Table 6: Reasons for dissatisfaction of GHF in the three areas

Reasons for dissatisfaction	BH		AHA		UC	
	No.	%	No	%	No	%
Medicine ineffective	58	34.5	36	66.7	16	38.1
Medicine not provided	8	4.8	4	7.4	6	14.3
Treatment facilities unsatisfactory	15	8.9	0	-	6	-
Improper attitude of doctor	27	16.1	5	9.2	10	23.8
Improper attitude of staff	9	5.3	0	-	0	-
Malpractice of staff	7	4.2	0	-	0	-
Others	44	26.2	9	16.7	10	23.8
	168	100	54	100	42	100

Figures 1 and 2 show the trend in the utilization of health care facilities, other than GHF, during routine and emergency sickness in the three areas.

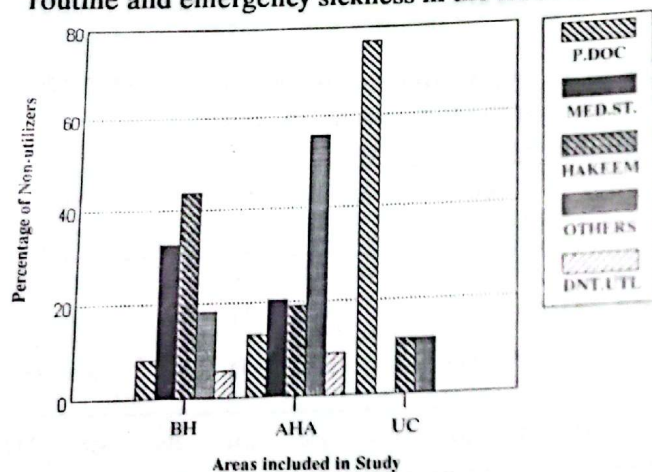


Fig. 1: Distt. of Persons Utilizing various HCF other than GHF in routine sickness

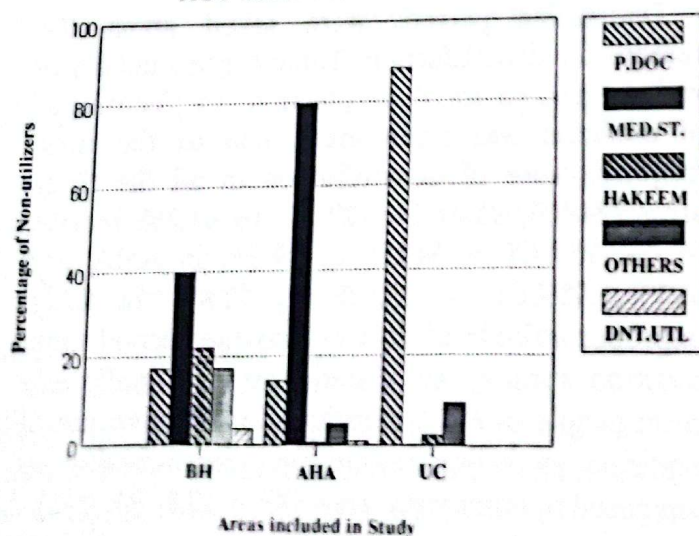


Fig. 2: Distt. of Persons Utilizing various HCF other than GHF in emergency sickness

It is evident from both figures that, out of those who do not utilize GHF, approximately 80% go to private doctors. Private doctors are consulted less in rural areas, partly because of relative unavailability of doctors and because of lower socioeconomic status of the people. Low levels of literacy may also be a contributory factor. Medical stores seem to play a dominating role in rural areas in case of emergency sickness, because of easy availability, and low cost as compared to private doctors. Hakeem seems to be a popular figure in BH, especially for the treatment of routine sickness.

Conclusion

The study highlights important findings related to the awareness, satisfaction and utilization of available GHF. Whereas, almost everybody knew about the existence of GHF in the area, only three fourth of all population utilized these services (alone or in combination with other services). Among those who utilized the services, 45.5% were not satisfied from the services. Ineffectiveness of medicine being the leading reason for non-utilization and for non-satisfaction of services, followed by improper attitude of doctors and other medical staff. Complaints about ineffectiveness of medicine raise serious questions about the standards and Quality Control measures in the pharmaceutical industry in Pakistan, mass production of fake medicine, as read in everyday newspapers, or it may be because people have false perceptions about the effects of medicine.

Non-utilization of services is higher in rural areas (especially in AHA) as compared to urban area. Apart from frequent availability of GHF, the two leading social factors may be lower socioeconomic status of the people (which makes the treatment unaffordable) and low levels of literacy, which create false perceptions among people about ineffectiveness of medicine. Long waiting hours at GHF and long distance of the facility from the community were also mentioned as leading factors. Routine sickness requires frequent visits to the health facilities and reasons mentioned above play a significant role in lowering the rate of utilization.

Acknowledgements

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ASSESSMENT OF NUTRITIONAL STATUS OF CHILDREN AT SOS VILLAGE LAHORE

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Summary

Malnutrition is a serious public health problem in the developing countries. National and local level surveys have revealed the existence of similar situation in Pakistan. This survey was carried out with a view to study the magnitude of the problem in a population of children and youngsters under highly controlled food supply conditions. There were 145 children living in groups of 8 to 10. The survey included the clinical assessment, anthropometric measurements, biochemical tests and household survey for hygienic condition, preparation and presentation of diet. Out of 145 children 62 showed general malnutrition (43. 66%), 23 showed chronic malnutrition (16.2%) 21 children were acutely malnourished (14%)

Introduction

Pakistan is a developing country with a growth rate of 3.1. Around 44% of its population is under fifteen years of age, showing a high dependency ratio. National Nutritional Surveys in 1965/66, 1976/77 and in 1985/87 as well as smaller local studies had indicated a substantial prevalence of malnutrition. Therefore, malnutrition is widely recognised as a public health problem of critical national importance.

Malnutrition includes inadequacies in diet, i.e. supplies of nutrients in inadequate amounts to the human being, as well as defects in absorption and utilization of food leading to clinical manifestations of disease.

On one side are effects of a diet inadequate (1) in quantity or quality - under nutrition, while on the other are the effects of excessive consumptions of foods manifested by obesity. Poor diet not only plays a role in the manifestation of malnutrition but has an important role in a variety of disorders which affect the human host. Therefore a balanced diet is necessary for full enjoyment of health, it is one that furnishes optimum conditions for main-

taining vigour and characteristics of youth. Some of the factors which make balanced diet are:

1. Sufficient calories to furnish heat and energy.
2. Adequate structural material to repair waste and provide for growth.
3. Inorganic element like Fe, P, Ca and I₂.
4. Foods containing adequate amounts of all necessary vitamins.
5. Some roughage.
6. Water is one of the essentials.

A well balanced diet favours prompt digestion and absorption, it not only provides the number of adequate calories but has a proportion of various nutrients like, proteins, salt and vitamins. A food may be rich in one or two items but may be deficient in others. In nature there does not exist any food having a proportion of adequate nutrients therefore multimix diet is the answer.

Concepts in Energy and Protein Requirements:

Body size reference standards for children, adolescents and adults. Body size is the major determinant of the absolute requirements for energy and protein. Variations in size are probably more significant quantitatively than the metabolic adapta-

tion. It is therefore necessary to define acceptable ranges of body size.

Children

Although the energy and protein requirements for the process of growth are relatively small compared with those for maintenance, except in the young infant, satisfactory growth is the first step in estimating the requirements of infants and children. Children in many developing countries are smaller at birth than those in industrialized countries and grow at a slower rate during infancy and early childhood. The evidence suggests that in young children these differences are due primarily to environmental factors, including inadequate nutrition, and that genetic and other factors are of lesser importance, so that young children of different ethnic groups should be considered as having the same or similar growth potential.

In communities where children's growth is limited by environmental factors, there is evidence of an association between functional impairment and deficit in linear growth. For such situations it is extremely difficult to separate the effects of under-nutrition from those of other aspects of social definition.

Surprisingly in contrast to adults, there appear to be no recommendations for children concerning the ranges within which weight or height at any given age may be regarded as satisfactory. This is partly because data is deficient and only just becoming available, and partly because children start with different birth weights and therefore their attained weights will continue for sometimes to be above or below the median. In epidemiological studies of childhood undernutrition it is conventional to accept - 2SD from the median as the cut - off point between 'normal' and malnourished, corresponding approximately to the 3rd Centile or to 80% of the median for weight and 90% for height. Similarly, + 2SD in weight or height may be taken as a cut - off point for obesity. (2)

Adolescents

The desirable heights and weights of children over 10 years of age present special problems because there is considerable variation between individuals and groups in the timing of the adolescent growth spurt which starts at different calendar ages in boys and girls. Further if children have been

growing slowly from infancy, as happens in many developing countries, by 10 years of age, the gap between their actual weight and their expected weight, based on that of adolescents in industrialized countries will be very large. It is not known whether extra food at this stage can increase the extent and duration of the pubertal growth spurt.

For these reason it is considered more realistic, after the age of 10 years, to relate requirements to the appropriate height rather than weight for age. By using actual height and median weight or height, it is possible to look into the fact that puberty begins at different ages in different groups of adolescents. Again, as with younger children, there are no clear recommendations about the acceptable ranges of weight or height(3).

Adults

Adult groups in various parts of the world show substantial difference in height and weight variation is also common within countries and areas.

Long-term prospective studies on large number of adults in developing countries are not available. It must be recognised that in communities subject to infections, periodic food deprivation, and high energy demands for physical activity, a higher body weight than the average could be advantageous. At present average weight of adults in many countries is below the mid point of that range, and sometimes even below the lower limit. There is no direct evidence that this in itself is either beneficial or harmful(4).

Methodology

The areas of activity are health and nutrition education with the intent to assess the magnitude of malnutrition among the SOS village children, determine the background socio-economic influence on nutritional status. In the light of findings and observations make recommendations for improvement of nutritional status of the children.

The SOS village, Lahore was selected for this study. There were 145 children accommodated in 15 - houses, with ages ranging from 2 to 12 years for boys to over 15 years for girls. Four dimensional approach was selected for this survey:

I. *Clinical Assessment included the following variables.*

1. General condition of the child.

2. Level of personal hygiene.
3. Mouth condition.
4. Teeth condition.
5. Eye condition.
6. Nail condition.
7. Skin condition.
8. Hair condition.
9. Oedema - Present, Absent.

II. Anthropometric Determinants.

1. Height in centimeters.
2. Weight in kilograms.
3. Skinfold thickness in millimeters.

III. Biochemical Determinants.

1. Blood examination which included following measurements. Hemoglobin. Total Serum Proteins. Serum Albumin. A/G Ratio
2. Urine examination which included detection of following contents. Sugar, albumin, RBCs and Pus cells.

IV. Factors related to Malnutrition.

1. Family size.
2. Socio Economic Status.
3. History of chronic disease.
4. Status of immunization.
5. Education.
6. Kitchen hygiene.
7. Presentation of diet.

Survey was done in two phases. During the first phase children were brought to the department of Nutrition and Dietetics, College of Community Medicine, in groups of 20 - 30 children daily. This phase was completed in week. Clinical examination, Anthropometric measurements and Biochemical tests were done by a trained team.

During the second phase team visited the SOS village and factors related to malnutrition were noted. This included examination of personal files of children and diet presentation.

Indicator	Terminology (If Low Result)	Type of Malnutrition
Weight for age	Underweight	General Malnutrition.
Weight for age	Stunting	Chronic Malnutrition
Weight for height	Wasting	Acute Malnutrition

Results

1. Clinical Assessment

Overall general condition of the children has been found to be very good except for teeth. Out of the 145 children, 27 (18.6%) showed dental caries.

2. Anthropometric Measurements

The weight for age was compared with international standards. Table No. 1 shows that 62 (42.7%) children are suffering from general malnutrition.

Table 1: Prevalence of General Malnutrition in SOS Village, Lahore

Age groups	Normal		Underweight		Total	
	No.	%	No.	%	No.	%
1 - 4	12	50.00	2	50.00	4	2.61
5 - 8	9	45.00	11	55.00	20	14.08
9 - 12	47	66.2	24	33.8	71	50.00
13 - 15	14	40.00	21	60.00	35	24.71
17 +	9	69.23	4	30.77	13	9.15
	86	56.34	62	43.66	142	100.00

Table No. 2 shows 26 out of 73 (35.62%) female children of SOS village are suffering from general malnutrition, being highest in 5-8 year age group (46.15%)

Table 2: Prevalence of General Malnutrition in female children of SOS Village

Age groups	Normal		Underweight		Total	
	No.	%	No.	%	No.	%
1 - 4	1	00.00	0	00.00	1	1.37
5 - 8	7	4.84	6	46.15	13	17.80
9 - 12	200	74.07	7	25.92	27	37.00
13 - 16	11	55.00	9	45.00	20	27.40
17 +	8	66.66	4	33.33	12	16.43
	47	64.38	26	35.62	73	100

3 - Children could not be assessed for anthropometric measurements as they were engaged in examination.

Out of 145 children 21 (14.48%) are both underweight for age and stunted. They are termed as suffering from acute malnutrition.

Skin fold thickness is measured and none of the children showed obesity therefore obesity is not the problem.

Most of the children belong to low socioeconomic background. Education of the parents could not be assessed. Almost all children were immunized except for 2.

Biochemical determination showed that 71.30% children were suffering from anaemia and 78.3% children have pus cells in their urine.

A/G Ratio was not within normal range in 29.12% of cases. No child was found to be diabetic.

Discussion

1. Clinical Assessment

Although physical condition of the children is good, the much alarming figure of dental caries demands attention. 27 (18.6%) Children showed dental caries which is highly significant as compared to the national figures (3.5%). Excess milk supply and proper brushing of the teeth is required.

2. Anthropometric Measurements

The weight for age was compared with the standards. Those who were under 80% of the standard were labeled as suffering from general malnutrition. 62 (43.66%) out of 145 children were labeled as generally malnourished. Further analysis showed 26 (35.62%) out of total No. 73 female children were suffering from general malnutrition. 36 (52.17%) out of a total No. of 69 male children were found to be under weight for age and thus suffered from general malnutrition. This shows that male children are more under weight as compared to female children. Compared with National figures (51.5%) of 1985-87 survey the SOS village children are slightly in a better condition (43.66%). But the situation is far from being satisfactory.

Height of children were compared with standard. Those who were less than 90% of the standard were termed as stunted for age.

The findings reflect higher level of stunting in females as compared to males. In our society good food is served to the males as they are considered superior. This phenomenon might be going on in SOS village also. Compared with National figures

of 41.8% (7) the level of stunting is far less (16.20%) in SOS Village.

This may also be explained that as boys grow up, they are more active and competitive in our society and bag more share in eating food. Also they are more carefree as compared to growing girls who are more conscious about their looks and want to be smarter. Girls are more prone to compulsory dieting especially after 10.

Out of total 145 21 (14.48%) are both underweight for age and stunted. According to classification used they are, suffering from acute malnutrition. This might be due to some problems with food, diarrhoeas, dysenteries and abnormal eating habits of the children. The figure is much higher than the National Level (4.5%) as revealed in 1985-87 survey. This may also be due to the fact that real parents provide more emotional and psychological support and care.

Biochemical determination shows that 71.3% children are anaemic and 78.3% children have pus cells in their urine. (This may be due to poor hygiene and method of collection of urine samples.

No child was found to be diabetic. A/G ratio was not found to be within normal limits in 29.1% of cases. Two factor should be kept in mind regarding this finding, first the prevalence of intestinal worms in children, second the lesser amount of animal proteins in the diet.

Children belonging to families having more than 7 members have higher level of general malnutrition. Out of 145-families of origin 16.55% shows some form of chronic illness with higher percentage of tuberculosis. As most of the children belong to low socio-economic background the higher percentage of chronic illness with special reference to tuberculosis can be explained. The high incidence of dental caries also affects the health status. The children may also be avoiding protein intake because of dislike for meat or egg and these factors may be contributing to high incidence of anaemia. Proper fluid intake may be overlooked by mothers as managing 8-10 youngsters is quite a burden. Worm infestation is another reason of such high incidence of anaemia and demands intervention. Status of immunization, kitchen hygiene, presentation of diet and weekly menu of diet were all within acceptable norms.

Recommendations

1. Feeding young children: Mothers should be given knowledge about seasonal variation of prices of foods (vegetables and fruits), and using multi-mix principles in diet.(8)
2. Focus on malnourished children. Malnourished children should be especially provided with four mix foods.
3. Nutrition during diarrhoea and other infections. The children should be given more liquids than usual and given freshly prepared foods, fresh fruit juice or bananas to provide potassium. Encourage children to eat as much as he or she can.(9)
4. Nutrition Education. Short courses of nutrition education may be arranged for mothers in which they may be trained in preparation of a balanced diet and in those cooking methodologies in which less nutrients are lost.
5. Regular medical examination alongwith stool examinations for helminthiasis. Regular medical examination alongwith growth measurements is advised. This helps in checking the problems before they become severe enough needing more radical measures.
6. Education in Personal Hygiene.(10) Mothers must receive education in basic principles of personal hygiene such as washing hands before and after meals, brushing the teeth before going to bed and washing hand after using the latrines. Through mothers these messages will be communicated to the children. Children can also be given direct messages and in return they can educate the mothers.

7. Psychological advice. Most of the children particularly the males are under psychological stress apart from the personal suffering, adolescent children undergo psychological stress due to many reasons, It is therefore recommended that Psychological counselling must be arranged at least once a year.

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PERCEPTIONS OF PRIMARY SCHOOL CHILDREN ABOUT KEY HEALTH ISSUES IN A VILLAGE SCHOOL NEAR LAHORE

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Summary

Focus group interviews were conducted with primary school students in the village of Bulhar in order to discern perceptions about four key health issues of nutrition, oral health, diarrhoea and skin disease. The study revealed that although the children did have some conception of healthy foods, this knowledge was limited and did not include an understanding of the importance of protein rich foods such as dal. Understanding of the relationship between cleaning the teeth and prevention of oral ill health was fair, although some misconceptions were apparent. Practice and skills in this area were not assessed. Clean food was understood to be important in relation to remaining free from diarrhea, but other non-related factors were incorrectly identified as causing diarrhoea. Skin complaints were understood to be related to personal hygiene in a very limited way, and communicability was not mentioned in relation to such diseases. The conclusion of the study is through revealing perceptions about key health issues, qualitative research of this nature can provide a basis on which to build appropriate and relevant health education programmes.

Introduction

The World Health Organization estimates that 50 million children die each year. The vast majority of these deaths are in the developing world, where 98% of all infant deaths occur (1). Malnutrition, diarrhoea and respiratory infections account for the largest number of deaths amongst children in the developing world. These diseases are largely preventable. The Pakistan Ministry of Health has written that "to be effective a health care system must consist of two essential components: first, accessible and culturally appropriate health services; and second, effective public health education programme (s)" (2). Children constitute a very important group to reach with positive health messages. Not only are children a particularly vulnerable group in terms of morbidity and mortality, childhood is a time of enormous changes. Children and young people undergo physical, intellectual, emotional and social development at a pace that will not be matched in adult life. Patterns of behaviour established in childhood are often maintained throughout adulthood. It is essential then, to help children to

establish patterns of healthful behaviour. Before any effective health education can take place, it is crucial to determine what kinds of information people already have about health. The beliefs, which individuals and groups hold about their health, whether founded on facts or misconception, will ultimately determine much of their behaviour in relation to their health. For example, residents of a certain area in Guatemala believed that frequent bathing can cause malaria (3). The health implications of this belief are clear. Health beliefs need to be clearly understood if healthy behaviour is to be promoted. In this paper, the authors attempt to determine the health perceptions of a group of primary school children. Perceptions have been defined as "Knowledge, attitudes, values and beliefs within a cultural context that may facilitate or hinder personal, family and community motivation to change" (4).

Materials and Methods

Bulhar is a village some 20 kilometres from Lahore. The village has two primary schools: one

for females and one for males. The boys primary school was selected for the purposes of this research. Sixty-six boys are enrolled in the school, but on the day the research was conducted a total of 54 boys were present. The age range was four to 12 year.

Qualitative research methods were deemed to be most appropriate for the purposes of this research. Focus group interviews were the method of choice. The focus group interview is a method which originated in market research, but has been used with great success in the social sciences (5). Respondents are interviewed in small groups ("Focus Groups"), with the ideal number of persons being between four to 12. Rather than administering a detailed questionnaire, the interviewer follows a schedule of questions which are asked to each respondent in turn. The main advantage of this method is that it produces in depth data, because questions are open ended and respondents can elaborate as they see fit. In contrast to the questionnaire, the researcher does not make assumptions about what the key issues are, but allows the respondent to answer freely (5). Some critics have argued that by interviewing respondents in a group bias may occur. However scientists respond that individuals do not form their ideas, values, attitudes and beliefs in a vacuum or in social isolation. Rather, ideas and beliefs are formed within a social context which is reflected by the focus group.

Focus group interviews are particularly useful when working with children. Children may not have the skills of literacy required to complete a questionnaire. Through focus group interviews, the researcher is also able to build a rapport with the respondents, which means that shyness of children towards an unknown interviewer can be eliminated.

The pupils of Bulhar village school were divided into five focus groups on the basis of their age. The boys were informed that the questions they would be asked were not designed to examine them, but that the interviewer just wanted to hear their ideas. Six questions formed the interviews schedule: question one was concerned with healthy foods; question two asked the boys to identify unhealthy foods; questions three and four asking the boys to describe the consequences of cleaning, or not cleaning teeth; question five asked the boys to say what they think causes diarrhoea; and the sixth and final question asked boys to identify the causes of

skin disease ("dry itching") amongst children. Responses were recorded by the interviewer.

A qualitative analysis of the results was undertaken to determine the key perceptions about the health issues identified in the interview schedule. As is usual in presentation of qualitative research, results and discussion are presented simultaneously. Statistical analysis is neither appropriate nor desirable, since sample size is small and qualitative research does not seek to produce estimates of population prevalence, but rather to produce valid results for the particular population from which the data is collected.

Results and Discussion

The results are presented here by categories determined by questions asked to each group by the interviewer. The following categories are discussed: perceptions about healthy and unhealthy diet; perceptions about some aspects of oral health; perceptions about causes of diarrheal disease; and perceptions about skin complaints, namely, scabies.

Perceptions about Healthy & Unhealthy Nutrition

Nutrition related diseases rank only after diarrheal diseases, to which they are in any case closely related, as the major cause of infant and early childhood morbidity in developing countries (6). Because of the importance of good nutrition in relation to general health, the children were asked to identify foods which induce health. Amongst classes two to five the boys were able to identify some health promoting foods, primarily fruits such as apples, oranges and pomegranates, and to a lesser extent protein rich foods such as meat and milk. No group mentioned eggs (the reason for this discussed later); neither were grains, pulses or legumes identified as being health inducing. Although other classes mentioned bananas as being healthy food, class two said that this fruit is not healthy as is a cause of constipation. The third class also mentioned that sweets are healthy foods. The response may be perceived as relating to social and emotional well being rather physical health. The first calls, with an age range of four to five years, were unable to answer the question at all. The answers given by the children may reflect the village diet in that expensive protein rich foods, such as meat were largely ignored in response to the question. The children did not, however,

identify the protein rich foods such as dal or beans which are low in cost and readily available for the lower income groups to which they belong. In response to the question "which foods make you unhealthy?" Classes two, four and five answered correctly that dirty and stale foods can induce sickness. Class three deviated somewhat in replying that left over foods can make you ill although in a village environment with the absence of facilities to keep foods cool in the hot summer months, this line of reasoning is accurate. No stuffs, other than "dirty lassi" were identified. Once again class one were not able to offer any answers to the question.

Perceptions about Oral Health

Classes two to four responded to the question "what are the benefits of teeth cleaning" answered that teeth become powerful and strong. Class five answered that in addition to freedom from tooth decay, the eyes become healthy. Class one answered only in terms of general health: "If we clean our teeth, we become healthy".

When faced with the question "what harm may come to a person who does not clean teeth? classes two-five correctly identified that tooth decay, loss of teeth and pain may be associated with lack of cleaning. The first class said that "dirty teeth" would be the consequence.

In addition to tooth decay, the boys in classes two to five mentioned other consequences of poor dental hygiene: earaches, headaches, coughs and influenza were commonly mentioned.

Perceptions about Diarrheal Disease

This area of questioning proved to reveal some of the most interesting and relevant data. Diarrheal disease is a major contributor to the very high levels of childhood morbidity and mortality in the developing world. Malnutrition amongst children is part of a vicious cycle involving diarrheas and dehydration (7). The children in this study were requested to answer to the question: what is the cause of passing more than three stools per day? Class five were able to offer several answers: over eating was commonly thought to be a major cause of passing three stools per day. Very interestingly, the group also associated diarrhoea with eating of foods identified as 'hot'. Studies of Ayurvedic (traditional) views of illness in the sub continent have revealed that many persons ascribe food items

with certain attributes such as 'hot' and 'cold' (7). Diseases are also classified according to 'hot' and 'cold' complaints. According to this traditional view of disease, diarrhoea is a 'hot' disease (8). The children in this study identified eggs and fish as hot foods, that is foods which may induce diarrhoea. This perception is important since eggs particularly are a protein rich food which is not unhealthy unless taken in large quantities. Some of the respondents correctly associated diarrhoea with eating dirty food, although 'dirty' was not defined and would require further research to reveal whether the definition of the boys is compatible with public health perceptions.

Classes two to four identified over eating as a key cause of diarrhoea. Class one said that diarrhoea is caused by two factors: as a punishment for stealing and through eating sugars.

Perceptions about Skin Complaints

All the respondents were asked to give their opinions about what causes dry itching. There was little disparity between the answers offered by classes three to five. The children demonstrated some understanding of the relationship between cleanliness and the condition of the skin: all groups answered that bathing in the dirty water of the village pond can cause itching. However, more detailed aspects of personal hygiene were not discussed. In addition, the children did not have any concept of communicability of skin disease. No single child answered that they might acquire such itching through contact with a sufferer. Insects bites were mentioned by all groups as having the potential to cause problems of itching.

Interestingly, this question was the only which elicited answers which were suggestive of a relationship between ill health and religion. Classes three and five said that wrath of God may cause itching.

Class two did not associate skin problems with hygiene, but rather with ingestion of certain food stuffs such as sugary foods, samosas and uncooked rice. Class one were unable to answer the question.

Conclusion

By revealing the perceptions of children about causes of disease, this research provides an invaluable source of information for development

of effective and appropriate programme of health education.

The respondents in this study demonstrated some understanding of the relationship between hygiene and health. Although their knowledge was limited, this knowledge does provide a foundation on which to build. Similarly, the children did have some understanding of foods which are healthy. Their current knowledge needs to be supplemented to include an understanding of the importance of protein rich foods.

Some cause for concern, and an area where health education could make an impact was the assertion that over eating is a major cause of diarrhoea. The researcher noted that most of the children were suffering from nutritional deficiency, with symptoms of pigmentation, changes in hair and skin complaints. It is most unlikely that such children are experiencing diarrhoea induced through over eating. Similarly, the concept of 'hot' and 'cold' foods could prove detrimental to health, if the avoidance of certain foods is undertaken in a child who is already surrounding poor nutritional status.

The relationship between cleaning teeth and oral health was clearly understood by all but the youngest respondents and this suggests that health education which reinforces this view, and imparts skills of good brushing would be most useful.

Skin disease was very poorly understood by the children, and no concept of communicable disease was demonstrated. This research then, clearly reveals the need for some health education in this area.

In conclusion, studies of this nature, which seek to reveal perceptions of certain groups about common health issues are most useful in developing an understanding of how people conceptualise health and illness, and thus, developing appropriate programmes to help improve their health.

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ORAL HEALTH FOR ALL — THE PROBLEM AND STRATEGIC PRIORITIES FOR PAKISTAN

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Summary

Oral health is a major component of total human health. Pakistan is facing a multitude of oral health problems on the one side and lack of proper infrastructure for oral health services on the other. This paper briefly discusses the alternative strategies identified by WHO and member states to promote oral health and prevent disease. In light of these strategies, policy guidelines in the areas of management, resources development and service delivery are developed for Pakistan.

Introduction

“Oral Health For a Healthy Life” the W.H.O. slogan for the year 1994, very rightly reflects that oral health is an important component of human health and social well being. Clean, healthy and well cared for mouth helps in self-confidence and facilitates communication and human relations. The good thing about oral health is that almost all oral diseases are preventable and if appropriate measures are taken, oral health can be improved to a level where all children are totally free of oral diseases, most of the adults have no caries and no fillings and people are able to keep their teeth till the end of their life(1).

Common orodental diseases in Pakistan are : dental caries; periodontal disease; malocclusion; maxillo - facial injuries; pre-cancerous conditions; cancer and dentofacial anomalies(2). The percentage of dental caries is 3.5%(3) and DMFT level (Average number of teeth that are Decayed, Missing on account of caries and Filled) at 12 years age for the year 1993 is 1.1(4).

Most of these problems are preventable but because of lack of awareness of the importance of oral health and hygiene the diseases are ignored initially when these problems could be controlled, leading to deterioration of the condition and only when severe pain and infection occurs attempt is made to find treatment.

Regarding oral health services, there are dental clinics at District and Tehsil Hospitals and at Rural Health Centres. These services are inadequate to the extent that these do not include oral health services, particularly their prevention. Added to this, there is no organizational structure either at districts, provincial or federal level to plan, execute, coordinate and supervise the dental health services. The Human Resources availability and development for oral health is also not promising one. The seven Dental Colleges produce about 150 graduates a year and there is one qualified dentist for 50,000 population. A paradox to this situation is that while dentist population ratio is highly unfavourable, there is unemployment among the qualified dentists. Dental auxiliaries (Dental Surgery Assistants, Dental Hygienists, Dental Technicians) are scarce commodity in the country. But there are unqualified dental practitioners and their number is estimated to be around 7,000(5).

ALTERNATIVE STRATEGIES FOR ORAL HEALTH

Health planners in almost all countries are confronting the same puzzle how to design, set up, regularly evaluate and readjust services that cover the need and demand under the prevailing cost constraints. Pakistan is not an exception in this regard.

Then, the question is where to start ? The probable answer would be to analyse the need and

demand in the first place and afterwards develop or re-model the oral health system. A powerful tool for this type of analysis has been developed on oral health care systems during the course of international collaborative studies, known as ICS. It includes three sets of information(6):

- (i) Random population sample survey of each key age group for oral diseases: 12 years, 35-44 years, 65 and over. It includes clinical examination for current health status / treatment needs and information on a questionnaire regarding attitudes, behaviour, level of satisfaction and other factors related to demand and services utilization.
- (ii) Survey on a sample of services providers i.e., dentists, dental auxiliaries etc.
- (iii) Assembling of data on structural, macro-economic and sociological issues.

The ICS provides the full description of the current status and gives clear guide-lines for future action.

The ICS studies has shown that oral diseases differ from country to country only in terms of prevalence and severity and not in type. Hence the principles for prevention and curation remain more or less the same. The principal lessons drawn from these studies include(7).

- (i) Oral health does not seem to depend on the type of personnel or on access to care.
- (ii) Care provided in the school settings is very effective in the treatment of childhood diseases, and must be backed up by simultaneous teaching of prevention techniques.
- (iii) The most decisive factors for oral health are linked to the capability of oral health personnel and governments to promote prevention activities.

From these studies and other literature available on comparative approaches to oral health care, it is obvious that a total rethink of oral care possibilities is now in progress. Commonly preventive methods, new techniques of training, new design of equipment, basic sets of instruments - new and modern materials are being combined to bring health promoting oral care to even the poorest community. The W.H.O. envisages Oral Health For All by the end of the century through focussing its programme on following areas (8).

1. Ensuring that essential preventive activities are maintained - so that we don't throw away the gains already made thus allowing the world to suffer another dental caries pandemic.
2. Demonstration of the new techniques for basic, health promoting, economically feasible oral treatment to the public, administrators and oral care personnel.
3. Preparation of learning materials posters, videos, computer - assisted learning packages, manuals, guides to support these changes.
4. Preparation of well designed technology for the new care - basic materials instruments and drugs.
5. Building a support network to assist communities to care for and repair children malined by destructive diseases like noma; at the same time leading a campaign, based on improved nutrition and basic child care, to prevent such illnesses.
6. Bringing about a radical change in education of oral health care professionals.

THE W.H.O.

ESSENTIAL ORAL HEALTH CARE MODEL

Regardless of the level-from local to national-at which an oral health programme operates and despite retaining discrete responsibilities, its organization must be such as to integrate it into the much broader system of total health care. The W.H.O. oral health care model(9) is based on the primary health care concept. There are three levels of care i.e., primary health care, first referral and second / final referral. Activities of three referral levels are complimentary.

Elements of the essential oral health care model as listed by W.H.O. are:

Primary Health Care Level

1. Promotion of oral health through life styles that are conducive to health.
2. Priority for prevention through health protection.
3. Community involvement and leadership, attention to social acceptability and economic feasibility.
4. Integration of oral and general health.
5. Access by all people to primary oral health care.
6. Maximum self-care, promoting self-sufficiency.
7. Regular public interaction through

- (a) Information from the people (examination and survey)
- (b) Information to the people (including quality of life messages and the promotion of health awareness)
8. Minimal Intervention focussed upon surface care
9. Referral as appropriate and feasible.
10. Employment of appropriate personnel and technology.

First referral level

11. General restorative and rehabilitative care.
12. Actions complementary to each of the primary health care level services, as required.

Second referral level

13. Specialized services not feasible at the first referral level.

STRATEGIC PRIORITIES FOR PAKISTAN

The fore-going review have addressed almost all aspects of the oral health system. The lessons learnt may be directed to the basic components of the oral health system of Pakistan.

MANAGEMENT AND ORGANIZATION

A well organized heirarchy of oral health care services with in the larger health system is a pre-requisite for successful implementation of the programme. The committee on health and nutrition for 8th five year plan has recommended for the development of a position of Director Dental Services at Federal and Provincial levels. The first thing about this proposal is that the name of post should be Director Oral Health Services. Secondly, it will be more appropriate to appoint an Assistant District Health Officer, Oral Health Services (ADHO - OHS) at district level, as the ultimate unit for comprehensive care in any area is a district.

The basic function of this organization will be :-

- (i) preparation of policy guide lines on oral health.
- (ii) planning and development of appropriate technologies which suit to the local situation.

*Surface care is taken here to mean non-invasive preventive and / or treatment measures that are applied to the surfaces of oral structures (as opposed to surgical procedures).

- (iii) Development and implementation of Quality Assurance / Oral Health Care Audit Systems.

RESOURCES DEVELOPMENT

The direction given by the committee on health and nutrition is appreciable. The personnel identified are in line with W.H.O. strategy. The strategic priority will be to have more focus on primary health workers and dental auxiliaries. The Committee has also logically recommended the review of curricula aiming at broadening the role of dental professional while strengthening the community dentistry (more appropriately community oral health).

The other strategic direction would be to develop local techniques, simple equipments and low cost materials for the success of the oral health care programme. Based on these principles an approach known as Atraumatic Restorative Technique (ART) has been identified. It has the potential to revolutionize the type of care that can be given in the community. The small caries cavities can be treated using dental hand instruments to scrap out and remove the diseased parts of teeth, and then cavities can be filled with glass ionomer which is also capable of having a preventive effect. For this approach to be successful, it needs to be a part of a community organization that provides both prevention and disease control care (10).

SERVICE DELIVERY

The W.H.O. essential oral health care model can be easily adapted to local situation for public sector.

The second strategic priority would be to identify and provide incentives for private sector as the cost of establishing a dental clinic is beyond the reach of most of the qualified dental graduates.

The priority should be promotion of oral hygiene, healthy life styles, appropriate foods and prevention through prophylaxis, removal of calculas, application of sealants, restoration of single surface caries cavities.

The ultimate goal of all this exercise is that communities should take the responsibility of preventive programmes, dentists should evolve into the role of oral physicians, providing guidance on healthy life styles and hygiene, as a part of maintaining health in general and oral health in parti-

cular. If we succeed in this endeavour then "Oral Health for a Healthy Life should be getting very close to a reality for All" in Pakistan.

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UNITED NATIONS GOALS FOR GLOBAL CHILD HEALTH WITH SPECIAL REFERENCE TO PAKISTAN

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Summary

The social goals established by UNO for Child Health in a world summit held on 30th Sep. 1990 are presented and discussed here with a view to draw up a National programme to achieve them by the year 2000.

Introduction

A World Summit for Children was held in 1990 under U.N.O. which was attended by all member nations, including 71 Presidents/Prime Ministers. New Social goals for children were established in this summit. It was agreed that each nation would adopt the goals according to its own circumstances and would draw up a national action programme to achieve these goals by the year 2000. Pakistan is also heading towards attainment of these goals through social action plan and other programmes.

DEFINITIONS

G.N.P

Gross national product expressed in current US \$. GNP per capital growth rates are average annual growth rates that have been computed by fitting trend lines to the logarithmic values of GNP per capita at constant market prices for each year of the time period.

LIFE EXPECTANCY AT BIRTH

The number of years new born children would live if subject to the mortality risks prevailing for the cross-section of population at the time of their birth.

ADULT LITERACY RATES

Percentage of persons aged 15 and over who can read and write.

Infant Mortality Rate

Number of deaths of infants under one years of age per thousand live births. More specifically this is the probability of dying between birth and exactly one year of age.

Under Five Mortality Rate

Number of deaths of children under 5 years of age per thousand live births. More specifically this is the probability of dying between birth and exactly five years of age.

Low Birth Weight

Infant born with less than 2500 gm of weight.

Under weight

Moderate : below minus 2 standard deviations from median weight for age of reference population.

Severe : Below minus three standard deviations from median weight for age of reference population.

Access of health services

Percentage of population that can reach appropriate local health services by the local means of transport in no more than one hour.

Crude Death Rate

Annual number of deaths per thousand population.

Crude Fertility Rate

Annual number of births per thousand population.

Contraceptive Prevalence

Percentage of married women age 15 to 49 currently using contraception.

Births Attended

Percentage of birth attended by Physician, Nurses, Mid-wives, Trained primary health care workers or Trained traditional birth attendants

Maternal Mortality Rate

Number of deaths of women from pregnancy related causes per thousand live birth.

The following is the list of goals, to be attained by the year 2000, which were adopted by the World Summit for Children.

- A one-third reduction in under-five death rates (or a reduction to below 70 per 1,000 live births - whichever is lower).

- A halving of maternal mortality rates.
- A halving of severe and moderate malnutrition among the world's under-fives.
- Safe water and sanitation for all families.
- Basic education for all children and completion of primary education by at least 80%.
- A halving of the adult illiteracy rate and the achievement of equal educational opportunity for males and females.
- Protection for the many millions of children in especially difficult circumstances and the acceptance and observance, in all countries, of the recently adopted Convention on the Rights of the Child. In particular, the 1990s should see rapidly growing acceptance of the idea of special protection for children in time of war.

**PRESENT POSITION OF PAKISTAN IN RESPECT OF
U. N. GOALS FOR CHILD HEALTH**

I.	Total Population.	124.8	million
II.	G.N.P.	US \$ 400	Per capita. 1991
III.	Life expectancy at birth	59	years
IV.	Total adult literacy rate	35	1990
V.	Mortality		
	i) Infant	95 / 1000	
	ii) Under - 5	137 / 1000	
VI.	%age of infants born with low birth weight	25 %	1990
VII.	%age children suffering from under weight 0 - 4 years.		
	i) Moderate.	40 %	
	ii) Severe.	14 %	
VIII.	%age of population with access to safe water.	56 %	1991
IX.	%age of population with adequate sanitation.	24 %	1991
X.	%age of population with access to health services.	55 %	
XI.	%age of immunized children 1 year old.	DPT 78 %	Polio 78 %
XII.	Pregnant women Tetanus.	48 %	
XIII.	Population Under 16.	57.3 Millions	
	Under 5.	21.7 Millions	
XIV.	Population annual growth rate.	3.2	
XV.	Crude death rate	11	
XVI.	Crude birth rate.	41	
XVII.	Total fertility rate.	6.2	
XVIII.	%age of population Urbanized.	35 %	
XIX.	Contraceptive prevalence.	12 %	
XX.	%age of births attended by trained Health Personnel.	35 %	
XXI.	Maternal Mortality Rate.	05 / 1000	

Discussion

In 1992 under five mortality rate in Pakistan was 137 per thousand live births. To achieve the targeted rate, the mortality rate is to be reduced to 46 per 1000 five births through a multidirectional approach which includes :

- Reduction in the incidence of diarrheal diseases at least by 25 %.
- Baby Friendly Hospital Initiative.
- Exclusive breast feeding for 3 months.
- Proper weaning.
- Discouraging top feeds.
- Health Education.
- Use of ORT for diarrheal diseases atleast in 80% cases.
- Reduction in deaths due to acute respiratory infections, by using proper ARI case management technique.
- Immunization coverage in atleast 90 % of all 1 year old children.

Maternal mortality rate is also to be brought down by 50 % (from present 5 per thousand to 2.5 per thousand live births) by the year 2000. This is to be achieved by :

- Availability of Family Planning Education and service to all eligible couples.
- Access of the expecting mothers to prenatal care.
- A trained attendant during child birth.
- Proper referral facility.
- Recognition of special health and nutritional needs of females during early child-hood, adolescence, pregnancy and lactation.
- Tetanus Immunization during child bearing period.

Serious consideration is to be given to the nutritional status of the children so that in under 5 year population moderate and severe type of malnutrition are reduced by 50% (Brought down to 20 % and 7 % respectively). This is achieved by :-

- Improving the nutritional status of mothers.
- Exclusive breast feeding for first 3 months.
- Elimination of Vit. A and Iodine deficiency.
- Proper monitoring of growth.

Safe water supply and proper sanitation for all families is to be arranged and promoted by health education.

Basic Education for all children is an essential component leading to atleast 80% completion of Primary School Education.

Adult illiteracy rate is to be reduced by 50% and education opportunity is to be made available to all without any gender discretion.

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SOCIAL ACTION PROGRAMME OF PAKISTAN

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During late eighties Pakistan faced crucial imbalances between; "Primary and Tertiary Health Services, Rural and Urban Coverage, Female and Male Access, Private and Public Provisions, Current and Development Expenditure and Quantitative and Qualitative expansions of social services"(1).

Social Action Programme of Pakistan (SAP) is an integrated approach which deals with all the imbalances mentioned above. SAP addresses the areas of basic social services, which are vital for the development of a common citizen in Pakistan.

Pakistan's Social Action Programme started in 1992 as three year SAP Programme, 1992-1995. Now it has been converted into Five Year Social Action Programme, from 1993 to 1998, or rather it is going to be merge in 8th Five Year Plan of Pakistan (1993-1998).

SAP is a response to the grave imbalances. "It identifies three reasons" for the slow moving indicators in the past.

1. Resources allocated to the social sectors have been too low i.e. around 4% of Gross Domestic Products (G.D.P.)
2. Population Growth Rate of 3% over crowds the available social services.
3. There are serious Implementation Constraints/Bottlenecks(2).

Social Action Programme (SAP) will accelerate the pace of social development through three channels.

1. Ensuring adequate financial allocations to the eight areas (stated below)
2. Improving the delivery of services.
3. Removing the implementation constraints by improving institutional arrangements.

SAP STRATEGY

1. Establishment of strategic planning mechanism.
2. Decentralization of administrative and financial powers.
3. Improvement in gender staffing imbalances.
4. Placement of community health workers (female) at village level.
5. Placement of community health workers (male) at village level.
6. Recognition of PHC Service (Primary Health Care Service) and its support through first referral.
7. Provision of family planning services through M.C.H. Centre (Maternal and Child Health Centres), BHUs (Basic Health Units) and RHCs (Rural Health Centres)
8. Strengthening of the management information system(3).

INSTITUTIONAL SET UP

I. Provincial SAP Council

Chief Minister	Chairman
Elected Representatives	Three
Experts	Two
Representation of NGOs (Non Government Organizations)	Two
Nominee of Chief Minister (Vice-Chairman)	One
SAP Co-ordinator	One

Functions of Provincial SAP Council

- (i) To formulate and plan policies for SAP activities.
- (ii) To lay down procedures and form rules for the implementation of SAP.
- (iii) To determine priorities in each sector, based on people's felt needs.

- (iv) To co-ordinate, supervise and monitor all SAP programmes.
- (v) To set up integration which is intersectorial, interagency and linking with NGOs and Private Sector.
- (vi) To mobilize funds from International, National and local Donor Agencies.

II. District SAP Committee (DSCs)

- (a) *District Technical Committee (DTC)* It comprises of :
 District Health Officer : Chairperson
 District Population Welfare Officer : Member
 Medical Superintendent of District Head Quarters Hospital : Member Non-Government Organisation (NGO) : Member
- (b) *Social Action Committee (SAC)* : It is proposed to set up at grass root-level i.e. village or ward level and it includes :
 - Member selected from the Community
 - Members from local NGOs

PRIORITY HEALTH SECTOR AREAS IN THE SAP

1. Expanded Poly - immunization
2. Control of Diarrhoeal diseases.
3. School Health Services.
4. Maternal and Child Health Services (M.C.H.)
Provision of :
 - (a) One MCH Centre each for 10,000 population.
 - (b) Training of 2500 Traditional Birth Attendants (TBAs)
5. Training of Multipurpose Health Workers (MHW)
6. Expansion of Drug addicts Rehabilitation Programme.
7. Mobile Primary Health Care Units (One for each district) (4).

SAP TARGETS FOR HEALTH SECTOR

	1991-92	1994-95
1. Immunization Coverage:		
Children 0 - 1 fully Immunised (million) (Unit cost Rs.250/-)	3.444	4.080
2. Oral rehydration salt (ORS)		
Packets (million) (Unit cost Rs. 2.25)	11.2	18.4

3. Traditional birth attendants (TBAs) (Unit cost Rs. 3,000/-) 8,000 10,250
4. Community health workers (CHWs) (Unit cost Rs. 8,000 (1993-94) per C.H.W.) 3,050 4,050

PRIMARY HEALTH PROGRAMME

1. Number of union council 4,522
2. Number of existing basic health units (BHUs) 4,472
3. Number of existing rural health centres (RHCs) 553
4. New basic health units (BHUs) (Unit cost Rs. 2 million)

1992-93	55
1993-94	66
1994-95	73
5. Upgradation of basic health units (BHUs) (Unit cost Rs. 1 million)

1992-93	583
1993-94	600
1994-95	720
6. Upgradation of rural health centres (RHCs) (Unit cost Rs. 2 million)

1993-94	63
1994-95	73
7. Urban health centres (UHCs) (Unit cost Rs. one million)

1992-93	54
1993-94	210
1994-95	290

Source: Planning Commission Target for Health Sector Annexure IV-2 Govt. of Pakistan(5)

Population Coverage by Family Planning Programmes in Pakistan During 1991-92 to 1994-95

Urban Areas

	1991-92	1992-93	1993-94	1994-95
Total population (Million)	38.04	39.53	41.13	41.94
Population covered (Million)	20.54	23.32	27.14	31.84

Percentage (%)				
Covered	54	59	66	76
<i>Rural Areas</i>				
Total population (Million)	79.16	80.99	82.76	85.36
Population covered (Million)	3.96	20.25	33.93	54.63
Percentage (%)				
Covered	5	25	41	64
<i>Total Urban + Rural</i>				
Total Population (Million)	117.20	120.52	123.80	127.30
Population covered (Million)	24.50	43.57	61.07	86.50
Percentage (%)				
Covered	21	36	49	68

Source: Annexure VII 4 Projections of Planning and Development Division(6)

RECOMMENDATIONS FOR BETTER IMPLEMENTATION OF SAP

- Many of the SAP components could be handled through integrated planning and delivery system, to minimize the wastage of Government resources on vertical programmes.
- SAP's ideology is basically designed to empower the people of Pakistan to manage the programme in an integrated manner. Therefore it is important to adopt the grass-root approach instead of top down one for planning as well as implementation of SAP.
- The concerned government department should work out the methodologies for integrated and multisectorial implementation strategies jointly with education, health, social welfare, women development and local

government departments for delivery of population/family planning, Maternal and Child Health services and training of community based service providers i.e. MHWs and TBAs.

- National mass media can play very important role in motivating and changing the attitude of the people towards the SAP.
- NGOs usually reach the deprived population, they can play an important role in implementing SAP programmes. They must be made complementary partners of SAP activities.

Too many vertical programmes without integration result in wastage of manpower and resources. The programmes should be evaluated to know the impact of the SAP on the quality of Social services and extent of their accessibility by the population at large. Continuous affective monitoring is therefore also required to make the SAP a success.

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