

Narrative Report of Training of Co-ordinators in Health and Development

(For the period of 3 months – 10th July 2002 to 9th October 2002)

Report written by

Ms. Seema Deodhar

Dr. Prasad Johnson

Ms. Meenal Jagtap

Ms. Vaishali Gaikwad

Ms. Ashwini Patil



The Foundation for Research in Community Health

Pune / Mumbai

2003



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27th June 2003

Mr. Pankaj Ballabh
Sustainable Development Coordinator,
Shell, Hazira Gas Pvt. Ltd.,
101- 103, Abhijeet II,
Mithakali Circle,
Ahmedabad - 380006

Dear Mr. Ballabh,

Enclosed herewith please find the Narrative Reports for the periods - 21st October
2002 to 31st December 2002 and 1st January 2003 to 31st March 2003.

Please acknowledge receipt.

Thanking you,

Yours sincerely,

Dr. Nerges Mistry
Joint Director & Trustee

Encl: Two Narrative Reports



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Team members

	Name
1.	Ms. Vasanti Purandare
2.	Dr. Dhananjay Kakade
3.	Mr. Appasaheb Ghadge
4.	Ms. Madhavi Gharmalkar
5.	Ms. Meena Poman
6.	Ms. Prabha Dudhal
7.	Mr. Raju Inamdar
8.	Mr. Santosh Jangam
9.	Mr. Avinash Gurav
10.	Mr. Sachin Gondhali
11.	Mr. Amol Bamishte

Team members associated with the Project

	Name	
1.	Ms. Tripti Prakash	10 th July 2002 to 16 th August 2002
2.	Ms. Neelima Joshi	10 th July 2002 to 10 th August 2002
3.	Mr. Gopal Kamble	10 th July 2002 to 25 th August 2002

INTRODUCTION

BACKGROUND

The Foundation for Research in Community Health (FRCH) established as a public trust in 1975 is recognized by the Dept. of Science and Technology as a national scientific research institution.

In the '70s FRCH undertook a study of the health problems of a rural area in Alibag district of Maharashtra (popularly known as the Mandwa project). In the absence of effective public and private sector health services, FRCH demonstrated that local village women provided with simple existing knowledge and technology could achieve many of the set health and medical targets in a 30,000 population. This was in the late '70s, which the government hoped to achieve by 2000 AD. This demonstrated that for most of the prevalent health problems of our country, remarkably simple, safe, cheap and effective knowledge and technology could be used very effectively and that semi literate village women had the ability to acquire and use this knowledge effectively for control of several common diseases. This also includes National Programmes such as ORT, leprosy, tuberculosis, ARI and even Family Planning. This was due to their strong social commitment, constant availability and accountability to their extended family and friends in the community.

In the past 5 years FRCH has demonstrated in the valley of Parinche in Pune district that village women can undertake a variety of non-medical health as well as medical functions within their village. Within the period of a year they have also proved to be effective teachers and trainers in other districts of Maharashtra on a project supported by the WHO.

During the past two years several organizations and institutions have deputed their women, including trained ANMs for training such as Catholic Health Association of India (CHAI), Kerala Shastra Sahitya Parishad (KSSP), and a rural adivasi development centre in Bihar. A well-defined course for hands on training of such a functionary at our center together with a Distance Education Programme with its training material in Hindi and Marathi is now available. The National Institute of Open Schooling, New Delhi (NIOS) accredited FRCH for preparing and conducting a course for the training of Gram Sakhi (1 year) and Sahyogini(2 years) in the Distance

Education mode for rural health functionaries. Upon successful completion a certificate/diploma will be awarded by the NIOS.

The recently released book by FRCH *Health and Medical Care: A People's Movement* provides in greater detail the implementation of the ICSSR/ICMR Report *Health for all: An Alternative strategy* of 1981 which visualized Health for All in a far wider perspective, encompassing nutrition, employment, education, improved women's status, water, sanitation and environment, as well as the overall approach and strategy to be employed and the cost of such an alternative strategy. It explains how several problems of the existing public and private sectors, training, motivation and accountability to the people can be overcome using an appropriate mix of social, technological and professional inputs at each level.

This would not only be more socially and culturally acceptable to the people but also, empower women functionaries and also provide large-scale employment to women within their own community.

Such a new approach, which is rational and logical, needs to be demonstrated on a larger scale and FRCH would be pleased to help if the necessary support is provided. We feel that this would help to achieve the requirements for most National Health Programmes and especially for Family Planning and Welfare, which requires a highly sensitive approach, provided within the community by their own functionaries. The functioning and accountability of such functionaries at much lower cost, would be more a social and community function with transparency being evident and accountability assured.

EXTENSION AND DISSEMINATION OF A PEOPLE-BASED HEALTH CARE SYSTEM:

FRCH believes that the eventual acceptance of a people-based health care system will materialize only through several demonstrations of its effectiveness at the grassroots level in various parts of the country. However being an organization with limited resources, FRCH cannot undertake such demonstrations on a large scale over long distances without additional financial support. Hence the approach for linking local capacity building with local realities and support structures needs to be considered for achieving a sustainable extension of the Community Health Care System (CHCS). **The**

core strategy envisaged here for dissemination is the creation of a cadre of locally drawn facilitators who will by definition develop and provide functional, administrative and most important social support to local level health functionaries as envisaged in the CHCS upto the 5000 population level. The facilitator should be capable of moulding the system to suit local needs and norms. This will be reflected in training and support, evaluating the program from time to time and ensuring smooth and effective functioning at all levels. The facilitators can serve as important resource persons for extension of this method of training for the State/Panchayats after the termination of this project.

SPECIFIC OBJECTIVES

1. Building local support for a people-based health care system in 3 states.
2. Assessment of the impact and functioning of such a village based Community Health Care System (CHCS).

Selected Area :

FRCH has attempted to replicate its community health care model in different areas to test the feasibility and to make necessary modifications.

The areas selected were:

1. Hazira in Gujarat
2. Phulbani in Orissa
3. Bankura in West Bengal
4. Chandrapur in Maharashtra

Four areas selected represent distinctive features:

- | | | |
|---------------|---|-------------------------------------------------------------------------------------|
| 1. Hazira | – | Highly industrialised, close to a major city |
| 2. Phulbani | – | Tribal, non-industrialised, access problems, poor transport facilities, hilly areas |
| 3. Bankura | – | Political decentralisation has occurred, strong political will. |
| 4. Chandrapur | – | Tribal & non-tribal groups, adopted by industry. |

FRCH will extend its work in Hazira. While in West Bengal, Ex-Health Minister Mr.Partha Dey and his team will be involved in replicating the model, in Phulbani, two NGOs NIPDIT and Agramee (For Background See Annexure 1) have undertaken the responsibility for replicating the people based health care model.

APPROACH

FRCH has trained these facilitators intensively for a 3 month period at Parinche/Pune. This will be followed by continual support for two years by FRCH's extension and training teams with the help of distance education. These facilitators will in turn select and train local functionaries over a year as master-trainers (Gram Sakhi) using the distance education material developed jointly by the FRCH and the NIOS. A certificate will be awarded to the Gram Sakhi by the NIOS after successful completion of the course.

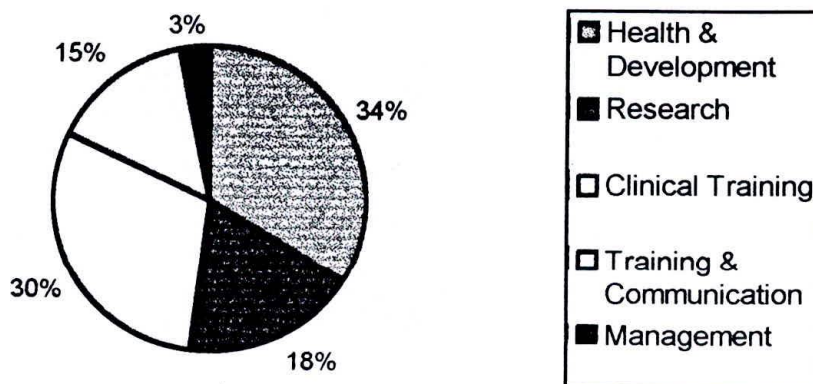
TRAINING PROCESS

The training of facilitators was divided into five major groups:

1. Health and Development
2. Clinical
3. Research
4. Training and Communication
5. Management

The percent(%) of hours utilized in above mentioned groups is as follows :

Topicwise % of Hours of Training



For details of the topic covered (**See Annexure 2 Syllabus**)

The above mentioned subjects were chosen, as the role of facilitators envisaged is :

1. Selection of grassroot level functionaries
2. Training of grassroot level functionaries
3. Liasoning with community and local authorities
4. Monitoring, documentation and evaluation
5. Improving and modifying the training

It was decided to impart training in wide issues as to make coordinators aware of various factors which may affect their work.

The objective of training of the major group :

Health & Development :

- To know different factors affecting health.
- To know relationship between different factors.

Clinical :

- To know symptoms of common illness, general plan of treatment and referral.
- To maintain health information.

Research :

- To create tools relevant to their work, such as needs assessment.
- To assess the impact of their work and make modifications as and when required.

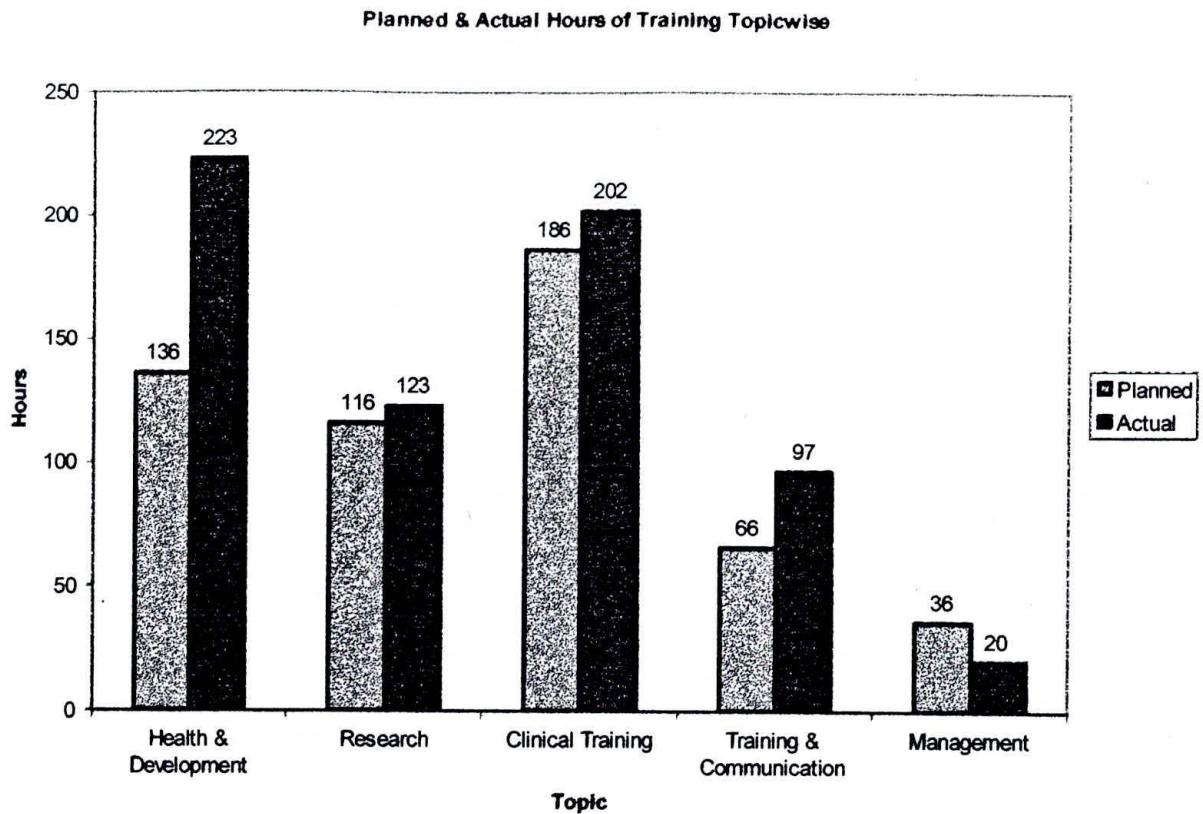
Training & Communication :

- To learn how to impart training.

Management :

- To be able to plan the project work.

The number of hours planned under each major topic and utilized is given below:



A total of 153 hours (19 days) extra were utilized. Hence holidays could not be given to trainees.

The topics, which could not be covered, are:

1. Legal issues relating to gender, land and water
2. Soil testing

Extra hours were utilized for training than planned because :

1. Seven out of eleven had worked in development field; four of them were totally new to the field. Four of the trainees had come from a highly industrialized belt while seven of them were from non-industrialized belt. Thus such heterogeneity in the trainees' background required lot of discussion.
2. Only two of the trainees were aware of women's participation in development process.
3. The group from the tribal area wanted to know more about preserving biodiversity and forest.
4. No trainee had any previous clinical experience or understanding of health issues.

Training Method

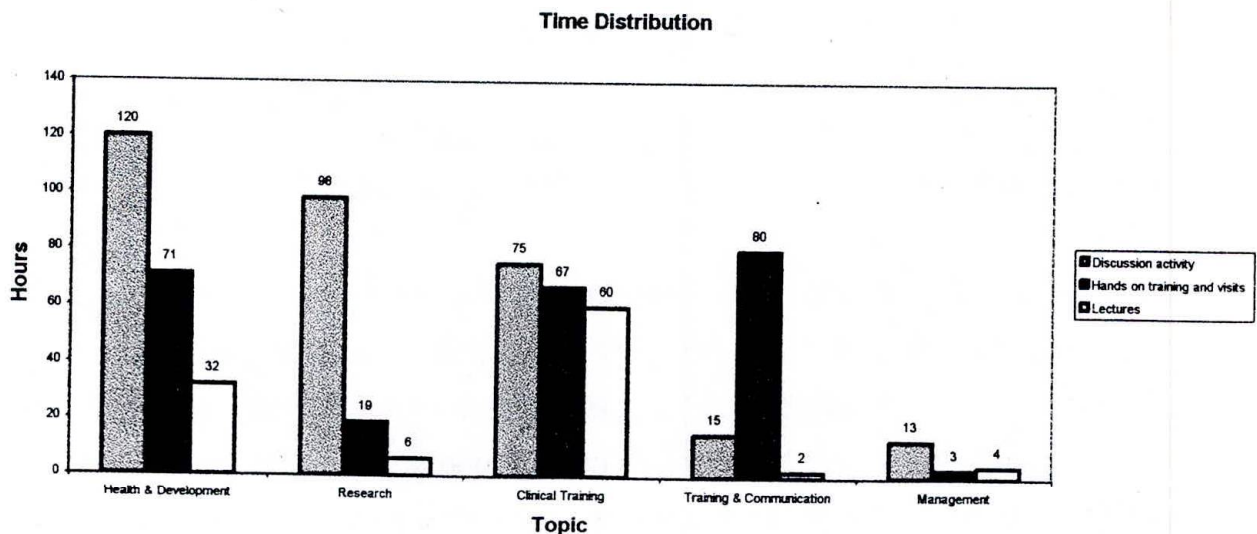
Training method used was integrated and participatory. The different methods used were:

1. Lectures
2. Discussion
3. Activities and hands on training
4. Visits
5. Audio/Visual Aids

1. From the following graph it is clear that lecture method was used only for 104 Hrs. Its very selective use was based on necessity.

Training Method	Total Hours
Discussion activity	321
Hands on training and Visits	240
Lectures	104

For e.g. In clinical training and research, trainees had no previous experience. Thus the lecture method was supplemented with activities or hands on training.



2. External lectures and field visits were arranged. This was done to help the facilitators understand different viewpoints about development. The following list shows the arranged visits and external lectures (**Annexure 3&4**).

3. The trainees were asked to explain or take sessions whenever necessary keeping in mind their experience in particular field.
 - Statistics - Sanjay (Phulbani)
 - Mental Health - Alpa (Gujarat)
 - Development - Digal (Phulbani)
 - Education - Sanjay (Phulbani)
 - Development - Vijay (Chandrapur)

4. Discussion was the prominent method utilized, since nine of the trainees had worked in their respective fields for more than 2 years.

5. Hands on training and activities were used to learn skills as well as provide an opportunity for experimental learning. This then equipped the trainees for discussion.

6. Films were used as a training tool to address certain issues (**Annexure 5**).
For eg. :
 1. Gaon Nahi Kisi Panch Ka, Sanshodhan - Development
 2. Astitva, Daman, Mother India - Gender
 3. Sanshodhan - Health Worker
 4. Neem and Haldi - Herbal Medicine
 5. Lagaan - Management Technique

7. Sharing sessions with FRCH's health workers were planned. These sessions gave the facilitators an idea of ;
 - 1) Scope of the work that could be done by health workers
 - 2) Problems faced by grassroots level functionaries
 - 3) Limitations and the need of support services

8. Trainees were given reading material with different viewpoints so that discussion could stimulate their thought process (**List of reading material – Annexure 6**).

The training process utilized for major heads was as follows (**For details of the training See Annexure 7 Process Documentation**)

Training in Health and Development

Developmental issues were discussed in detail based on the premise that health is not possible without development. A total 223 hrs. were utilized for Health and development.

Sr.No	Date	Topic	Hours
1.	10 July 2002	FRCH Philosophy Film – Chhipe Angare, Chakori	7.30
2.	11 July 2002	Development concept, Film	4
3.	14 July 2002	Globalisation	4
4.	15 July 2002	Visit to Mahur	3
5.	16 July 2002	Economic Development, Film – Gaon Nahin Kinhi Panch Ka & Bhumi Putra	11
6.	17 July 2002	Rural Development , Film – Sanshodhan	10
7.	18 July 2002	Conceptual framework of development	6
8.	19 July 2002	Gender, Development	5
9.	20 July 2002	Environment	2
10.	21 July 2002	Environment, Gender	3.30
11.	22 July 2002	Development, Decentralisation, Globalisation	5.30
12.	24 July 2002	Rural development	10
13.	27 July 2002	Environment, Development, Film – Daman	5.30
14.	29 July 2002	Social, political, development, visit to Veer	8.30
15.	30 July 2002	Film – Astitva	3
16.	31 July 2002	Political development	4.30
17.	1 August 2002	Film – Mother India	3
18.	3 August 2002	Rational drug theory	3
19.	5 August 2002	Rural development – Visit to Satalwadi, visit to Pangare for public information, Film – Lajja	11
20.	7 August 2002	Film – Animal husbandry	3
21.	8 August 2002	Development and environment	11
22.	12 August 2002	Visit to Mandhar	3
23.	19 August 2002	Development – Post test	10
24.	20 August 2002	Development- Attitudinal change presentation	5
25.	26 August 2002	Visit to Satalwadi	3
26.	28 August 2002	Present health system and globalisation	5.30
27.	11 September 2002	Rural technology and development	10
28.	23 September 2002	Nai Talim/Development – Revision	4
29.	24 & 25 September 2002	Feedback, Revision, Activity	22

Sr.No	Date	Topic	Hours
30.	27 September 2002	Development and water, Film – Chandni Bar	9
31.	1 October 2002	Visit to Pabal for Rural development	10
32.	2 October 2002	Development and microplanning	6
33.	3 October 2002	Development and air	6

Training Process

The process of training was participatory. Trainees were provided with reading material, shown films related to development and shared their own experiences in the development field

After this, discussion were held regarding their observations.

This process raised various issues such as :

1. Privatization and the public Sector
2. New technology and rural technology
3. Government and non-government / Anarchy
4. Decentralization and centralization
5. Freedom and equity
6. Choice and compulsion
7. Service and employment
8. Liberalization and total control
9. Development and environmental protection
10. Consumerism and need based use of material

These issues were discussed. Different view points were presented through external lectures and visits. Following this, various community based experiments and movements were discussed. They were analyzed critically. Subsequently, success stories of individuals and community based organizations were discussed. This helped them to develop their own perspective in development as well as strategies to be utilized.

At the end, development and its relation to health was discussed. Trainees were allowed to list down factors affecting health. Thus the emphasis on development for health was brought out clearly.

CLINICAL TRAINING

Clinical training was planned from 7th August to 28th August 2002. However actual clinical training commenced from 22nd August to 15th September 2002. The clinical training was postponed, as gender issues, political systems and poverty related issues were covered during this period. A total of 21 days (186 hours) was planned within which to complete the clinical training. But 23 days (202 hours) were required to complete the designed syllabus **(For details – Annexure 2)**

The facilitators have worked with various issues related to health. One of the facilitators (Ms. Sugatha Panigrahi) had worked with grassroots level health functionaries but her role was limited to organizing camps and training programmes. Another facilitator had worked in a de-addiction centre and as such, her knowledge of health and related issues was narrow **(See Annexure C1 -Biodata of Facilitators)**.

The objectives of imparting clinical training were :

1. To identify commonly occurring illnesses and treat them.
2. To recognize danger signals and make timely and appropriate referrals.
3. To integrate different systems of medicine.
4. To conduct health check ups.
5. To conduct a clinic in a home or village setting.

Process of Clinical Training :

The human body as a whole and its relationship with the mind was explained. Furthermore various factors affecting health were revealed. All systems were explained with the help of models, body mapping and black board illustrations.

While a particular body system was taught, common diseases relating to that system were explained. The signs and symptoms, cause of illness, treatment, advice and when to refer was told.

Simultaneously bi-weekly clinics were conducted in different hamlets **(See Annexure C2)**. A total of 15 clinics were conducted. The objective of conducting such clinics was to give them hands on training vis-à-vis examination and treatment of commonly occurring illnesses. A list of illnesses seen is attached **(See Annexure C3)**

School Health programmes were conducted concurrently with the training. A total of 308 students were examined (**See Annexure C4**). This was done with the objective of refining their skills in general examination and in developing their ability to understand what is normal. Two days were utilized to clear their doubts and answer their queries which was more than planned for (**Annexure C5**).

List of Yogasanas and exercises taught are attached in (**Annexure C5**). List of medicine taught to them are attached in (**Annexure C6**).

TIME TABLE OF CLINICAL TRAINING

TOPIC	HOURS
Introduction	5
Digestive system	5
Respiratory system	21
Pains & Aches	18
Reproductive system	11.5
Orthopaedics	10
Fever	10
Emergencies	4
Skin, Ear & Eye	3
Nutrition	5
Herbal Medicine	5
Mental Health	17.5
Queries	10.5
	125 Hrs (15 days)

TRAINING IN RESEARCH

Though a total of 116 hours were devoted, but 123 hours were required. The objectives of conducting training in research were :

- To develop analytical attitude
- To be able to develop their own tools for study
- To be familiar with quantitative and qualitative methods
- To know the basics of epidemiological research

Process of training :

The training started with the discussion on "What is Science?". Trainees responded as follows:

1. Physics
2. Industries
3. Chemistry
4. Laboratories
5. Biology

A discussion was conducted on the difference between science and technology. The objectives of science were explained. It was also explained that science is not a general or any particular body of knowledge; science is distinct because of its methodology.

Approaches to knowledge : The word science is derived from the latin word "to know". Throughout history, knowledge has been acquired through many ways. The modes which have been used to acquire knowledge are :

1. Authoritarian mode
2. Mystical mode
3. Rationalistic mode
4. Scientific mode

A major distinction among these modes is the way in which importance is given to the source or producer of knowledge (who says?), the procedure by which knowledge is produced (How do you know?). The scientific approach is grounded on a set of fundamental assumptions. These assumptions are unproven and unprovable.

1. Nature is orderly.
2. We can know nature.
3. Knowledge is superior to ignorance.
4. All natural phenomena have natural causes.
5. Nothing is self-evident.
6. Knowledge is derived from the acquisition of experience.

The ultimate goal of social science is to produce an accumulating body of reliable knowledge. Such knowledge would enable us to explain, predict and understand empirical phenomenon that interest us.

The components of science are :

- explanation
- prediction
- understanding

1. Explanation

Scientific explanation: aims to provide general explanation to "Why". For e.g. Why a given event or behaviour has taken place? A systematic and empirical analysis of the factors responsible for the occurrence of the event or behaviour is required. Two basic types of explanation are used:

- Deductive explanation
- Inductive/Probabilistic explanation

2. Prediction

The ability to make correct predictions has been regarded as one of the foremost qualities of science.

3. Understanding

After this, conceptual mapping and process documentation was explained.

Trainees were asked to suggest some of the research questions they would like to investigate.

The research queries, which were listed, are :

- Studying in vernacular medium verses English medium
- The outcome if the fish population has reduced in one particular lake
- How to measure the impact of work of a health functionary
- How they could measure the impact of savings and credit groups
- How to measure the impact of a journal
- How to measure the impact of communication.

From the problems posed, they were asked to divide the main problem into small problems and to

- Write a hypothesis
- List the variables

This gave them the basic concept of "variables, objectives and hypothesis". Then the trainees were taught the importance of "Operational definitions". This was explained with the help of few concepts such as "anger", "power". Every one was asked to describe the above two mentioned terms. It came out very clearly that every one had a different concept. Thus defining of terms or concepts used was very important and was stressed upon.

The difference between qualitative and quantitative methods was told.

For qualitative research; five methods were explained. They were :

- Focus group discussions
- Focus interviews
- Process documentation
- Pile sorting
- Case studies

The validity and reliability of data was explained.

Trainees were asked to perform process documentation of two days training.

They were asked to analyze one Focus group discussion. Whilst one discussion was conducted by them at the community level they played the role of participants in another.

Few exercises were given to classify data both in quantitative and qualitative terms.

Different types of measures were taught:

- Rates
- Ratio

- Proportion

Sampling procedures were discussed.

Test of probability and significance was explained.

Their own projects were discussed in detail. Impact indicators were listed. Base line tools for community and village health functionary was prepared by trainees (**See Annexure R1**).

For details of research training (**See Annexure R2**).

Epidemiology was focussed on for health research. The trainees were taught about the basics of epidemiology.

The formulation of questions for understanding the dynamics of community based disease was taught as an entry point. For example :

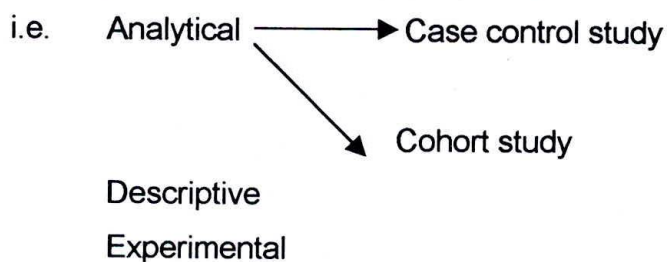
- Who has the disease?
- What has caused the disease?
- Where has it occurred?
- Why has it occurred?
- How has it occurred/spread?
- When has it occurred?

These basic tools were explained with the importance of each one being highlighted.

Following this, other tools like rates, ratios and proportions were explained in detail using examples like infant mortality rate, prevalence rate, incidence rate etc.

Basic principles of sampling were explained.

Types of epidemiological studies were explained in brief.



They were also told about the dynamics of disease causation, i.e. the relationship between agent, host and environment.

Epidemic surveillance as an important research tool was explained. At the same time a practical activity was carried out to investigate an outbreak of Hepatitis in one village.

(See Annexure R3)

TRAINING AND COMMUNICATION

A total of 66 hours were devoted to the above-mentioned component in the syllabus. A total of 97 hours were required. Except for three facilitators, others had experience in training and communication.

The objective of the training were :

1. To know different approaches in health training.
2. To plan and conduct training for their own projects.

Thus it was decided to have a discussion on training methods and different educational experiences. To learn from other grassroot level experiences a two day workshop was arranged. During this workshop five different organizations presented their approach to training in health, scope of health functionaries, impact of training and legal issues related to grassroots health functionaries.

A discussion of different experiments in education conducted by Shri Rabindranath Tagore, Shri Aurobindo, Mahatma Gandhi and Shri J.K. Krishnamurthi was held. The group was interested in Mahatma Gandhi's experiment ("Nai Talim") and the method propagated by Mr. J. Krishnamurthi.

"Nai Talim" as a method propagates life skill education, learning from the surrounding environment and develops a social commitment while J. Krishnamurthi's approach denies discipline of any kind, learning what one is interested. Facilitators felt that they will use a combination of these two approaches.

The participatory approach advocated by FRCH was demonstrated in the following activities followed by discussion :

Children	-	Khelwadi	
Children	-	School Health	
Adults	-	Films	
Adults	-	Notice board	- 1.5 hrs.
Adults	-	Saving and credit group meeting	- 4 hrs.
Adults	-	Organizing community	
		and discussion about problem	- 4 hrs.
Adolescent girls	-	Health education	- 2 hrs.

Different types of communication like - Dialogue, negotiation, counseling, confrontation, ignoring and Satyagraha were discussed.

Later on, a discussion on syllabus, curriculum was held. Trainees were asked to prepare syllabus, which they would be utilizing for training of their own functionaries.

The basics of writing of training modules was taught. Evaluation of training and communication was based on the syllabus proposed and their participation in training. Of the 11 participants, 3 were unable to contribute in any way to the session. Of the three one had language problem since she could not speak in Hindi or English.

MANAGEMENT

A total of 36 hours was devoted to this component of training. Since the trainee co-coordinators had been working in the field as supervisors for at least two years only a total of 20 hours of training was required.

The objective of the training was :

To inculcate planning and training of their own programmes

Thus discussions were held where supportive monitoring was demonstrated.

Topics discussed in this area included :

- Planning their own programmes
- Project proposal writing
- Report writing
- Minute writing
- Supportive monitoring
- Management techniques
- Basics of account keeping

Basic management techniques were explained through a viewing of the film 'Lagaan'. There was no evaluation conducted for this part of the training.

Discussion	10 hrs
Field visit	3 hrs
Lecture	4 hrs.
Film	3 hrs.
Lecture	4 hrs.
Discussion and activity	16 hrs.
Total	40 hrs

EVALUATION

Evaluation of any training programme is necessary. Different evaluation methods described below were used, as the topics required different tools.

1. Health Development -
 - 1) Pre-Post test, Process Documentation,
 - 2) Focus group discussion

2. Clinical Training -
 - 1) Spot checking of skills, multiple choice questions

3. Research -
 - 1) Tools prepared by the trainees for e g, FGD questionnaire, Baseline questionnaire, Code list prepared for disease data, analysis of FGDs, parameters identified.

4. Training & Communication -
 - 1) Syllabus prepared for trainee's health functions.
 - 2) Participation in training

No formal evaluation was done for the section on Management.

A)Development

1. Development of an attitudinal change was reflected in the conceptual mapping, pre-test and post-test.

Sr.No	Development Factors	Pre-Test	Post-Test
1.	Health	Big hospital, expensive medicine, no disease, Health - Doctor, medicine is the only solution to disease, trust only on Allopathy, lab test.	Affordable, accessible and effective medical treatment, believe in our own body- to cure minor illnesses, and consult the doctor only in case of major illnesses ,increasing faith in home remedies, Ayurved and Homeopathy, balanced diet, preventive measures as clean surrounding is also important, adequate nutrition.
2.	Economic Development	Development means only economic development. Multinational companies means development, full time job employment, western lifestyle, High bank balance, industrialization, Modern technology, Information Technology, luxurious lifestyle, travelling abroad, communication	Fulfillment of basic needs, decentralization of technology Swadeshi, not only industries but agriculture also is the way of economic development, globalisation, surplus export.
3.	Social Development		Equal distribution of resources, peace, entertainment, rural development, utilization of manpower, respect to our own culture, reduce in crime rate, use of local resources, de-addiction, sense of belonging.
5.	Education	Higher education, big colleges, schools, multi linguistic	Primary education, priority to education, women's education, education for all, parents meetings, number of school dropouts should reduced.
6.	Gender	No dowry deaths and exploitation of women	Gender equality, participation of women in gram sabha and social activities, self image, education for women.
7.	Environment	Proper utilization of land, forest and labour.	Balance between cash crops and food grains, ecological development, watershed development, development through minimum degradation of environment, environment protection, protection of traditional seeds and technology.

B)Evaluation of Clinical Skills

Evaluation of clinical training was done by

- i) Spot checking of the skills
 - ii) Their ability to conduct physical examination
 - iii) Multiple choice questions were given to evaluate their knowledge.
 - iv) Focus group discussion
- 1) Spot checking of the skills acquired during school health programme revealed that all the trainees were competent in general examination including vision test.

Skills learnt were :

1. Weight measurement
2. Height measurement
3. Vision checkup
4. Counting pulse rate
5. Counting respiratory rate
6. Detection of anaemia
7. Detection of cataract

Skills requiring more practice were identified viz :

1. Measuring blood pressure
2. Haemoglobin estimation
3. Detecting heart sounds
4. Straight leg raising
5. Counting pulse in children

C) Research :

The following tools were prepared by trainees:

1. Baseline Survey
2. Questionnaire for focus group discussion
3. Listing code for diseases

Grades were assigned on the quality of the above mentioned tools prepared by the trainees.

D) Training and Communication :

1. Syllabus for their functionaries was prepared by the trainees. **(See Annexure E1).**

Grades were given for the syllabus prepared.

2. Eight out of eleven candidates were able to take part in the training session on which they were also evaluated.

Following is the performance of the trainees :

Sr. No	Trainees	Health Development		Research	Clinical Training		Training & Communication	
1.	Alpa Joshi (Gujarat)	6	40%	C+	13	43%	4	40%
2.	Manoj Patel (Gujarat)	8	53%	C+	12	40%	4	40%
3.	Niranjana Patel (Gujarat)	5	33%	D	9	30%	3	30%
4.	Shailendra Khalashi (Gujarat)	4	27%	D	12	40%	5	50%
5.	Joyita Sarkar (West Bengal)	7	47%	B+	13	43%	7	70%
6.	Sanchita Sarkar (West Bengal)	5	33%	C+	10	33%	6	60%
7.	Ramashish Mukherjee (West Bengal)	3	20%	C	8	27%	4	40%
8.	Jerimio Digal (Orissa)			D				
9.	Sugatha Panigrahi (Orissa)	6	40%	D	11	37%	5	50%
10.	Pramila Konhar (Orissa)	6	40%	B+	13	43%	4	40%
11.	Sanjay Bhol (Orissa)	6	40%	B	8	27%	5	50%

- 2) For evaluating knowledge, multiple choice questionnaire was prepared. **(See Annexure E2).** Result of multiple choice questionnaire were:

Gujarat :

		%
1.	Alpa Joshi	64
2.	Manoj Patel	59
3.	Niranjan Patel	60
4.	Shailendra Khalasi	51

West Bengal :

		%
1.	Joyita	72
2.	Sanchita	62
3.	Ramashish	59

Orissa :

		%
1.	Sanjay	66
2.	Digal	66
3.	Pramila	59
4.	Sugatha	45

An evaluation of the training programme by Facilitators :

Evaluation of training programme by Facilitators

A) About Content

1. Broad content (Macro view of issues)
2. Wide exposure

B) Method of Training

1. Interactive and co-operative
2. Relationship between trainees and facilitators was warm.
3. Participatory
4. Very practical
5. Group discussions were important
6. Integrated training

7. Changes made in syllabus according to our feedback
8. Use of many examples has helped to learn
9. Various views were taught
10. Working with health workers has helped to learn practical concerns

C) A) Impact of training as perceived by trainees :

1. Self analysis has increased.
2. Learnt that most issues are multidimensional and have learnt to link various issues.
3. Learned the importance of using local resources.
4. Learned to look at problems from various angles and to look for multiple solutions.
5. Learned to work individually and in groups.
6. Learned how to conduct training.
7. Improved communication.
8. Learned about gender equality.
9. Learned to utilize home remedies.
10. Aware of limitations in self.
11. Helped to build our own perspective.
12. Attitude about health has changed, from doctors and medicine to exercise, diet, education, gender and environment.
13. Confidence level has increased.
14. Helped in an accident situation.
15. Preventive measures like quality of water, exercises have become important.
16. Body also has a defence system.

B) Future plans as envisaged by trainees :

1. Work of Mr. Anna Hazare and Mr. Popat Rao will be presented to their community.
2. No consumption of medicines for common minor illnesses.
3. Information learnt will be told to relatives and community members.
4. Preventive measures will be taken along with community involvement.

SUGGESTIONS BY TRAINEES

A) Time Schedule

1. Content of development issues need to be reduced
2. More time to be spent on clinical training
3. More practical field oriented experience
4. Need for annual feedback sessions

B) Sequencing of the syllabus

1. Water purification, veterinary training at the beginning of the syllabus
2. Mental health also at the beginning of the syllabus
3. Project management in the middle of the period
4. Human health at the end of syllabus

C) To be included in next programme

1. Visit to milk dairy
2. Soil testing
3. Community mobilization

ANNEXURE 1

About NIPDIT

National Institute for People's Development Investigation & Training shortly known as NIPDIT, literally means THE OPPRESSED. It is a non-profit making, non-political, non-religious, non-government, Voluntary Organisation working since 1983 in the field of Tribal & Rural development. The head office is located in Phulbani of Kandhamal district. Project offices of different operational districts are located at Block/Gram Panchayat Head quarters of Bolangir, Kalahandi and Keonjhar.

NIPDIT's intervention is towards fulfilling the basic need of THE OPPRESSED. Developing human and material resources among weaker sections, empowering them by creating self-confidence with appropriate leadership qualities is the main mission & vision of NIPDIT. The important tool with NIPDIT is to create awareness among the focal groups for their socio-cultural & economic change.

Programmes by NIPDIT

The major programme areas covered by NIPDIT for integrated development are :

- Forest & Environment
- Community Health
- Gender Development
- Organization Building
- Land & Agriculture
- Entrepreneurship Development
- Lobbying, Advocacy & Networking

AREAS OF COVERAGE

NIPDIT covers 7 Developmental Blocks, 35 Gram Panchayats and 440 villages covering a total population of 1.5 lakhs of Kandhamal, Bolangir, Kalahandi, Keonjhar & Mayourbhanj districts.

TRAINING INFRASTRUCTURE

Four well-equipped training centres are being run by NIPDIT. Three of these are in Kandhamal district with one in the H.Q. another two are at 10 Km. & 50 Km. away from Phulbani whereas one is in Bolangir district which is 100 Km. from district H.Q. The infrastructures serve the requirements of NIPDIT as well as other organizations on request.

PRESENT STAFF POSITION

At present 50 full time young, dynamic, dedicated, qualified and trained professionals are working in different project areas. 200 local animators are also actively involved with NIPDIT in different operational districts; some are part timers and some are working on purely voluntary basis

ABOUT AGRAGAMEE

Aragamee - meaning "marching forward" - is a group of professionals, activists and thinkers working with marginalized and underprivileged communities in the tribal Districts of Orissa, India. Our efforts at initiating a people centred development have combined an issue-based approach with programmes for socio-economic development.

Aragamee works in 10 Blocks in 7 districts of Orissa, mostly in remote areas. Aragamee has received support from the Government of India & Orissa, as also from International agencies, such as GAA, HIOVS, UNDP, UNICEF, WFP, Action Aid, etc.

Aragamee's current Mandate is :

To promote throughout India all aspects of tribal development and in particular to adopt an integrated approach to help the tribal communities in mobilising for self-sustaining development organisations and to build up an institutional base for training of tribal youths as well as young educated professionals.

Aragamee has also taken up action research in several areas of work, which have helped in making effective policy intervention, and ensured attention to and mainstreaming of issues of survival and human rights in the tribal regions. These efforts taken up through participatory techniques have helped establish effective methodologies while also enabling in-depth exploration of the different situations and aspects of the tribal socio-economic situation, and the forces that affect it.

Aragamee's concerted and systematic efforts have had significant impact in addressing some of the fundamental causes of poverty which include debt and bondage, and acute food shortage during the monsoon months. Along with tribal communities, hitherto downtrodden and repressed have also developed the ability and confidence to form successful grassroots organisations for sustainable development action which has caught the attention of state and national governments as also the media. Thus villages with strong people's organisations have been able to make effective use of natural resources to build up buffer stocks in the community grain banks which helps them tide over periods of low food stocks, and also dialogue with the instruments of local governance and administration for effective delivery.

Aragamee's areas of action research have indicated that there is much potential as well as need for improved production, and better natural resource management systems in the tribal regions.

Annexure 2
Syllabus for Co-ordinator

S.NO.	TOPIC
1.	Development Various definitions of development; Components of development; Factors affecting development; Role of State individuals; NGOs in the development, History of development in India, Emerging issues in development
2.	Governance Different Political and Economic Systems; Communism, Capitalism, Socialism, Dictatorial. Panchayat Raj : Historical review, Gandhi's vision of Gram Swarajya Concept, Components, Factors affecting Panchayati Raj, People's role in Panchayati Raj, Concept of decentralization : Political, Economic, Technical
3.	Parameters to assess development Economic, Agriculture, Gender, Political Decentralization, Self Governance, Access to health, education and other amenities, social security.
4.	Infectious diseases; its relation to poverty and
5.	Epidemiology
6.	Quantitative Research Methods Base line Survey
7.	Documentation
8.	Qualitative Research Methods FGD, Focus Group Interview, Pile sorting
9.	Science : What is science, objectivity, scientific thinking and its impact.
10.	Know your body various systems, Minor and common illnesses, Disease classification, why diseases happen, Morbidity patterns, Pattern of morbidity in developed countries and developing countries. Diseases of Poverty, Diseases of affluence.
11.	Common diseases of Digestive system, Respiratory system, Reproductive system, Fevers, Skeleton: Detecting emergencies, treatment, advice, follow up and referral
12.	Telemedicine : Concept, its need, use of computers

S.NO.	TOPIC
13.	Nutrition ; well balanced diet, Malnourishment: detection, measures to be taken, special diets, kitchen diets
14.	Land : Quality of land, Soil testing, Land holdings, Land reforms, Legal issues, Cropping pattern, Multiple crops, Agriculture, Insecticides and pesticides.
15.	Water : Water Purification, Measuring of well, Water testing, Watershed Management
16.	Microplanning
17.	Air : Air pollution, why it occurs? Industrialization, rules and regulation, Green house effect, Forestation etc.
18.	Environment and Health: Protection of environment, culture of protecting environment, Environment laws.
19.	Poverty : various definitions of poverty, Reason for being poor, Approaches used by Govt. to eradicate poverty, equity and equality, different schemes of govt. opportunity loss, vicious cycle of poverty and illness, steps taken in other countries, Gandhi's concept of simple living.
20.	Globalization, Liberalization, Privatization What does it mean; how it will impinge on Health , Education, Agriculture, Natural Resources, Sovereignty of state, subsidy, Patent act etc. and environment.
21.	Health as a development issue : Understanding Health; Various definitions of Health, illness and disease, People's perception of Health, illness and disease, and importance of knowing people's perception. Factors affecting health.
22.	History of Health System in India; Health system of various countries; National Health Policy, Various Health Committees
23.	National Health Problems and Programmes Distribution of Resources, vertical Programmes Centre and State relationship, Role of Panchayat in Health
24.	Grassroots level Projects strengths and weakness, community financing, Role of CHW, Role of community in taking care of their own health. Sustainability.
25.	Participatory learning: Method, Education, its impact, <i>Nai Talim</i> , Concept, Components practice each candidate
26.	Communication skills, Media, Audio-Visual skills, Counselling

S.NO.	TOPIC
27.	Khelwadi, Street play, Role plays, Story telling
28.	Culture and Health
29.	Monitoring, Support and Guidance
30.	Evaluation of different programmes, projects and trainees
31.	Mental health; Factors affecting mental health common mental disorders, classification, detection Stress management, Gender and Mental Health, Domestic violence, counseling
32.	Different systems of medicine: Ayurved, Homeopathy, Yoga, Reiki, Acupressure, Allopathy
33.	Identification of Herbal medicine, Preparation of Herbarium
34.	Planning of their own programmes
35.	Project proposal writing. Funding Agencies and their focus: Govt., private, International
36.	Basics of account keeping, petty cash, audit, budgeting
37.	Human values and relations
38.	Management techniques
39.	Legal aspects related to Health and Development and Gender and use of paramedical workers.
40.	Role of Information, various methods of collecting information, dissemination- why and where, Internet
41.	Religion, spirituality, its impact
42.	Feedback, Evaluation, Examination

ANNEXURE 3

LIST OF VISITS

1. Ralegan Siddhi
2. Sustainable Ecosystem Development at Panshet.
3. Rural Technology at Pabal.
4. Rural Technology at Phaltan
5. Goatry – Phaltan
6. Leprosy Rehabilitation Colony – Mandaki
7. Water Shed Development – Satalwadi.
8. Dairy - Kaldari

ANNEXURE 3

KHELWADI

24/07/02	Pangare
07/08/02	Parinche
08/08/02	Mandhar
14/08/02	Veer
21/08/02	Khengrewadi
28/08/02	Mahur
11/09/02	Hargude

ANNEXURE 3
PUBLIC INFORMATION
VISITS

15/07/02	Mahur
29/07/02	Veer
05/08/02	Pangare
12/08/02	Mandhar
26/08/02	Satalwadi

ANNEXURE 4

EXTERNAL LECTURERS

- 1) Rajiv Sane (M.A. (Sociology), B.E.(Electrical))
 - Member of Option Positive Group
 - Consultant for different labour unions
- 2) Arvind Shetri (MSW)
- 3) Prakash Gole
 - Environmentalist
 - Project in 'Panshet', Pune for development of Forest ecosystem and Water ecosystem.
- 4) Popatrao Pawar (B.A)
 - Ex-Sarpanch of village - Hivare Bazaar (Model Village), Dist.Ahmednagar, Maharashtra.
- 5) Aruna Deshpande (MSc.(Statistics))
 - Biostatistics
- 6) Nagmani Rao (M.S.W)
 - Lecturer in Karve Institute of Social Sciences
- 7) Devrajbhai Chauhan (M.A. Economics)
- 8) Dr.Vishwas Rane (PhD in Pharmacology)
 - Worked with 'Rational Drug Movement'
- 9) Pankaj Saxeria
 - Environmentalist
 - Working with "Kalpavriksha" - an NGO
- 10) Arti Naik (B.Sc in Physiotherapy)
 - Working in 'Yogesh Hospital'
- 11) Gopal Kadam
 - Ex-Sarpanch of Satalwadi (Model Village), Dist. Purandar, Maharashtra

ANNEXURE 5

VIDEO FILMS

Subject : Development

11/07/02	Chhipe Angare, Chakori
16/07/02	Gaon Nahi Kinhi Panch ka Bhumiputra
27/07/02	Daman
30/07/02	Astitva
01/08/02	Mother India
07/08/02	Animal Husbandry
27/09/02	Chandni Bar
05/08/02	Lajja
	Sanshodhan

Subject : Management

04/10/02	Lagaan
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Entertainment

Nayak
Rahul
Raju Chacha
Baby's Day Out
Devdas

ANNEXURE 6

MATERIAL PROVIDED

1.	Centrally sponsored schemes for Rural Development – Devraj Chauhan
2.	Basic Statistical Concepts – Caluin F.Schmid
3.	Yogesh Hospital (Exercise chart)
4.	Examination of urine
5.	Table U-I WEIGHT-HEIGHT AGE TABLES
6.	Introduction to Life Skills for Psychosocial Competence
7.	Mental Health – Dr.Srikala Bharath
8.	Composition of Food (Nutrition)
9.	Promotion of Mental Health in Women
10.	Psychological Interventions in Mental Health problems of Women (NIMHANS)
11.	Sampling
12.	World Bank Funded Health Care – Dr.Vineeta Gupta
13.	Rural Development through People's Mobilization. Case study of Ralegan – Dr.Ramesh Awasthi
14.	Alternative Strategies & India's Development
15.	Health & Development
16.	Health Development – K.V.Narayan
17.	Health & Development – K.V.Narayan
18.	Strategies for Development and People's participation – Medha Patkar
19.	Health & Development (Approaches to the Measurement of Development) – K.V.Narayan
20.	Planning and Development – Madhu Dandawate
21.	A Visit to Ralegan Siddhi (Rural scan. Quarterly.Vol 2.Issue 1)
22.	The cost of Free Trade: The WTO Regime & the Indian Economy – Utsa Patnaik
23.	Globalisation & Health
24.	Neoliberal Finance & Crisis in the Developing World
25.	Globalisation, Information & Labour movement (NCAS Advocacy Internet Issue)
26.	The New Face of Capitalism: Slow Growth, Excess Capital & a mountain of Debt (Monthly Review, April 2002)
27.	Globalisation – Definition
28.	A Human Development Approach to Globalisation (Advocacy Internet Issue # 18)
29.	Consumers, Social Justice & The World Market (Advocacy Internet Issue # 19)
30.	Liberalisation : An Indian Overview
31.	A Meeting of Minds: The Times of India Sept 1, 2000
32.	Crisis & the Capitalist cycle: A Symposium: Edited by A.Rumyantsev

33.	VIKALP (Alternatives) Special Issue – Gender & Transformation
34.	Sahyogini Report (1 st October – 31 st March)
35.	Lay Reporting of Health Information (WHO-1978)
36.	Understanding Human Behaviour – Dr. C.R.Chandrashekhar
37.	Guidelines for Homeopathic Treatment
38.	Module on Epidemiology
39.	Module on Women & Health
40.	Module on Village Development
41.	Module on Anatomy & Physiology
42.	Module on Research
43.	Module on Respiratory System

ANNEXURE 6

TRAINING MATERIAL

Sr.No	Health & Development	Research	Clinical	Management
1.	VIKALP - Alternative Special Issue. Gender and Transformation	What is Science module	Psychological interventions in Mental Health problems in Women	Project proposal writing - write up
2.	Crisis and the capitalist cycle	Statistics Sampling	Understanding Human behaviour	Sahyogini Project Report
3.	A Meeting of minds (An article from The Times of India)	Epidemiology module	Promotion of mental health in women	
4.	Consumers, Social Justice and the World Market (Article from Advocacy Internet Issue)	Basics Statistical concepts and techniques	Mental Health Issues in Women	
5.	A Human Development Approach to Globalisation. (Article from Advocacy Internet Issue)	Tests of significance	Introduction to Life Skills for Psychological Competence (NIMHANS)	
6.	The Great Concern – Globalization		Nutrition	
7.	Monthly Review April 2002		Examination of Urine. Detection and Estimation of Protein in Urine.	
8.	Globalization Information and the Labour Movement (NCAS Advocacy Internet Issue)		Anatomy module	
9.	Globalization and Health (Article from Advocacy Internet Issue)		Physiology module	
10.	The Cost of Free Trade : UTSA PATNAIK The WTO Regime & the Indian Economy (Social Scientists, Vol 27)		List of Exercises	
11.	A Visit to Ralegan Siddhi (Article from Rural Scan - Vol 2, Jan-Mar 2000)			
12.	Health & Development - K.V.Narayan			

Sr.No	Health & Development	Research	Clinical	Management
13.	Alternative Strategies and India's Development			
14.	Rural Development through People's Mobilization. A Case Study of Ralegan Siddhi – Dr.Ramesh Awasthi			
15.	Centrally Sponsored Schemes for Rural Development - Devrajbhai Chauhan			

**ANNEXURE 7
(PROCESS DOCUMENTATION OF THREE MONTHS)-**

Overview of the methodology used

Sr N.	Topic	Communication Method					Strategy							Time plan/Period					Days required
		ML	DL	Neg	Conf	Agr	Class Room teaching	Group Discussion	Brain storming	Play/ Poster method	Practical	Exposure	Audio visual	9.30 am	1.00 pm	LB	2.30 pm	4.30 pm	
1.	Village Environment	✓	✓				*	*			20%	20%							3 days
2.	Occupational practice	✓	✓	✓			*	*			-	20%							2 days
3.	Religious & Cultural Practice	✓	✓	✓	✓		*	*			-	-							3 days
4.	Superstition	✓	✓		✓			*			30%	-	-						2 days
5.	Gender Situation	✓	✓	✓	✓		*	*			30%	-	-						2 days
6.	Community Development		✓		✓		*	*											1 day
7.	Food Intake	✓	✓				*	*			30%	20%							1 day
8.	Sanitation	✓	✓		✓		*	*			-	-							1 day

Sr N.	Topic	Communication Method					Strategy							Time plan/Period					Days required
		ML	DL	Neg	Conf	Agr	Class Room teaching	Group Discussion	Brain storming	Play/ Poster method	Practical	Exposure	Audio visual	9.30 am	1.00 pm	LB	2.30 pm	4.30 pm	
9.	Drinking water	✓	✓					*											1 day
10	Know your body	✓	✓		✓	✓	*	*		*	-	-							10 days
11	Cause & Effect of Minor Illness	✓	✓		✓	✓	*	*											5-7 day:
12	Health Practices Care	✓	✓				*	*			-	-							3 days
13	Vitamins & Minerals Sources / functions	✓	✓				*	*			30%	-							1 day
14	Emergency	✓					*				20%	20%							5 days
15	Identification & utilization of Herbal Medicinal plants	✓	✓					*											3 days

Sr N.	Topic	Communication Method					Strategy							Time plan/Period					Days required	
		ML	DL	Neg	Conf	Agr	Class Room teaching	Group Discussion	Brain storming	Play/ Poster method	Practical	Exposure	Audio visual	9.30 am	1.00 pm	LB	2.30 pm	4.30 pm		
16	Physical Exercise & Yogas	✓					*						100%							3 days
17	Application of Homeopathy Medicine	✓					*						30%							2 days
18	Allopathy Medicine	✓											20%							
19	Utility of Naturopathy	✓	✓				*	*												1 day

- ML – Monologue
- DL – Dialogue
- Neg – Negative
- Conf – Confrontation
- Agr-Agreement

Development

Introducing the Foundation was not the only motive but also provided the perspective of the organization through it. The Foundation constantly learnt during its formative years. The Foundation faced many problems while learning and learnt from these problems. This process is a learning cycle. No institution is dependent on a single person. Many people participate in the growth of any institute. This participation helps in development and growth of the institution.

The Foundation went through various stages of growth. This created a different thought process. Clinical awareness or health is not related to only 'disease', but environment and its related factors, gender etc, are closely related to it and also inter-dependent. Trainees were taught to sing songs. This helped increased concentration in training and make them conscious about prevailing social conditions and to create an atmosphere of openness and being open to suggestion. They were told some rules and regulations to help in discipline and to reduce conflicts. As the training period was of three months, discipline was required during their stay.

The subjects covered in syllabus, were discussed because the trainees were under the impression that they were going to get training from FRCH to become doctors. This was felt necessary to clear any wrong impressions and to introduce the subjects along with the method of training explanation.

Health is not related to just disease, but there are various facets to it. As health is one of the culminating outcomes of development, the trainees were told about development. For this, the example of Punjab and Kerala was given. Despite economic prosperity, terrorism is still a problem in Punjab. Literacy rate is low. Infant mortality rate is high. As against Kerala, there isn't much economic development, but literacy is high, gender equality is present. Infant mortality rate is low. Human development has taken place. The trainees were asked to compare using these examples. They were provided with a perspective that health stays good only if holistic development of humans takes place.

As the trainees were going to work in action research , they were told the method and importance of process documentation.

The training methods adopted and syllabus formed were flexible; therefore the trainees were informed that they could suggest changes.

The trainees were told about participatory training method. They were told that they could make their own choice after introspection and independent thinking.

To make sure they understood what a participatory training method meant, it was explained once again. Participatory training method means discussion and developing a habit of thinking. To be able to differentiate between right and wrong is important.

One trainee enquired, whether FRCH would provide notes of topics taught. This type of training was explained again and the difference between training for co-ordinators and grassroots level functionaries was emphasised. They were encouraged to be able to find information sources and work independently.

The trainees were told that the training method is one that is process-oriented rather than content-oriented. They were told about the Parinche project. While talking about the structure of health services, they were informed about the system adopted by the government vis-à-vis FRCH. To point out that participation of people, especially rural women is important in the process of development, FRCH has endeavoured to empower them. By explaining this motive the relationship between development and gender was clarified.

To know and understand the existing system before creating an alternate, the trainees were asked about the usefulness of public health services in their region. Government schemes are not being developed for the people's needs. e.g., Family planning. Due to India's geographical and cultural differences, the schemes should be developed region-wise, but a single scheme is

implemented for all. Hence the trainees were given a view of designing schemes only after understanding the needs of their area. At the same time extending help is essential only if the people realize the need for it. This helps in successful completion of any programme.

While talking about the Parinche project by FRCH, information was provided on questions such as to how the Tais, Sahayoginis were selected? What was the criteria? How a syllabus was formed while training the tais? In the whole process, the participation of villagers was paramount. The project took shape from their needs.

The trainees were told about the principles on which the Parinche project works. For development of a village a holistic programme is required. People were encouraged to make use of natural resources to aid and hasten development, the Foundation would provide technical support when it was required. By creating awareness in the people about this basic aspect of development the Parinche project took shape. This clarified the concept of development as well. The example of Ralegan Siddhi was also given as the trainees have to do a similar kind of work in their villages. While understanding a project its positive as well as negative aspects should be known.

People in villages should demand for development themselves for continued growth of the village. Upon this a trainee asked, 'how can we take development to the villager, if they are not aware of their needs?' It was further discussed that we should not do favours for anybody, but empower them. It is essential to move towards actual needs from felt needs. To illustrate this an example was given, wherein the government provides medicines for diarrhoea, but does nothing for the root cause of diarrhoea, that is lack of sanitation, a hygienic environment and potable water.

A discussion about attitudes and empowerment approach followed. Examples of the freedom movement, Dalit movement and Narmada Bachao Andolan were given. In these movements, the people brought forth their needs themselves. Similarly during natural calamities people have to be provided service. Which approach to follow for village development has to be decided

according to the circumstances. Example of Buddha was given. To achieve balance under any situation and being able to find a central path is important.

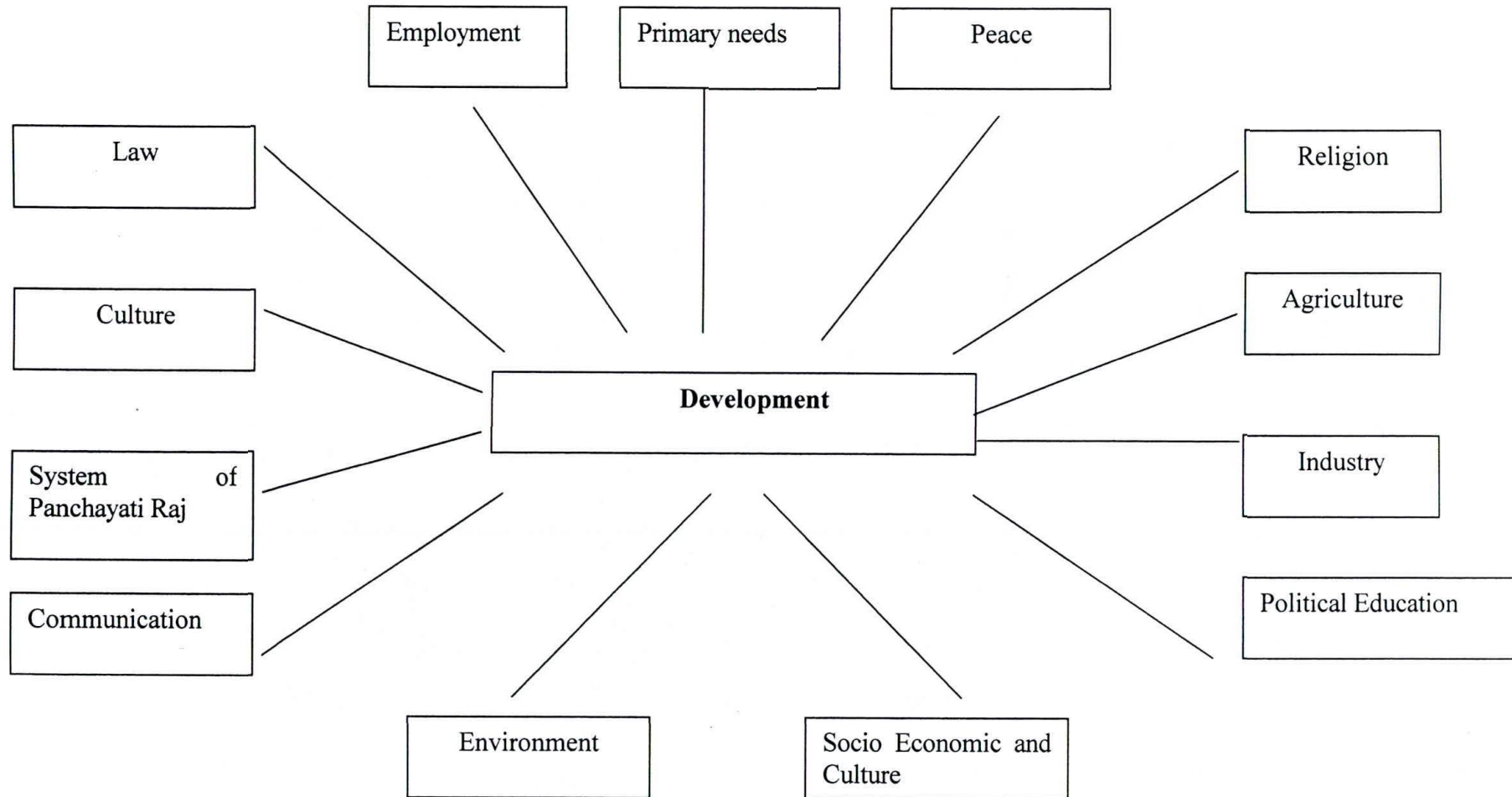
To start the topic of development, we began with the conceptual framework. This helped in identifying the components of development and understanding the relationship between these components.

While doing conceptual framework 3 parts are important.

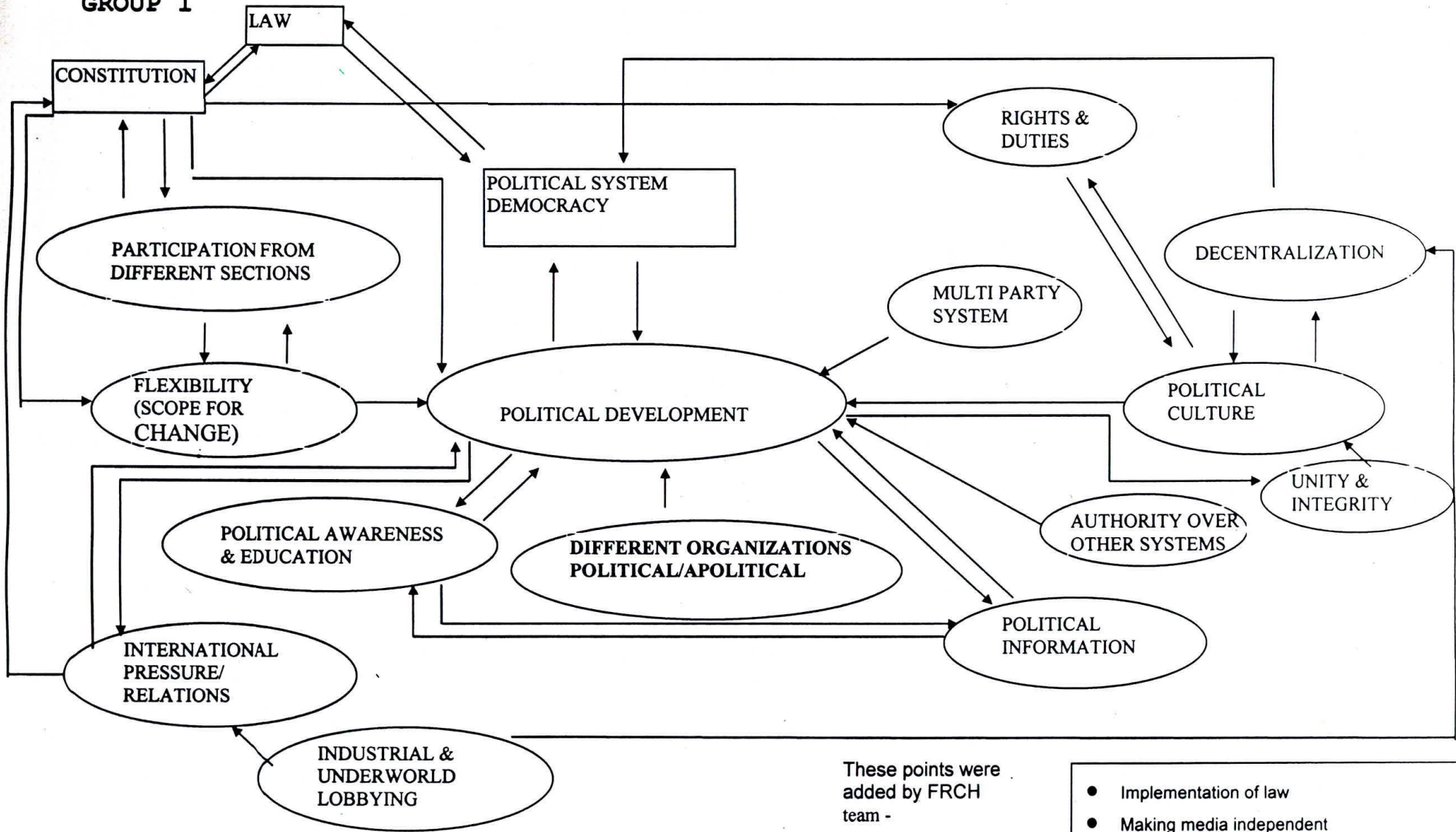
- 1) Facts
- 2) Concept
- 3) Theory.

Nobody understood the definitions of these parts therefore these were explained by simple examples. As an example for fact it was stated, 'Sun rises from East'. Such small and simple facts make a concept, it later creates a theory.

INITIAL CONCEPTUAL FRAMEWORK FOR 'DEVELOPMENT' BY TRAINEES



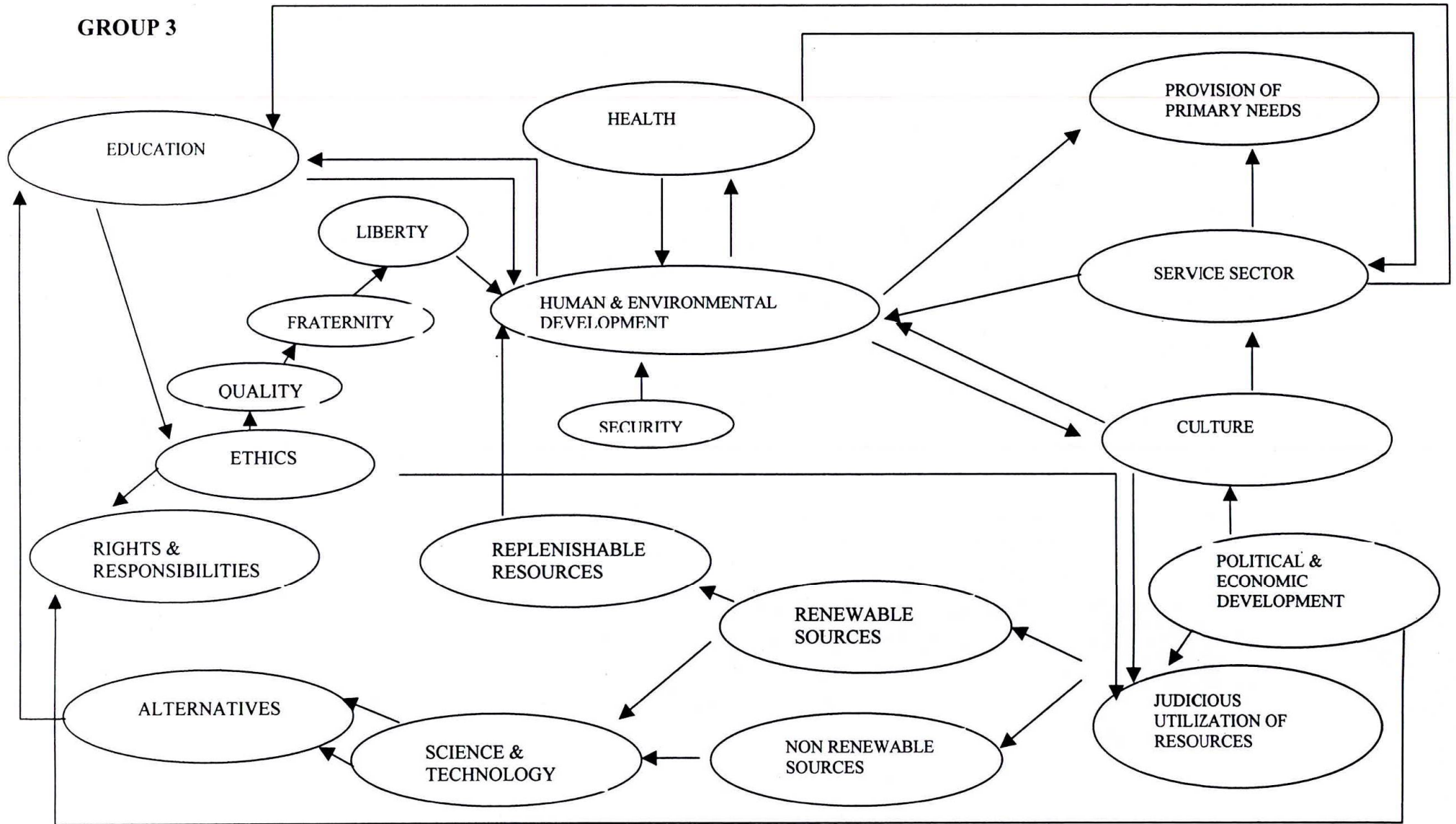
GROUP 1



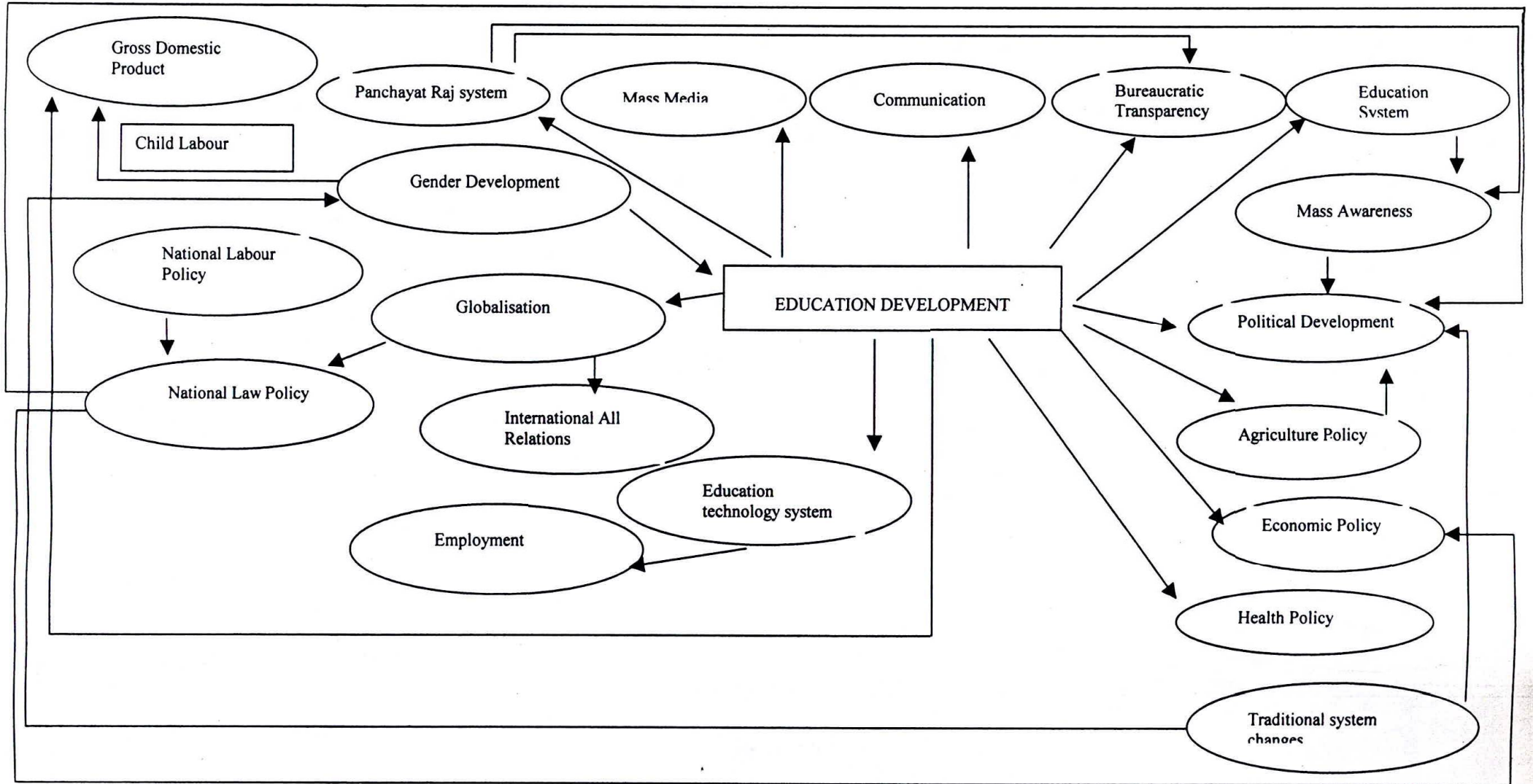
These points were added by FRCH team -

- Implementation of law
- Making media independent
- Seeking political information
- Awareness of Rights and Responsibilities
- Making participation meaningful
- Knowing the agenda of different parties
- The last level of decentralization should be the absence of any party.

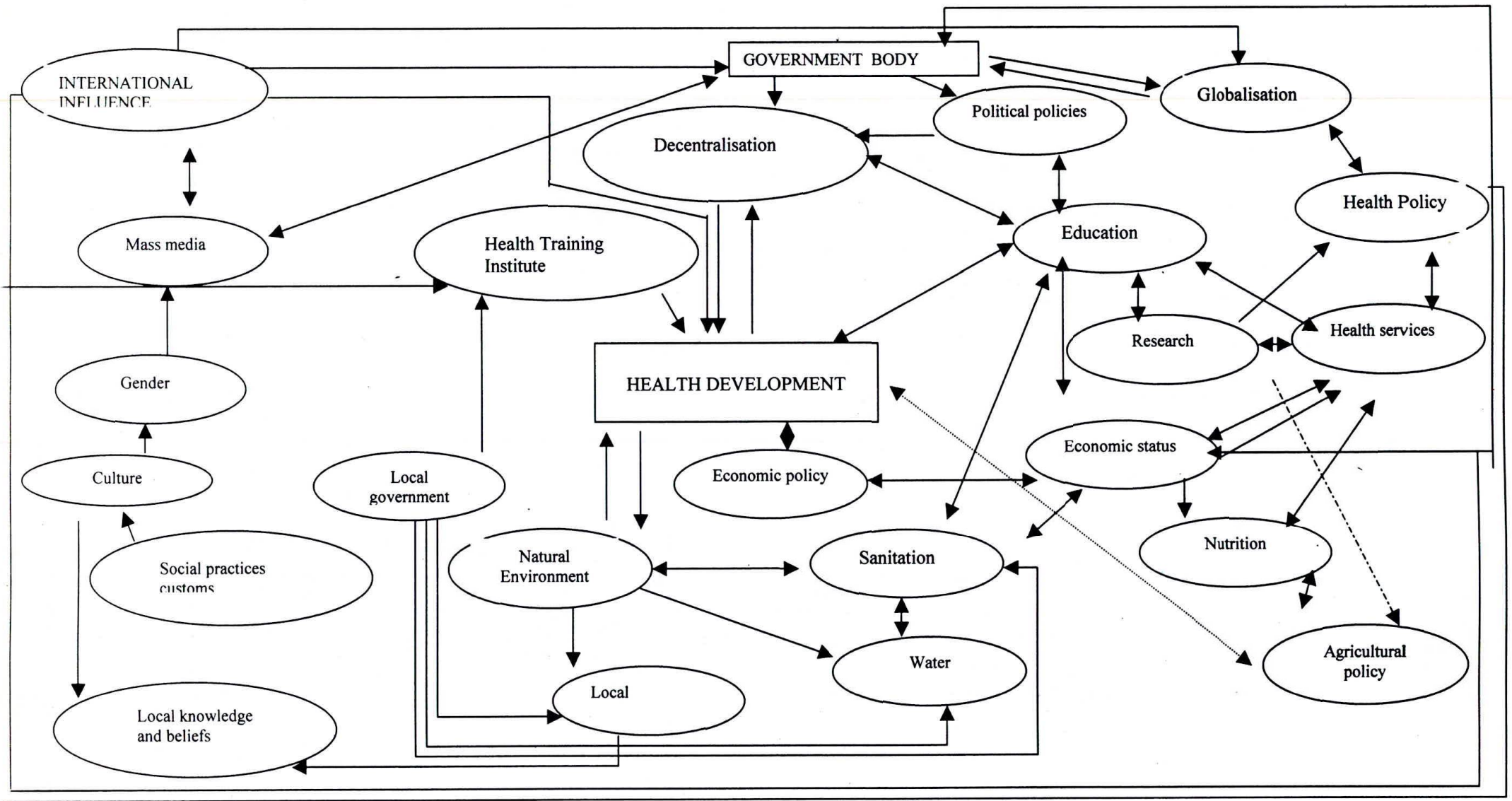
GROUP 3



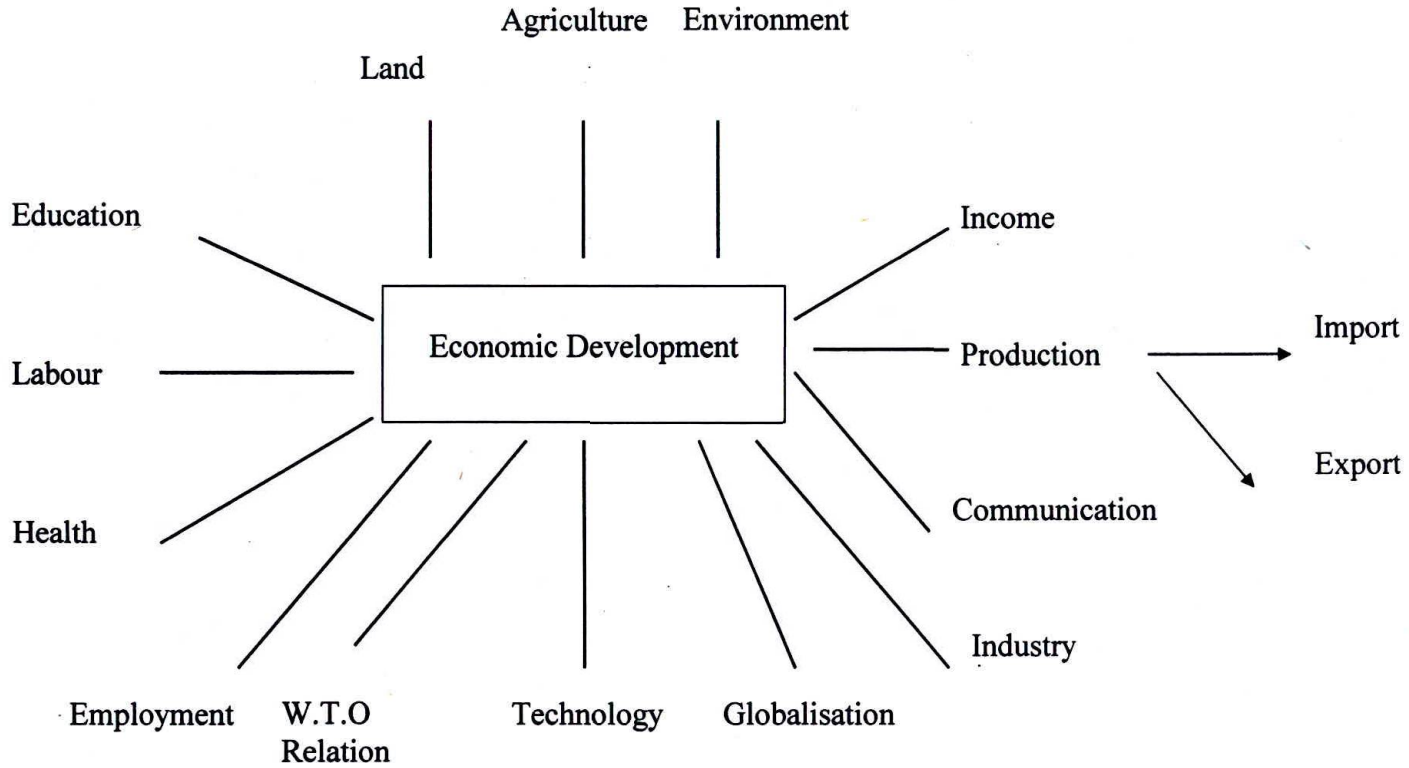
GROUP 1



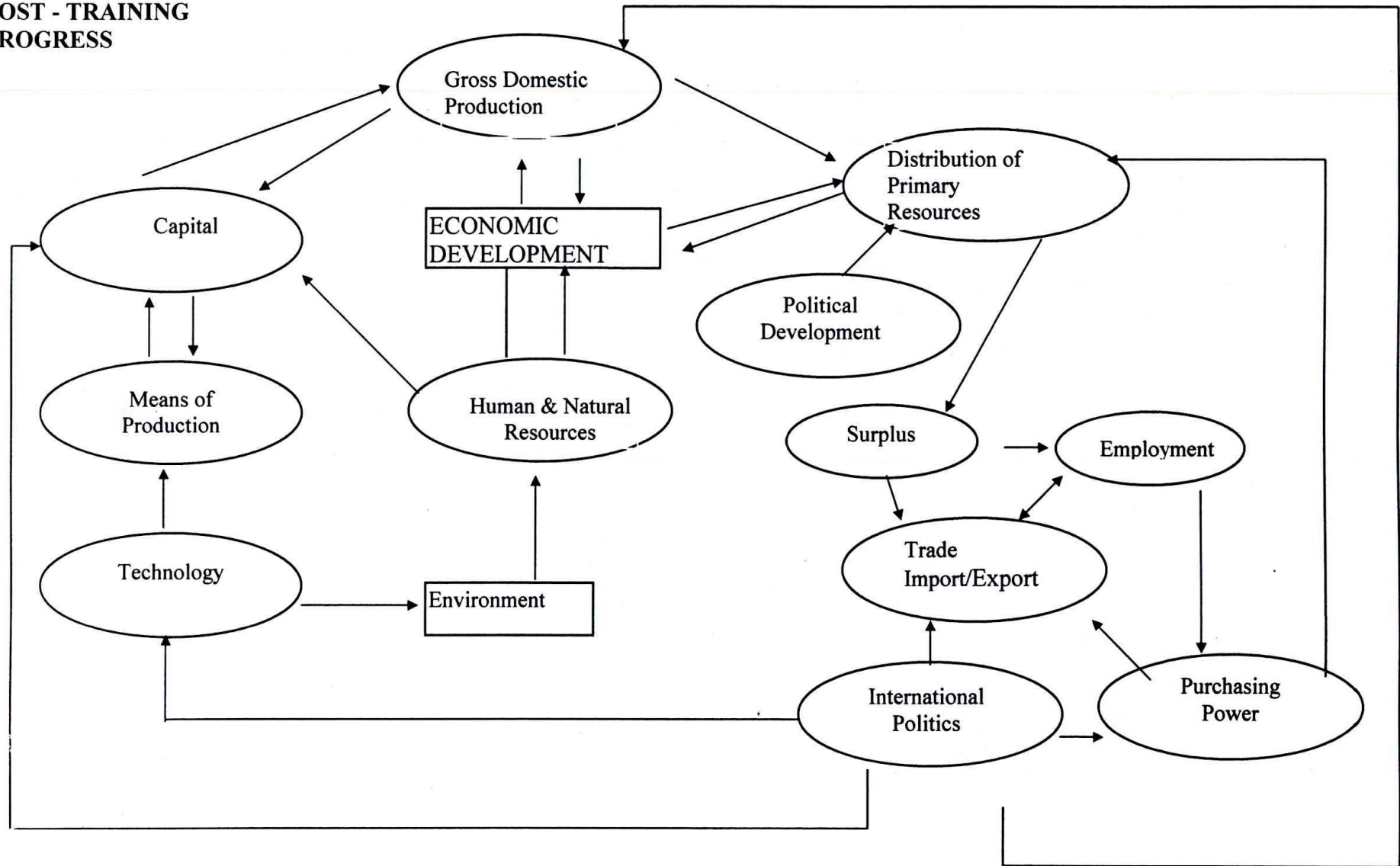
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PRE-TRAINING



**POST - TRAINING
PROGRESS**



Performing conceptual mapping shows that any incident may have various factors, which could be related to each other. This activity was felt necessary as it would enable the trainees to take a holistic approach rather than vertical approach in thinking. To implement this, the trainees were first asked about their concepts on education, health and to do conceptual mapping for them. Afterwards they were divided into 3 groups and asked to do conceptual mapping for power, training. What is a "variable" was also clarified at this time. For training, subject, trainee, teacher are variables. After these discussions, the trainees were asked to make conceptual mapping of development once again. They were also asked to consolidate everyone's efforts and present them on the black board, so that if anyone had missed out anything, they could come to know about it.

Such activities are understood and absorbed well through repetition and this helps increase confidence. The trainees were asked as to why they were asked to perform these activities or exercises, one trainee responded that it would be useful to explain to the funding agency. So it was explained again that conceptual mapping is necessary to for our own satisfaction, curiosity and to boost confidence.

Development is affected by various factors in varying intensities. Example of Parinche project was give for this and story of David Wener was narrated. "There lives a young boy in a village. A rusted nail pierces his foot while working in the field. The little boy dies because it is not possible to take him to a doctor immediately" The trainees were asked as to what they felt about the story. Why did the young boy die?

Medical students or doctor state that the boy died because he was infected by Tetanus. This is one of the causes, but the more important reason is that there is no doctor in the village, there is no transport to take him to a doctor in the city. The boy's father is weak financially, therefore he could not afford to provide a pair of slippers to the young boy, therefore the nail got into the boy's foot, he contracted Tetanus and died.

In this way, there may be ten different reasons contributing to the occurrence of one incident. Development is linked to health. So if the development of the village takes place, then naturally the people's health will be better.

It is important to know how and why development occurred. For this it is essential to have process documentation.

The Godhra riots were discussed and a song was sung related to it. Caste and religious riots have a detrimental effect on development, therefore there should be peace in society. Peace was thus added as a component of development.

Development which started off with conceptual framework. The component 'peace' which was never considered for development was added. It is essential to define development, as definitions of development may vary in each region. Conceptual framework is required to provide direction to the work and to define related components when undertaking such work. For example, in 1960s gender as an issue was not linked to development, but work was done on the issue of caste. Therefore, while assessing its impact, we cannot say work was not done on gender, because during that time the caste issue was at fore-front.

Participants were given this example and were informed about attitude of the researcher by mentioning that it is essential to define the components on which the work is dependent and the components on which there will be an impact.

It was difficult for the participants to understand the concept, therefore they were given the example of Parinche project.

Evaluation is required of any work. It is essential to know the components while going about the proper way in evaluation.

It is essential to know the objectives, definitions, what strategy was followed, and what was the impact, during evaluating.

Participants were told about the process of data collection and analysis. For this, they were asked to collect data from various sources like newspapers, television, radio, magazines, and derive proper conclusions after analysing this data.

After this the participants were given group activity for one hour. Political, economic and environmental advancement are three important factors that contribute to development. The trainees were asked to prepare conceptual framework on these

three components to understand them properly. The idea behind this activity was that the participants should think independently and analyse these components and their confidence should grow.

One member from each group made presentation of the group activity. This gave them exposure. They did this presentation voluntarily; hence it helped in their confidence growth.

Discussions were held on the components presented by the participants. This activity gave direction to their thoughts. It was observed during the presentations that since the participants who presented factors of economic and political development were from the same educational background, it was easier for them to identify the components, but they were unable to establish relationships within the components.

A lecture on globalisation by Mr. Rajiv Sane was held. The participants were impressed. They were told about the difference between lecture method and participatory training method once again. FRCH trainer then talked about the positive outcome of participatory learning method.

Trainees were told at the beginning of the training that they were co-ordinators, therefore it was important for them to know some English words. So that they would not face any difficulty while attending some seminar or meetings. For this, English words were used deliberately in the training.

One should be able to establish relationship between any two incidents. They should be able to work at the Micro and Macro level simultaneously. For example, when talking about gender, it is not enough to have gender equality at community level, the laws of the land have to be changed.

Using conceptual mapping, it was explained that the relationship can be positive as well as negative. Development is not only technology. Technological advancement is necessary, as over a period of time human's needs change. Some needs are luxuries, but over time changes, they become basic necessities for example, electricity. Technology can sometimes be used wrongly, as in atom bombs, fire. Ultra sound is used to determine the health of a foetus, but it is used for gender

determination and if it is a female foetus, it is aborted. Development is not just technology, buildings or industries.

Some needs change over time, for example, pre-historic humans did not need electricity but slowly the need arose.

Discussions were held about development from pre-historic human to contemporary humans. Human development followed means of production.

While discussing economic development, it was pointed out that the results of work performed by women either at home or in the field is not accounted for in the Gross Domestic Product. This is due to the difference of patriarchy.

Participants asked questions on Gross Domestic Product, What is capital?, surplus, globalisation etc. and also on international politics as well as on multinational politics.

While discussing economic development, the impact of globalisation was also touched upon. Globalisation is being forced upon us. Economically strong western countries are earning huge profits by dumping their surplus goods in third world countries. The government as well as the people should know as to, at what level we should accept or reject the multinationals. If we get some new technology, which we can not produce indigenously, then we should accept that multinational for example, drugs for tuberculosis.

If a multinational company buys primary goods from us and sells secondary goods to us, we should be able to recognise their duplicity. For example, international investment in newspapers will lead to more emphasis being given to murder, riots etc. eclipsing the current prevalence of political news. We could use *Swadeshi* goods as an alternative to multinational products. For this the example of Mr. Prakash Gole was given.

Discussions were held on topics such as economic development, globalisation and conceptual framework was done. Mr. Rajiv Sane's lecture was arranged. Due to these activities the trainees started the process of thinking. Due to repeated discussion on some topics, they were able to internalize it. First they became confused and to clear this confusion they started asking questions.

Participants were asked to think independently about globalisation versus economic development. Listening, understanding followed by internalization is important. When giving idea about the whole training, we introduced two persons with different perspectives. The trainees had to listen to both persons, think over it and find a middle path. Each individual had to decide which technology to accept and what to reject after thinking independently.

The ex-sarpanch of Hiwre Bazaar visited the co-ordinators and he told the history of Hiwre Bazaar and how he helped in village development. He has done work similar to Anna Hazare. This shows that even a common man can develop a village. The trainees were provided with a perspective that every work should start off from one's self. No matter how much one is insulted or encounters difficulties, one should not desist from doing the good work. So long as people do not realize their own needs, they should not be given help.

Popatrao Pawar is the ex-sarpanch of Hiwre Bazaar. During the period of 1972-82, the social, economic and political state of affairs decreased in the village due to a famine. People started migrating, level of addiction rose. He made efforts to raise the socio-economic levels. As a young, educated citizen, he put aside his own personal interests. Trainees learnt how to face difficulties, how to work and that with a strong will, even a simple person can work.

Popatrao Pawar undertook village development under the following components :

- 1) Community organisation and motivation – Five-point plan of ideal village was used
- 2) Programmes developed through peoples needs e.g., school, liquor ban
- 3) Economic development – Self help groups
- 4) Environmental development – plantation, watershed, development of water management, fodder, community farming
- 5) Government + NGO schemes implemented for village development e.g., Jawahar Yojana, Swarna Jayanti rural employment scheme, Jeevan Dhara Yojana

While discussing these issues it was realized that the trainees were under the impression that the work being done at Hiwre Bazaar was in isolation. To clear this wrong impression they were given further examples like

- 1) Fatima Bi (Andhra Pradesh)
- 2) Anand Karve (Phaltan)
- 3) Anna Hazare (Ralegan Siddhi)
- 4) Pani Panchayat (Saswad)
- 5) Gomukh (Ratnagiri)

After this the participants were asked as to which works, undertaken by Popatrao Pawar would they like to replicate in their own villages. The common feedback was that they would like to work on the five-point programme of an ideal village, but they felt it would be difficult to motivate the people for *shramadan*.

They were told that to bring people together and to encourage them for *shramadan*, a common point or factors of interest to all, for example in Maharashtra water problems and in Orissa, joint forest management, could be the starting point.

Using this platform, we can convince the people of the needs and involve them. It is important to involve more people for development rather than do more development. Any work becomes sustainable if there is self-interest and group participation.

After this, discussions were held on various approaches to development, their positive and negative components, decentralisation of power, second line leadership etc.

Development become sustainable due to second line leadership. For example, Dalit movement in Maharashtra. Lack of a second line leadership poses hurdles for sustainable development, for example Jai Prakash Narayan – Education.

Trainees were asked to understand the issue and the underlying principles. For this, example of FRCH was given, as people and strategies of the Foundation may change, but principles remain the same.

Even if one topic is studied thoroughly, instead of collecting content on multiple subjects, the thought process is started. Knowledge could be gained from anywhere,

if there is self-motivation. Strategy adopted by FRCH to start the thought process in people was told to the trainees. For example, repeated discussions on various topics. The flow this provided to their thoughts, exposure visits and difference in tals.

One trainee initiated a game about *shramadan*. Two groups were formed. Each group was given an image cut into pieces, and they were asked to generate a meaningful image from these pieces. One of the participants was asked to guide them in the role of a *sarpanch*, after this they were told about the idea behind the game, and discussions were initiated to find what they learnt from this game. From this game, they were made conscious about the difficulties faced in working after involving people at village level, how to solve these difficulties? How to make use of peoples' psychology after understanding it?

Planning is important in every stage of community work. A game was organised to explain it. On a square piece of paper, 10-12 persons were asked to stand. Everyone got in equal, insufficient space. After this the paper was cut into long strips and glued together to form a long strip. After laying down this trip everyone got equal space. It was also inferred from this activity, that proper distribution of available resources results in equal advantage to everyone.

Along with this, moral values were also discussed. It is not necessary that the social moralities prevalent in society should always be right; we should decide what is right and wrong from them.

It is essential to have an open mind, while solving any problem. This facilitates decision making after thinking from different points of view.

The participants were shown a film regarding female reservation in politics, current abuse of the system and what women can do in development, through the panchayati raj system.

The topics discussed during the training were listed, which are as follows:

- 1) Privatisation Vs. Public Sector
- 2) Use of new technology Vs. Development
- 3) Government Vs. Non-Government
- 4) Decentralisation Vs. Centralisation

- 5) Freedom Vs. Equality
- 6) Choice Vs. Compulsion
- 7) Service Vs. Empowerment
- 8) Liberalisation Vs. Total Control
- 9) Development Vs. Environment Protection
- 10) Consumerism Vs. Need based use of materials.

As the means of production changed, it changed the social, economical and political system. It had an impact on cultural values and social patterns as well. Marx' theorem of historical materialisation was given. Financial gains became the primary cause in changing political systems, for example, slavery system, king system, feudalism, capitalism. The trainees were told that these systems are always dynamic, but because we are not aware of it, we are afraid of changing any system.

Some books and novels were suggested for the trainees to read and to study the changes which occurred in the social, political and financial system during the era of feudalism, for example, Devdas, Shrikant. This could be useful for the trainees to establish relations with other systems. They were also told that the novel "Lalita" by Saratchandra, where relation between malaria and feudalism is shown could be treated as an example of process documentation.

For the issue of New Technology Vs. Development, example of Thailand was given. Instead of big dams, smaller dams were built, because of which water problems and problems of displacement did not arise. It is important to keep in mind, which technology to use and where and how to use it.

To address the issue of centralisation, the trainees were told that one should know which things to centralise and which to decentralise, for example, health and education could be decentralised, but defence and foreign relations cannot be decentralised.

Regarding Freedom Vs. Equality, it was told that the Britishers exploited Indians and in this way it seems that they misused their independence.

Example of an earthquake was given to explain Service Vs. Empowerment. For an earthquake, service should be provided, it won't do to employ empowerment approach here.

Same approach can't be used in all matters and no approach is against the other. They complement each other. Trainees were given a view that balance has to be attained between the approaches and to use them according to the need.

One thing was noticed during the training that the trainees themselves were coming forward to discuss the topics which they felt was difficult. They were asking question and making presentation without fear or inhibitions. This showed that the trainees had developed an interest in training and their thinking process had started.

The upper classes and castes exploit the lower class/caste and accumulate their own capital. To understand this a game *Shenganyacha khel* was played. This led to a discussion on globalisation. Globalisation affects individuals and society as well.

The trainees were given a group activity. They were divided into 3 groups and were asked to do conceptual mapping. The subjects were as follows –

- 1) Gender development
- 2) Educational development
- 3) Health development

They were given a time of one and a half hours. One of the groups presented on education development, but because it was not focussed, a presentation was given to give it correct direction.

To gain complete knowledge on any subject; self-study, participatory learning method, discussion, performing activity or practical and analytical reading is essential. Hence the trainees were given reading material for and against globalisation, and they were given 3 options, ie.

- 1) Divide into 3 groups, each group will be given reading material, which they should read and understand and then each group should present.
- 2) The group should read the material and do conceptual mapping.
- 3) Discuss after reading the material in front of everyone.

The trainees selected the last option, due to the fact that, this way English could be translated into Hindi immediately, as not everyone understood English. Usha Patnaik's article *The cost of free trade: the WTO regime and the Indian Economy* was selected, as it was relevant for the participants, but was difficult to understand.

Using this method, it was told to the trainees that analytical reading was also a part of research method.

Globalisation, GATT, rejection of Indian goods, MNC policies were discussed. These topics were related to earlier discussions held in context of development, therefore understanding the concepts became easier, and as the discussions were repeated, it helped in internalization.

Using some examples of organization in Maharashtra and Saurashtra, it was told that technology can be decentralised, for example, a tractor manufactured using simple technology and some other agriculture-related equipment, organic farming etc.

Development is not dependent on factories alone. Israel's example was quoted to point out that development can also be achieved by improving the efficiency of agriculture and related industries undertaking research for these fields.

From the geographical areas of the trainees where they will later work, it was pointed that West Bengal has no industry, whereas in Gujarat, industries are in excess. Trainees from Gujarat talked about the drawbacks of industrialisation, while trainees from West Bengal were glad that industrialisation had not taken place in West Bengal. At the start of the training, they were under the impression that industrialisation means development, but now they came to know a new facet of development.

After this the trainees were asked as to which components would be used if development takes place in their village. Everybody mentioned these components. The viewpoints of trainees about development on the first day of training and showed a vast difference. The answers that they gave later were as –

- Utilisation of local resources

- Unity
- Social and political awareness
- Cottage industry
- Rural technology
- Natural resource management
- Access to community resources and benefit sharing.

Participants had left out primary needs, while creating a concept of development; therefore they were told that without taking care of basic needs, development is incomplete.

As gender is also an important component of development, it was also discussed.

When development takes place in a village, we have to check, whether men and women are treated equally. But such equality is not possible and to know why it is not possible, we have to first understand how a man and a woman are developed by society. Therefore a list of qualities following the same by society was generated. An ideal man and woman are created out of this.

Status of a woman in society is always secondary. They are always deprived of authority and rights. But she has lot of duties to perform. Most important is to ensure piety of a woman's body. They were also told about the history of evolution of family system.

It was observed during the discussion that some of the male trainees did not participate, whereas male participation was high when virtues of an ideal woman were being discussed.

ANNEXURE QUALITATIVE ANALYSIS

Mr. Khalasi Shailendra:

Before : If you want to do development in society you must have development in social, technological and economic sectors.

Politics : plays role in development.

Economic : essential items in every house.

Social : Food grain, electricity, transportation
Education essential for development.

Health : No one should be diseased.

After : I got idea of how development is possible in the areas of politics, economics, environment and health.

In health Tais offer affordable and effective services to society. It has given us new thought.

After watching watershed development projects I was able to understand lot about new development concept.

We got new perspective to look at science, education, environment, culture, entertainment.

How you will use this in your area -

- In my area less people participate

- How many people participate in gram sabha?
 - How many women participate in gram sabha?
 - Whether people from various caste participate or not?
 - What are the questions asked?
 - Whether these questions are answered or not?

- There is always a poor result in school
 - Whether teaching is bad?
 - Whether pupils are casual about school?
 - Are there less examinations?
 - Children concentrate less in class?
 - Whether practicals are less?

- There is less agriculture. Why? What it was 3 years ago is very less now.
 - Is there water scarcity?
 - People are now more in company service? Hence less agriculture.
 - Less rain?
 - Because of arrival of companies employment opportunities increased?
 - No one wants headache of maintaining cows, buffaloes, goats,etc.

- Establishment of Mahila mandals, Yuvak mandals is essential for development of village. People should be made more aware of health, environment. People should learn to communicate with each other. Everybody should be involved in process of production. There should be larger Forum to discuss and solve problem of village.

ANNEXURE
QUALITATIVE ANALYSIS
POST HEALTH DEVELOPMENT

- Niranjan, Sanjay, Pramila, Alpa, Joyita
 - 1) Understood different factors of development and were able to establish relationships among them. (Integrated Approach)

- Manoj
 - 1) Now able to think critically and analytically.

- Alpa
 - 1) Initially there were no questions in mind but now there are lots of questions to think upon.

- Shailendra
 - 1) In Development your own thinking is important.

- Alpa, Manoj
 - 1) Broader framework of development gained through discussion, visits, guests and practicals.

- Joyita
 - 1) We can look at 'Population Explosion' as human resources rather than a problem.

- Pramila
 - 1) For Development of country, there should be change in person, family, village and then state. I will present the works of Anna Hazare and Popatrao Pawar in our Gram Sabha.

- Manoj, Pramila
 - 1) Development should start from village to city/urban area.

- Shailendra, Alpa
Manoj, Joyita, Sanchita, Pramila, Sanjay
1) Change in thought process

- Digal
1) Initially interested in information and notes. Now interested in discussion.

- Sanjay, Sanchita, Joyita, Pramila, Sugatha
1) Believed in our own body to cure minor diseases.
2) Decreased dependence on medicines.

- Joyita, Pramila, Sanjay
1) Proper utilisation of available local resources.

ANNEXURE CLINICAL TRAINING

INTRODUCTION (22 August 2002)

On the first day of training in development and research, various definitions of "Health" and "Illness" other than the World Health Organization's definition was discussed. This was done to enable them to understand "that perceptions and attitude of people guide their behaviour". It was emphasized that they should familiarize themselves with the way people perceive health. To make the issue relevant the following example was given:

- During FRCH's project in Parinche, the community's response to who is healthy varied. For example; *being rich, having a son, having children, being married* etc. constituted health, but the common factor stated by the community was "having respect in the village". This indicates that the community has taken into account emotional stability, good inter personal community relationships as important indicators for health.
- During a project conducted in the Konkan region, women of that area had said "Self respect" was the indicator for health.
- In one study from a highly industrialized area, people considered health as "having a job".
- Some people think "a fat child" is healthy. If a child is malnourished, water retention (oedema) in the body occurs. This makes parents feel that the child is healthy and they do not seek the help of health services.

Thus the way people perceive health guides their behaviour.

To further illustrate this issue, a discussion on "how they look at their own bodies" was conducted. Following were the responses:

- Compact machine
- Machine
- Co-operative society

- Biological machine
- Home for Soul
- Marvel
- Mystery
- 'Kalpa Vriksha' - "like a tree which will grant your wish"

Next it was decided to identify proverbs related to the body. A few such proverbs identified are listed below:

- Body is *Nashwar*
- Cage for soul
- From dust to dust.

The group analyzed all these responses and proverbs and came to the conclusion that our bodies are perceived in the following ways –

- Body as a utilitarian object
- Body as an unknown, mystery which could not be understood.
- Body as a vehicle for the soul
- Body as a part of nature
- Body is mortal
- Body is to be revered

These perceptions about our bodies also guide our behaviour. If we look at it as something, which is dust, we don't take care of our bodies. On the other hand if the body is seen as a mystery we don't attempt to learn about it.

Thus to improve understanding about health awareness, the group concluded that it is important to know the community's perception and plan our health education content on that basis. The consensus was that the approach taken would not be one of direct confrontation but to build on correct perceptions.

Another important issue discussed was "*do we trust our bodies?*" Do we listen to what our bodies are trying to communicate to us? Pain could be one such signal where our bodies are trying to tell us that it requires rest or a change in life style. Another signal could be indigestion.

Participants related some of their experiences where their bodies tell them not to do certain things such as keeping 'fasts' as it leads to gastritis, stress leading to headache etc.

The next issue discussed was that if we trust our bodies, we should bear the responsibility of keeping it healthy. People know that smoking, eating gutkha, eating food rich in fat and leading a sedentary lifestyle can lead to health problems. Still we continue to do the same. Even our relationship to our bodies is hierarchal. "I" is related to our faces or our thoughts. We take care of our faces to make it beautiful but we hardly take care of our other body parts. The entire advertising world is built on this misconception. If we think we are a part of nature then we should have certain life style principles, which are common with other living beings, for example, the smallest unit of life - the cell.

From the most primitive life form, complex life has evolved. If we are a part of nature then like other animal forms, primitive man must have had an instinct for healing herbs. For instance, when cats suffer from indigestion they eat a particular grass to induce vomiting that helps clean their system. It has also been observed by zoologists that elephants and chimpanzees also eat special herbs when they are sick, but due to modernization we have distanced ourselves from nature. Instincts have been subdued. But we still see a reflection of our relationship to nature in certain rituals like offering prayer to "Pimpal", "Neem" and "Tulsi" trees. One of the common practices in Maharashtra is that temples have some land under their control. No tree in this area is allowed to be cut. This area is called "Devrai". This was one way of protecting trees and at the same time giving them the status of being "Divine". Participants responded that in their areas too such practices are observed.

Where do we put man's place in nature? To find the answer, participants were asked to draw a picture of "Man's place in nature".

The following observations were noted from the pictures:

- The group from the industrialized area reflected predominantly pollution.
- The group from Phulbani had drawn trees and hills, which is a representation of their own area.

- One of the participants had placed "Man above the other living being and non- living objects."
- Three of the participants used the utilitarian approach. The picture clearly showed that they had drawn man at the centre with all natural resources directed towards him.
- Two of the participants had shown a symbiotic relationship with nature.

Few of the participants said that the relationship with nature depends on our perspective as to how we see man's arrival on earth.

A majority (80%) believed in evolution. Those remaining felt we had come from another planet. One of the participants felt that man was created by God. A discussion followed which addressed the issue "did life forms exist on other planets". To explain this "*Unique event theory*" was explained. Biologists do not believe that life is possible on other planets i.e. events, which occurred earlier, were co-incidental and it is not possible that those same events would be repeated again. Physicists believe that such events do occur and life could exist, but there is no proof that we have come from another planet.

At present scientists believe that evolution is the answer/choice to show "man's" arrival on earth.

Discussion period	-	3 hrs.
Activity	-	25 minutes

PERSPECTIVE

- We are a part of nature
- Health is our responsibility
- Our bodies are equally important as are our minds.
- All body parts are equally important.
- Trusting in their own bodies.

KNOWLEDGE

- Evolution
- Unique event theory
- Different definitions of health

SKILL

- How to generate qualitative information.
- How to analyse picture drawing.
- Analysis of qualitative information.

DIGESTIVE SYSTEM (22-23 August 2002)

A total of 12 hrs. were spent on teaching.

The objectives of the training were:

- To know the digestive organs;
- To understand the process of digestion;
- Convey common problems related to digestion and their treatment;
- To learn symptoms of diseases related to digestive system;
- To recognize danger signals

Process of training

To assess the knowledge of trainees about digestive system they were asked to draw a picture of the digestive system. Trainees were able to draw/list various organs except salivary glands and pancreas. Discussion of the various organs, their placement and functions was carried out. A correct picture of the digestive system was drawn.

To explain that anatomy of an organ is directly related to its function, various organs, their structure and role was explained. This led to a discussion on different types of tissues and their function. After that the role of digestive system was explained. The process of digestion was explained.

The next day, training started with revision of digestive organs, cells, tissues and process of digestion.

The following diseases with their symptoms, signs, treatment and referral criteria were explained:

1. Diarrhoea and Dysentery
2. Gastritis
3. Piles
4. Stomatitis
5. Ulcer disease
6. Ulcerative colitis
7. Vomiting

8. Worm infestation

For the above-mentioned diseases home remedies and life style changes were also told. Trainees had difficulty in understanding terms like aerobic, anaerobic, by-products and end product.

Total hours	-	12 hrs.
Demonstration/Activity	-	1 hr.
Lecture	-	5 hrs.
Discussion	-	6 hrs.
Teaching Aid	-	Models, Blackboard, paper and pencil.

RESPIRATORY SYSTEM

(24th, 26th, 27th and 29th August 2002)

A total of 26 hrs were devoted to training.

The objectives of the training were:

1. To learn about respiratory organs and their functions.
2. To identify common respiratory illnesses and provide treatment.
3. To recognize danger signals and provide appropriate and timely referral.

Process of training

The participants were asked to draw respiratory system. The participants could not make a satisfactory presentation. Hence respiratory system was drawn on the black board and explained. Composition of air was discussed and respiratory physiology was explained. Following diseases with signs and symptoms and treatment were explained.

1. Allergic rhinitis
2. Common cold
3. Pharyngitis
4. Sinusitis
5. Tonsillitis

This session on diseases and treatment was repeated again.

The next day training started with 'cellular respiration'. This was the difficult part of the training and required repetition. It took three hours to explain cellular respiration.

Chest mapping was carried out. Different types of pain in the chest and their differential diagnosis was explained.

The following diseases with signs and symptoms, criteria for referral and treatment were explained:

1. Acute bronchitis
2. Adenoiditis
3. Bronchiolitis
4. Chronic bronchitis
5. Diphtheria
6. Emphysema
7. Laryngitis

8. Lung cancer
9. Otitis media
10. Pertusis
11. Pneumonia
12. Tuberculosis

Skills imparted

1. Counting respiratory rate
2. Tonsil examination
3. Lymph node examination
4. Observe intercostal indrawing
5. How to install saline drops in nose
6. How to administer steam inhalation at home

The following perspectives were imparted:

1. Role of antibiotics in viral infections.
2. Role of home remedies in common respiratory problem.
3. Inadvertent use of steroids by private practitioners in respiratory illnesses.
4. Use of rational drugs.
5. Tuberculosis is a infectious disease and can be cured.
6. Drug resistance and judicious use of antibiotics.
7. Concept of immunity and its relation to nutrition and mental health.
8. Concept of vaccination, types and schedule.

Total hours	-	26 hrs.
Lecture	-	17 hrs.
Practical and demonstration	-	4 hrs.
Discussion and activity	-	6 hrs.

Difficulties faced

1. Cellular respiration
2. Judicious use of antibiotics
3. Eliciting chest sounds
4. Concept of immunity

PAINS AND ACHES
(30.08.2002 to 01.09.2002)

A total of 18 hours were devoted for training in pains and aches.

The objectives of the training were:

1. To know the role of pain in disease
 2. To know the factors, which have an impact on pain
 3. To view pain positively
 4. Gender and pain
- Participants were encouraged to narrate their own experiences of pain
 - Pain was classified into various types and the significance of type of pain to specific organs was explained.
eg. Hollow organs (intestine, gall bladder) produce Colicky pain.

Classification was -

- Dull throbbing pain
 - Pricking pain
 - Colicky pain
 - Crushing
 - Strangulation
 - Radiating pain
- Criteria for referral was explained and associated factors told when referral should be done.
 - A positive outlook and attitude towards pain in labour was given.
 - Role of gender vis-à-vis pain was discussed.
 - Pain in various body parts/areas was explained
 - Chest
 - Upper and lower limb
 - Shoulder
 - Skills imparted were
 - Straight leg raising test
 - Detecting muscle spasm

The next day training began with revision of skills

- Trainees were asked to examine patients
- Osteoarthritis of knee and being able to diagnose it was explained by eliciting signs

- Cases seen in the hamlet clinics were discussed
- Exercises were taught to strengthen back and neck muscles
- Abdominal pain was taught

Trainees were unable to relate site of pain to organ placement (in the abdomen).

To make the participants understand this, an exercise was carried out.

- Body mapping of abdominal organs was performed.

This helped the trainees to relate site of pain to underlying organs.

- The next day, training began with trainees narrating experiences of pain. This highlighted that threshold of pain for different individuals vary. Thus defining the type of pain was difficult.
- Asking where the pain was located, type of pain, radiation of the pain and associated factors if present were to be elicited. Not attaching too much significance or relying on patients perception of pain was emphasized.

Total hours	-	18 + 3 = 21 Hrs
Practical and hands on training	-	7 Hrs
Lecture	-	10 Hrs
Discussion and Activity	-	5 Hrs

REPRODUCTIVE SYSTEM (2-3 September 2002)

The objectives of the training were:

- To recognise and treat antenatal problems
- Use integrated systems of medicine
- Recognition of danger signals with appropriate referral

- Anatomy and physiology of the reproductive tract was taught.
- Teaching aids used were pictures and models.
- Function of each part was explained.
- Menstrual cycle was explained in detail.
 - Hormonal changes
 - Changes in ovaries
 - Changes in uterus
 - Changes in behaviour
 - Social/cultural views on menstruation
 - Historical views on menstruation
eg. strength, fear, sprinkling of menstrual blood in fields before planting new crops, etc

- Viewing the menstrual cycle in the larger dimension incorporating physical, mental, cultural and social factors was taught and discussed in detail.
- Diseases and abnormalities in the reproductive tract was taught in detail.
 - Menstrual irregularities
 - Menstrual problems such as pain during periods, heavy menstrual flow, mood changes preceding menstruation was discussed.
 - Fibroids
 - Pelvic inflammatory disease, its causes and signs and symptoms.
 - Cancer of cervix was discussed.

- Danger symptoms and signs were told.
- Physiologic changes in pregnancy were taught.
- Body changes in each stage of pregnancy were discussed in detail.
- Diagnosis of pregnancy was taught by using only signs and symptoms.
- Stages of foetal development were explained.
- How to determine stage of pregnancy was told.
- How to calculate Expected Date of Delivery (EDD) was explained.

- Dietary practices to be adopted in pregnancy was explained.
- Other interventions like tetanus injection, iron and folic acid supplementation were told.
- What is needed to conduct a safe delivery using WHO prescribed standards and other culturally acceptable practices were taught.
- Exercises : Lamaze during pregnancy
Kegel's during and after pregnancy was explained.
- Danger signs and symptoms in each stage (trimester) of pregnancy were explained in detail.

FEVER

(6-7 September 2002)

Total days devoted to training - 2

The objectives of the training were:

1. To identify common fevers and treat
 2. Identify danger signals and make appropriate referral
 3. To use integrated systems of medicine to treat fever
-
- Body as a whole was dealt with
 - Various temperature regulating mechanisms were explained
 - Conduction
 - Convection
 - Radiation
 - Role of each body part and its effect in controlling body temperature was explained
 - Hypothalamus in the brain
 - Blood
 - Skin
 - Why fever occurs, physiology was explained
 - Concept of threshold was explained.
 - Fever was classified as;
 - mild - upto 100⁰ F
 - moderate - 101 - 103⁰ F
 - High - 103⁰ F
 - Diseases with signs and symptoms were explained
 - Hepatitis
 - Typhoid
 - Rheumatic fever
 - Malaria
 - Chicken pox
 - Tuberculosis
 - Puerperal sepsis
 - Urinary tract infection
 - Measles
 - Wounds
 - Pneumonia
 - Meningitis
 - Influenza
 - Pelvic inflammatory disease
 - Bacillary dysentery

- Danger signals with fever was explained in detail.
Role play was conducted for the above mentioned diseases. The trainees participated in this. This enabled the trainer to ascertain as to how much they were able to understand.
- Also it was emphasized that one symptom could be a pointer of multiple system disorders ie, it could be a part of more than one system.
- Discussing diseases causing fevers separately also led to a repetition of these conditions.
e.g. Pneumonia in respiratory system
Pneumonia in fever.

ORTHOPAEDIC TRAINING (8-9 September 2002)

The objectives of the training were:

1. Relation of strain to pains and aches.
2. Relation of exercises to maintaining flexibility, and movement of joints
3. How to recognize fractures and provide first aid in fractures and immobilization if required?
4. Alternatives to plaster immobilization.
5. When, how and why to refer an orthopaedic patient.
6. Management of orthopaedic patients.

Pains and aches relating to following body parts were discussed.

Skills imparted :

▪ Pains and aches

A) Backache

- SLR examination
- Palpation of spine
- How to recognise Neurodeficit? and thereby understand its severity.
- Exercises

B) Neck pain

- How to recognise muscle spasm? Various pressure points to elicit that.
- Exercises

C) Knee pain

- How to recognise instability .
- Various painful conditions associated with knee pain – osteoarthritis; contusion; swelling.
- Exercises

▪ Trauma

- Fractures of following parts:
 - Wrist – colles fractures
 - Forearm – green stick fracture
 - Hip

- Leg
- Vertebra – compression fractures
- Shoulder

These were discussed with emphasis on first-aid; principles of supports; do's and don'ts of immobilisation; alternatives to plaster material in Orissa, Bengal and Gujarat; how to immobilise the extremity or the part attached.

Training Process:

Trainees participated in this. They had a broad idea of minor and major fractures. They understood the objectives and principles of immobilisation. All immobilisation techniques were demonstrated to trainees and they were asked to practice immobilisation techniques on each other.

Regarding musculoskeletal system, they were given charts of neck, back and shoulder exercises.

MEDICAL EMERGENCIES (13 September 2002)

Total - 4 Hrs

The objectives of the training were:

- To identify signs of life threatening emergencies
- To make timely and appropriate referral

The emergencies fall into three categories :

- Problems of breathing
- Problems of shock and unconsciousness
- Problems of poisoning and snakebite

BREATHING PROBLEMS

- Choking on food or other foreign bodies
- Absence or decrease in respiratory effort
- Cyanosis

SHOCK AND UNCONSCIOUSNESS

- Anxiety and restlessness
 - Cold and clammy skin
 - Pallor
 - Rapid and weak pulse
 - Rapid and shallow breathing
 - Decrease in urine output
 - Large dark patches on skin
 - Wheezing
 - Decreased consciousness
 - Dilated, pinpoint or unequal sized pupils with abnormal reactions of pupils to light
- Unequal pupils: damage to opposite side of brain
pinpoint : poisoning and insecticides
does not react to light : severe damage to brain
neck stiffness
tone of skin vis-à-vis dehydration
- Did the patient start choking while he/she was eating?
 - Did the child have any throat infection (Diphtheria, Croup)?

- Was the patient found in a closed room with fire?
- Was s/he close to an electric wire?
- Did the patient suffer injury to neck or head?
- Was the patient taking any drugs?
- Was the patient found close to water?
- Are fontanelles depressed?
- Any history of convulsions?

BITES

- Blue and black skin and severe pain
- Drooping eyelids and slurred speech
- Bleeding from gums and mouth, urine, skin (snake bite)

BURNS

Burns around mouth.

INSECTICIDES / PESTICIDES

History of sweating and drooling

These poisons affect the nerves, sweat glands and salivary glands. Slow and Shallow breathing, unusual odour on patient's breath.

- Enquire if possible how long patient has been in coma ?

1. Has the patient been vomiting
2. Suffering from diarrhoea
3. How did patient get burned?
4. Did the patient receive any injection?
5. Has patient been sick during the past 1 week?
6. Any chronic disease
7. Drinking alcohol
8. Gradual or sudden unconsciousness

EXAMINATION:

1. Patient's respiration (type and rate)
2. Pulse rate
3. Blood pressure

4. Temperature
5. Colour of the skin
6. State of consciousness
7. Pupillary reaction
8. Alert: Time and place, event
9. Confused: responds to hearing his/her name important in head injuries
10. Responds after shaking: low level
11. Responds to pain - very low level of consciousness
12. Cannot be aroused: deep coma

SHOCK

Following listed points to be looked into.

- Bleeding as evidenced from external body appearance, respiration, pulse.
- Low blood pressure
- Burns
- Loss of body fluids
- Infections
- Heart attack
- Allergic reactions
- Injury – internal bleeding
- Diarrhoea, vomiting, weak dizzy, anxious, fear of death.
- Thirsty, blurred vision, cannot breath, itching, fever

The process of training:

Danger signals were explained. First Aid was shown for snakebite, electric shock, drowning and for fractures.

MISCELLANEOUS PROBLEM
(13 September 2002)

Information on following diseases was given:

Skin

1. Abscess
2. Allergic reaction (Urticaria)
3. Cracked heels
4. Fungal infection
5. Guinea worm
6. Herpes Zoster
7. Leprosy
8. Leucoderma
9. Lice
10. Pimples
11. Psoriasis
12. Rash
13. Scabies
14. Thorn prick
15. Ulcer
16. Wound

Eye

Conjunctivitis
Glaucoma
Refractive errors
Trachoma

Ear

Pain in ear
Discharge from ear

NUTRITION
(19 September 2002)

Total Days devoted to training - 3

The objectives of the training were:

- Principles of a balanced diet
 - To know various deficiency diseases
 - Emphasis on special diets
-
- What is nutrition was explained.
 - Concept of balanced diet was explained and demonstrated by taking into account percentages of different food groups.
 - Different diet plans for pregnant and lactating mothers was given.
 - An exercise was carried out to demonstrate caloric value of one day's food intake.
- It was seen that one meal catered to the whole days need of energy requirements. Hence overeating was touched upon.
- Different food groups
 - Carbohydrates
 - Proteins
 - Fats
 - Vitamins and mineral salts
 - Water

These were taught by explaining caloric value per 100gm and its sources.

Function of each food group with resultant deficiency symptoms and signs was explained.

- Importance of balanced diet, certain nutrient supplementation in pregnancy was emphasized. Dietary restrictions and taboos during pregnancy were dealt with.
- Dietary practices during pregnancy as a subject for formulating a questionnaire was carried out.
- Malnutrition was explained under the following heads:
 - Causes and reasons
 - Symptoms and signs of Kwashiorkor and Marasmus with reason behind

each symptom and sign

- Interventional measures to be taken using government resources, home diets that incorporate locally available, cost effective, culturally acceptable food sources was emphasized upon.

How to diagnose malnutrition by signs and symptoms and mid arm circumference was told.

- Nutritional anaemia was explained
Role of micro-nutrients like vitamin C was taught.
- Goitre was told and its effects were described.
- Vitamin A deficiency was explained and sources of food rich in Vitamin A conveyed.
- Vitamin B deficiency was explained and sources of food rich in Vitamin B conveyed.
- Vitamin C deficiency was explained and sources of food rich in Vitamin C conveyed.
- Vitamin D deficiency was explained and sources of food rich in Vitamin D conveyed.
- Vitamin E deficiency was explained and sources of food rich in Vitamin E conveyed.
- Vitamin K deficiency was explained and sources of food rich in Vitamin K conveyed.

MENTAL HEALTH
(20.09.2002 to 23.09.2002)

A total of 23 hours were utilized to teach mental health. It was clarified at the outset, that the session will focus on mental health issues.

The objective of the training were :

- to establish a relationship between mind and body.
- to provide skills to recognize abnormal from normal.

The session started with an activity.

Participants were asked to close their eyes for two minutes and narrate the thoughts, which occurred within this stipulated time.

Answers that followed as told by participants are listed below:

1. Memory of mother
2. Durga Puja
3. Journey back to hometown
4. Upcoming examinations
5. Memories associated with friends or village
6. Children's exam

This list was analysed by the participants and conclusions drawn. This exercise showed that we think of either the past or the future. It is very difficult to focus on the present. This leads to conflict and subsequently stress, as the past cannot be changed and for the future, corrective actions cannot be taken.

The discussion that followed was on future plans and this led to the important issue "What is the purpose of life?"

Every participant was asked to share their view on purpose of life. A list was prepared which is listed below:

1. Foot prints should be there after death
2. People should remember us
3. To take care of family
4. To complete job responsibilities
5. For self-development
6. For social cause

7. For social development
8. For self-satisfaction
9. For attaining happiness
10. For attaining peace
11. No purpose

This list was discussed again. An important issue that came up was that all of us want people to remember us after our death, or why people want to work for the community or society.

Few of the participants felt that it is due to our egos. One of the participants said: 'when one identifies oneself it is with caste and religion.'

Everyone introduced themselves. A few of the participants introduced themselves with their degrees, caste or telling about family and relatives in high post.

This led to the discussion "Was this really our identity?" How does one describe oneself? Following this, Id, ego and super ego were discussed. Factors affecting ego and super ego were discussed.

It was realized that emotions are a major part of our reactions. And this is directly linked to our ego.

A list of emotions are listed below -

1. Anger
2. Peace
3. Jealousy
4. Sorrow
5. Joy
6. Disgust
7. Mercy
8. Pride
9. Cruelty
10. Love
11. Infatuation
12. Greed

13. Aggression
14. Hate
15. Sympathy
16. Sadness
17. Remorse
18. Fear
19. Irritation
20. Regret

One primitive emotion identified was fear, as babies also have fear. As the child grows, from fear arises greed and jealousy.

Thus it was decided to discuss more about fear. Everybody narrated their experiences of fear.

Fear of animals, drowning, death, rape, ghosts, God, elders, death of near ones, breaking self image was discussed.

Factors affecting fear were discussed. Gender issues were also discussed.

Following this fear of the "unknown" and self-image was discussed.

It was agreed that as thoughts precede emotions, the same would be applicable in the case of fear.

If we attempt to rationally observe our thoughts we will be able to control fear. How can we do this? It was discussed that sharing, exploring the unknown, meditation, prayer helped in controlling fear.

It was discussed that introspection may also decrease our fears. Introspection may also bring up unnecessary information collected by us. This unnecessary information leads to stress and affects our relationships and emotions.

How to empty our minds from this unnecessary information?

The group discussed the above-mentioned issue and felt that, only awareness about this unnecessary information can control it.

The group decided to share their "unnecessary information" as a step to be aware of it. All the participants contributed and suggestions were made by others.

The second day session started with again classifying of the mind i.e.,: Id, ego and super ego.

Freudian explanation to mental health disorders was explained which is based on repression. Viewpoints other than Freud were also explained.

Different personality types such as Sanguine, Phlegmatic, Melancholic and Choleric were explained with their characteristics.

Participants felt that after fear another problem creating emotion was anger and required discussion.

"Why does one get angry?" was the question put forward. Answers that followed were;

- if somebody does not listen to what we are saying
- if we are not satisfied
- if we are stressed
- if something does not go according to our wish

These were some of the reasons of anger, and this was analysed.

Anger was also linked to our expectations and desires. Expectations and desires are linked to our ego.

A discussion on factors affecting ego followed. Being aware of these factors that ego was the solution the participants felt. All religions in their own way have tried to control ego.

From ego, discussion moved to how we develop defence mechanisms and that these are also indicators of our personalities. Three major defence mechanisms: aggression, withdrawal and flight were identified and discussed.

Later in the training various mental disorders and their symptoms were explained. The importance of referral was stressed. Mental disorders are like any other physical disorder and they are curable. This was explained.

The various disorders taught -

1. Mania
2. Depression

Symptoms were discussed which overlap multiple mental disorders like :

1. Delusions
2. Hallucinations
3. Psychosis
4. Neurosis

Mental disorders with reference to women were explained. Factors are not only biological but cultural, social, work- culture related practices were also discussed.

Disorders dealt with were:

1. Pre-menstrual stress
2. Menopause
3. Backache
4. Headache
5. White discharge per vagina
6. Possession
7. Hysteria

Principles of counselling were discussed.

Most of the participants were confused about "Love" as an emotion. It was explained that is "Love" is a faculty/function of brain/mind.

A total of 23 hours were devoted to mental health training.

Lecture	-	2 hours
Discussion	-	21 hours

Sr. No	Name	Education		Environment		Health		Gender		Political		Social		Economic		Basic Amenities / Infrastructure		Total Marks	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1.	Ramashish	1	1		1		2	3		1		3	2				1	8	7
2.	Joyita	1		1	3		1					1	7	5	5		1	8	17
3.	Sanchita		1		2		1				1		3	4	2			4	10
4.	Alpa		1		2		1		1		1		2	3	1		3	3	12
5.	Manoj		1			1	2		2		1		5	5	1	3	1	9	13
6.	Niranjan	1	1		1		2						4	3			1	4	9
7.	Shailendra		2		4	1	1					1	4	2	1	2	2	6	14
8.	Diggal				4		1		2	1	3	3	7	4	5		3	8	25
9.	Sugatha				1							1	1	1	4	3	1	5	7
10.	Pramila				3		1				2	1	4	2	1			3	11
11.	Sanjay	1			1							1	3	5	2			7	6
	Total Marks	4	7	1	22	2	12	3	5	2	8	11	42	34	22	8			

TRAINEES RESPONSES FROM QUESTIONNAIRE

Sr. No	Trainees	Development		Clinical		Mental Health		Training Method	
		Marks	Percent	Marks	Percent	Marks	Percent	Marks	Percent
1.	Alpa	6	40	7	47	6	40	4	40
2.	Manoj	8	53	6	40	6	40	4	40
3.	Niranjan	5	33	5	33	4	27	3	30
4.	Shailendra	4	27	6	40	6	40	5	50
5.	Sanchita	5	33	5	33	5	33	6	60
6.	Joyita	7	47	7	47	6	40	7	70
7.	Ramshish	3	20	4	27	4	27	4	40
8.	Sugatha	6	40	6	40	5	33	5	50
9.	Pramila	6	40	7	47	6	40	4	40
10.	Sanjay	6	40	5	33	3	20	5	50

**ANNEXURE C1
BIO DATA OF TRAINEES**

State			Educational Qualification			Experience					Rural	Research	Training &	Clinical	Management
	Sex	Age	UnGrad	Grad	Post Grad	No Exp	0-1 year	1-5 years	5-10 years	Above	Development		Communication		
<u>ORISSA</u>															
Jirimio Digal	M	40	-	-	✓	-	-	-	-	✓	✓ 15 years	-	✓ 2 years	-	✓
Sugatha Panigrahi	F	29	-	-	✓	-	-	✓	-	-	✓ 2 years	-	✓ 1 year	-	✓
Sanjay Bhol	M	27	-	-	✓	-	-	✓	-	-	✓ 1 year	-	✓ 2 years	-	✓
Pramila Konhr	F	30	-	✓	-	-	-	-	✓	-	✓ 7 years	-	✓ 2 years (teaching)	-	✓
West Bengal															
Ramasis Mukhree	M	21	✓	-	-	✓	-	-	-	-	-	-	-	-	✓
Jyoita Sarkar	F	23	-	-	✓	✓	-	-	-	-	-	-	-	-	-
Sanchita Sarkar	F	25	-	-	✓	-	-	✓	-	-	-	-	✓ 3 years (teaching)	-	✓
Hazira															
Niranjan Patel	M	35	-	-	✓	-	-	-	✓	-	✓ 4 years				
Alpha Joshi	F	23	-	-	✓	-	-	✓	-	-	-	-	✓ 2 1/2 years	-	✓
Shailendra Khalasi	M	29	-	✓	-	-	✓	-	-	-	-	-	✓ 3 years (teaching)	-	✓
Manoj Patel	M	21	-	-	✓	-	✓	-	-	-	-	-	-	-	✓ 4 months (accountant)

**ANNEXURE C2
CLINICS**

12/07/02	Dhankawadi
16/07/02	Pangare
19/07/02	Mandhar
23/07/02	New Hargude
26/07/02	Yadavwadi
30/07/02	Hargude
02/08/02	Khengrewadi
06/08/02	Parinche
09/08/02	Pangare
16/08/02	Shindewadi
20/08/02	Dudhalwadi
30/08/02	Kambalwadi
03/09/02	Khengrewadi
06/09/02	Dhankawadi
16/09/02	Pangare



ANNEXURE C3
LIST OF CASES SEEN BY FACILITATORS

1. Acute bronchitis
2. Allergy
3. Amoebiasis
4. Anaemia
5. Arthritis
6. Asthma
7. Boils and blisters
8. Cancer stomach
9. Chronic bronchitis, Emphysema
10. Common cold
11. Facial palsy
12. Fever
13. Fracture
14. Fungal infection
15. Gastritis
16. Hypertension
17. Infected wound
18. Itching
19. Jaundice
20. Malaria
21. Numbness
22. Pains - low back - knee pain
23. Piles
24. Pneumonia
25. Rheumatic Heart disease
26. Sinusitis
27. Sore throat
28. Spondylitis
29. Urinary Tract Infection
30. Uterine prolapse
31. Weakness
32. White discharge
33. Worm Infestation



ANNEXURE C4 SCHOOL HEALTH PROGRAMME

The school health programme was planned with the following objectives :

- To recognize what is normal
- To provide appropriate screening to recognize health problems for further treatment.

All trainees were involved in the school health programme. The importance of school health check ups was explained. The session was conducted and some children were diagnosed to have problems and were referred. A total of 368 students have been examined.

Process of conducting school health programme

Trainees were divided into five groups for conducting the following activities:

- Weighing the child and counting the pulse;
- Measuring the height and counting the respiration;
- Vision check-up;
- General examination;
- Listening to heart sounds

After trainees had filled in the above-mentioned necessary information and examined the child, s/he was sent to the doctor for verifying the result of the trainees examination. This also ensures that if trainees have missed certain details about the health of child, doctors can correct and make necessary changes. The observations regarding the performance of trainees need of new information or practice of a skill then becomes a part of that day's session.

The trainees were rotated from one group to another. This ensured that the trainees got hands-on-training in every skill. The number of children to be examined on a given day is limited to 55 as it provides enough time for each to conduct activities giving each student the required time.

The chart below shows the types of cases detected by trainees:

CASE DISTRIBUTION

Sr.No	Illness/Disease	No.of cases	Percentage
1.	Tonsillitis	41	13.62
2.	Wax in ear	60	19.93
3.	Dental caries	66	21.92
4.	Cardiac murmur	34	12.29
5.	Throat inflammation	4	1.32
6.	Cervical lymph node enlargement	7	2.32
7.	Cough	21	6.97
8.	Fever	1	0.33
9.	White patch on skin	7	2.32
10.	Boils	2	0.66
11.	Icterus	3	0.99
12.	Chronic diarrhoea	1	0.33
13.	Peri orbital swelling	2	0.66
14.	Jaundice	1	0.33
15.	Worm infestation	5	1.66
16.	Phimosis	22	7.30
17.	Mouth ulcers	1	0.33
18.	Anaemia(mild)	2	0.66
19.	Malnutrition	3	0.99
20.	Abdominal pain	12	3.98
21.	Low backache	1	0.33
22.	Chronic suppurative otitis media	1	0.33
23.	Headache	4	1.32
24.	Irregular periods	1	0.33
25.	Stye	1	0.33

Out of 368 students 301 (81.57%) were detected to have some problems. 126 students (34.23%) had problems related to poor hygiene such as wax in ear or dental carries. This shows that health education, a graded referral system and regular school check ups are necessary.

After initiation of this activity it was observed that trainees require more practice in the skill of listening to heart sounds and being able to detect between normal and abnormal heart sounds. A total of 34 students with cardiac murmur were detected. The school health programme has helped trainees to gain confidence.

Sr. No	NAME OF ILLNESS	Functional Classification (GRADE)	23/07/02	26/07/02	07/08/02	14/08/02	21/08/02	27/08/02	04/09/02	01/10/02	01/10/02	24/09/02	TOTAL	%
1.	Tonsils	II	8	8	4	4	3	14	9	12	5	-	67	12.83
2.	Wax in ear	I	4	3	11	6	14	22	11	9	7	13	100	19.15
3.	Dental caries	II	-	12	23	7	4	20	5	6	2	1	89	17.04
4.	Systolic murmur Diastolic murmur	IV	8	5	3	5 1	3	9		4	1	3	42	8.04
5.	Throat Inflammation	II	1	2	-	-2	=	4		-	-	-	9	1.72
6.	Cervical Lymph node	II	4	1	-	-	2	-		1	1	-	9	1.72
7.	Cough	II	3	1	10	7	-	-	-	3	-	-	14	2.68
8.	Fever	II	1	-	-	-	-	-	-	-	-	-	1	0.19
9.	White Patch	II	1	-	-	-	-	-	-	-	-	-	1	1.14
10.	Boils	I	2	-	-	-5	1	-	-	-	1	-	9	1.72
11.	Icterus	III	-	-	-	1	-	-	-	2	-	-	3	0.57
12.	Chronic diarrhoea	II	1	-	-	-	-	-	-	-	-	-	1	0.19
13.	Within Normal limits		27	21	3	8	4	4	16	16	21	15	135	25.86
14.	Periorbital swelling	III	-	-	-	1	-	-	-	-	-	-	1	0.19

SR. NO	NAME OF ILLNESS	Functional Classification (GRADE)	23/07/02	26/07/02	07/08/02	14/08/02	21/08/02	27/08/02	04/09/02	01/10/02	01/10/02	24/09/02	TOTAL	%
15.	Worms	I	-	-	3	-	-	2	-	3	-	-	8	1.5
16.	Phimosis	III	-	8	4	3		7	11	-	-	-	33	6.32
17.	Ulcer on tongue	II	-	-	1	-	-	-	-	-	-	-	1	0.19
18.	Anaemia (Mild)	II	-	-	1	-	-	-	-	1	2	3	7	1.34
19.	Malnourished	II	-	-	1			1	-	-	-	-	2	0.38
20.	Abdominal pain (epigasmic/umbilical/during menses)	I	-	-	1			1	-	-	-	-	2	3.44
21.	Low Backache	II	-	-	-		7	5	1+1	3	-	1	18	0.19
22.	C.S.O.M	III	-	-	-			1	-	-	-	-	1	0.19
23.	Headache	II	-	-	-			4	-	1	2	1	8	1.53
24.	Irregular Menses	II	-	-	-			1	-	-	-	-	1	0.19
25.	Styes	II	-	-	-			1	-	-	-	-	1	0.19
26.	Undescended Testes	II	-	-	-			1	-	-	-	-	1	0.19
27.	Arthritis Chronic							-	1	-	-	-	1	0.19
28.	Squint							-	1	-	1	1	3	0.57
29.	H/O Heart Disease								1	-	-	-	1	0.19

SR. NO	NAME OF ILLNESS	Functional Classification (GRADE)	23/07/02	26/07/02	07/08/02	14/08/02	21/08/02	27/08/02	04/09/02	01/10/02	01/10/02	24/09/02	TOTAL	%
30.	Infected wound								1	-	-	-	1	0.19
31.	Ear discharge								1	-	-	-	1	0.19
32.	Spasmodic chest pain								1	-	-	-	1	0.19
33.	Common cold								6	-	4	-	10	1.91
34.	Eye sight check up								3	-	4	-	7	1.34
35.	Vitiligo								1	-	-	-	1	0.19
													594	

ANNEXURE C4

23/07/2002	Parinche
26/07/2002	Parinche
07/08/2002	Yadavwadi
14/08/2002	Yadavwadi
24/08/2002	Yadavwadi
04/09/2002	Yadavwadi

ANNEXURE C4

DATE	PLACE	STANDARD	FEMALE	MALE	TOTAL
04/09/02	Yadavwadi	6 th	19	37	56
24/11/02	Yadavwadi	7 th	30	34	64
01/10/02					
24/09/02	Yadavwadi	8 th	26	19	45
01/10/02					
24/09/02	Yadavwadi	9 th	23	17	40
21/08/02	Yadavwadi	10 th	26	17	43
14/08/02	Yadavwadi	5 th	22	27	49
07/08/02	Yadavwadi	1 st -4 th	20	23	43
23/07/02	Parinche	1 st -4 th	26	29	55
26/07/02	Parinche	1 st -4 th	21	36	57
27/08/02	Gharmalkarwadi	1 st -4 th	27	35	62
11/10/02	Yadavwadi	Absent	4	4	8
		Total	244	278	522

ANNEXURE C4
ABSENT STUDENT

PLACE	FEMALE	MALE	TOTAL
Gharmalkarwadi	3	2	5
Yadawwadi	3	2	5
Yadawwadi	3	2	5
Yadawwadi	1	2	3
Yadawwadi	1	4	5
Yadawwadi	-	1	1
Yadawwadi	1	-	1
	12	13	25

1/10/02

Absent Student

8

check-up done

17

Absent student

ANNEXURE C5
(05/09/2002 and 12/09/2002)

10 AM - 3 PM

Total - 10 Hrs

Two days were exclusively utilized to answer trainees queries/doubts regarding clinical training.

The questions asked were :

- What is allergic reaction?
- What is Chlorphenarmine tablet
- What is Gastritis?
- Can drugs cause gastritis ?
What should we advice?
- What is a chronic illness?
- Home remedies for backache?
- Home remedies for Family planning?
- What is filariasis? How to treat filariasis?
- What is the difference between filariasis and Malaria?
- What is the cause of dengue fever?
- What is a cardiac murmur?
- What is meningitis?
- What is gonorrhoea?
- How to motivate mothers to bring their children for vaccination?
- Reasons for low sperm count
- What is pelvic inflammatory disease?
- How long a person can live with one kidney?
- Why are alcoholics fat?
- Why women don't suffer from kidney stone?
- Is night emission a disease? If it occurs daily is it normal
- What is impotency? Is it related to nutrition?
- What is Phimosiis?
- What is breast cancer?
- What is an artery and vein?
- What is diabetes?
- What is mental retardation?

ANNEXURE C5

LIST OF YOGASANAS SHOWN

1. Bhujangasan
2. Butterfly
3. Kavachal
4. Mandurasan
5. Suryanamaskar
6. Tadasan
7. Yognidra

ANNEXURE C6

Sr. No	Name	Indications	Dosage	Contra-indication
1.	Paracetamol (500 mg)	Fever/Headache/ Body ache Dysmenorrhoea	0-6 months - 1/8 tab three times a day 6months - 2 years - 1/6 tab 2 - 4 years - 1/4 tab 4 - 7 yrs - 1/2 tab 8-12 yrs - 1 tab Above 12 yrs – 1-2 tabs	Jaundice
2.	Metronidazole (200 mg)	Yellow frothy stools/ stools with blood or Mucus	Below 3 yrs - 1/2 tab (100 mg) 3 - 7 yrs – 1/2 tab (100 mg) Above 8 yrs - 12 yrs - 1 tab (200 mg) Above 12 yrs - 2 tabs (400 mg) 3 times x 7 days	Pregnancy, Lactating
3.	Mebendazole (100 mg)	Worms	1 tab (100 mg) twice a day for 3 days(Adults) ½ tab (50 mg) twice a day for 3 days.(Less than 12 yrs)	Pregnancy, Lactating
4.	Chloroquine (150 mg)	Malaria	For adults - 4 tabs after blood smear, after 6 hrs. - 2 tabs 1 tab twice for 2 days	
5.	Ibuprofen(200 mg)	Bodyache, Tooth ache, Backache	4 yrs - 8 yrs. – 1/2 tab twice a day. 8 yrs - 12 yrs - 1 tab twice a day. Above 12 yrs - 2 tabs twice a day.	
6.	Salbutamol	Already prescribed as per Doctor's instructions		
7.	CPM (4 mg)	Allergy	6 - 12 yrs. - 1/2 tab 12 yrs and above - 1 tab	
8.	Cotra (80 mg)		< 1 - avoid, but 1/4 tab twice a day 1 - 3 yrs. - 1/4 tab 4 - 8 yrs. – 1/2 tab 9 - 12 yrs. - 1 1/2 tab Above 12 yrs. - 2 tabs (twice a day for 5 days)	Lactating
9.	Gelusil	Acidity	For Adults - 2 tabs	
10.	Metoclopramide - 10 mg.	Vomiting	Adults – 10 mg. t.i.d. Children 9 – 14 years - 5 mg. t.i.d. 5-9 years – 2.5 mg t.i.d. 3-5 years – 2.0 mg t.i.d. 1-3 years – 1.0 mg t.i.d. < 1 year - 1.0 mg t.i.d.	
11.	Domperidone – 10 mg.		10 mg. t.i.d – 15 minutes before food.	Pregnancy
12.	Albendazole	Antihelminth	Adults 400 mg. – 1 H.S. Child < 10 kg. 200 mg. 1 H.S.	Pregnancy, Lactating
13.	Asprin (use in > 20 years)	Fever, Bodyache, Knee pain,	300 mg q.i.d	

Sr. No	Name	Indications	Dosage	Contra-indication
14.	Benzyl benzoate	Scabies		Take bath with hot water, apply from neck downwards . Reapply after 24 hours. After 48 hrs. (2 days) take hot water bath. Reapply on hands after every time hands are washed. Do not apply on face.

ANNEXURE C6 AYURVEDIC MEDICINE

- सरपंखा : प्लीहा, हड्डी
- सोनामुखी : विरेचक (असुंठ, त्रिफला)
- धायटी : To induce Fermentation, menopause, Fibroid
(धायटी : 100 ग्रॅम ; काले द्राक्ष : 100 ग्रॅम ; लोघ्रचूर्ण : 100 ग्रॅम ; जीरा : 50 ग्रॅम ; नागकेशर : 100 ग्रॅम ; गोदंती भस्म : 50 ग्रॅम)
- शतावरी : स्त्रियांसाठी
- मधुनाशीनी (गुडमारी) : antidiabetic
(भेंडी अ मधुनाशीनी) (zymnima sylvestar) (बेडकीचा पाला)
- इंद्रजव : antiworm , anti diarrhoea
- कांचनार (आपटयाच झाड)
- शेमड (Bombax Mulbaria) : पित्तनाशक, Pimples, मोचरस
- काळमेघ : (Andrographis Peniculata) - मलेरिया
(कडु , करीयाती , काळीजीरी , कोळम)
- गोक्षुर : (डाययुरेटीक) (Pedalium Murax) (Trabulus Terextis)
- किडामारी, बदकवेल : Fever (Aristo Locia , Bractiolata)
- ब्राम्ही (Sentela Sentilica) : ब्रेन टॉनिक
(मंडुक पर्णी)
- हडजोड - (cisses quadingularis)
- मेंदी के फुल : For normal kidney function
रेणुक बिज (बिज चमचाभर अ लेंडी पिपळी)
- सुरण : Piles
- वछ (वचा) : (वेखंड)
- गुळवेल : त्रिदोष नाशक
गुळवेल 20 ग्रॅम , कोरफड 20 ग्रॅम , बोरफळाच छाल 10 ग्रॅम - 3 बार पिलाना)

● सारीवा (अनंतमुळ)	:	Lactation सारीवादीवटी (हॅमीटेसमस इंडिकस)
● वारीयाकंद (<i>Dioscoria Bulbifera</i>) (नैन बटाका)	-	शक्तीदायक
● निर्गुडी + मका	:	एक चमचा दोनदा (<i>Geriatric</i>)
● कोरफड (<i>Aloe Vera</i>)	:	Menstrual ailments
● भुई आवळा (<i>Thilantus Faternus</i>)	:	कावीळ
● शंख पुष्पी (<i>Evolvulus microphilus</i>)	:	ब्रेन टॉनिक
● कंपालीक	:	worms , skin diseases
● कटु पटोल	:	(कडु पडवळ) (<i>Triocozanthis cucumarina</i>) - Acidity
● सदाफुली	:	Wind cristing , low BP
● गुळगुळ	:	catalyst
● सफेद मुसळ (<i>Borivilianam</i>)	:	टॉनिक
● सर्पगंधा (<i>Roulfia Serpentina</i>)		
● सर्पगंधा (<i>Roulfia Tataphulia</i>)		
● बहुपात्री (पात्री)	:	Vitamin A , allergy
● बला (<i>Saida cortifolia , Rhombipholia , बाळा</i>)		
● हिरडा	:	Diarrhoea

ANNEXURE C6 HOMEOPATHIC MEDICINES

Trainees were initially acquainted with following aspects of Homeopathy

- Principles
- Individualization
- Selection of medicine
- Compounding a medicine
- Dispensing a medicine
- Reviewing patients

Following medicines were discussed with trainees :

- Arsenic album
- Argentum Nitricum
- Calcarea carb
- Sulphuric acid
- Robinia
- Natrum Mur
- Carbo veg
- Aconite
- Belladonna
- Pulsatilla
- Aloes
- Veratrum alb
- Chamomilla
- Podophyllum
- Merc sol
- Merc cor
- Mag phos
- Colocynth
- Abies Nigra
- Lycopodium
- Bryonia alb
- Chelidonium
- Cardus mar
- Collinsonia
- Ratanhia
- Aesculus
- Hammamillus
- Antim crud
- Kreosote
- Senecio Q
- Cimicifuga
- Secal cor
- Aletris Farinosa
- Hydrastis
- Thalaspia Bursa
- Pyrogen
- conium maculatum
- Sanguinaria
- Belladonna
- Apis mel

- Thuja
- Naja
- Antim tart
- Hepar sulph

Above mentioned medicines were discussed as singular medicines or in compound form. In a module which is given to trainees Homeopathic medicines with reference to Digestive system, Reproductive system, Respiratory system, Skin, Eye, Ear, Head, Excretory system, Accidents, pains and aches are discussed widely. Entire module was discussed with trainers.

Herbal and Home remedies

- Preparation of काढा
- How to evaluate medicinal potential of plant?
- How to draw extract?
- How to purify it for consumption? These issues were discussed with trainers.

Following plants were shown to trainers :

आघाडा , निर्गुडी , कोरफड , शेमड , रोवगा , एरंड , माका , गुळवेल , बवकवेल , करवंद , बदकवेल , शंखपुष्पी , सत्यानाशीनी , गोखरू , बेल , कोरफड , धायटी , अनंतमुळ , कांचनार , बहुपात्री , सदाफुली

We discussed with them preparation of following medicinal syrups.

- For anaemia : Drumstik ; Jaggery ; जीरा ; सौंफ ; वेलची ; दालचीनी
- For cough, asthma - eggs + lemon juice syrup
- Jackfruit syrup for white discharge and TB
- Hibiscus syrup for white discharge

We discussed following ayurvedic medicines :

सुंतशेखर वटी , कुबेराक्षवटी , कपुरादिवटी , संजीवनी वटी

Along with this recommended diet patterns in various ailments as enlisted in Ayurveda is discussed.

ANNEXURE R1

Base Line Survey Questionnaire prepared by the Trainees

1) **Objectives:**

- (a) To assess health services in the project area.
- (b) To assess the expenditure incurred on health care.
- (c) To know the type of morbidities present in the project area.

2) **Personal Information :**

- (a) Name: _____ Marital Status : Married/Unmarried
(b) Age : 18+ Sex : Male/Female
(c) Caste: SC/ST/OC

3) **Family Members :**

Name	Age	Sex	Occupation	Educational Qualification	Relation to the Household Head

4) **Health Seeking Behaviour :**

To whom do you visit first when any of your family members is ill -

- Private Doctor
- Hospital
- Traditional Healer
- Others

- 5) (a) No. of family members were sick in last one month –

(b)

Name	Illness	Symptoms

6) Nature of disease, please specify.

7) Please mention the total expenditure on health care for the purpose. Rs.

8) (a) Have you met any severe illness by any of your family members during last one year?

1.

2.

3.

(b) Nature of disease

(c) Cost involved in treatment

9) When do you use herbal medicine and why?

10) No. of children

0-7 days

8-29 days

29-1 year

1 year - 4 years

5 years - 14 years

15 years - 45 years

45 years - 65 years

65 +

11) The place of delivery

(a) Hospital

(b) TBA

(c) ANM

(d) Private Practitioner

(e) Others

12) Have any of your family members met an incidence in last one year?

- (a) Dog bite
- (b) Snake bite
- (c) Burns
- (d) Drowning
- (e) Shock

QUESTION TO GRAM PANCHAYAT

1) Type of health services available in your Gram Panchayat jurisdiction

Provision	No
Private Practitioner	
Traditional Healer	
Government Hospitals	
Others	

2) Nature of drinking water resource in the community

Type	No
Tube well	
Dug well	
Ponds	
Water tanks	
Others	

3) Is there any sanitary provision?

Type	No
Soak pits	
Toilets	
Dust bin	
Others	

4) Is there any water purification system followed ?

- Bleaching
- Cleaning the dug wells/ponds

5) Is any child or children or pregnant mothers have died?

6) If Yes, Please mention

- (a) Name :
- (b) Address :
- (c) Date of death/place :

7) Was there any epidemic outbreak in your area in last one year and no. of deaths?

- (a) How many were ill?
- (b) What was the epidemic?
- (c) How many no. of people died?

8) What services ANM's provided in the area?

9) Name the five diseases, which you feel them dangerous.

- 1.
- 2.
- 3.
- 4.
- 5.

10) Nature of Veterinary health services available in your area.

11) Cattle population

Cattle	No
Goat	
Cow	
Buffaloes	
Hen	
Pig	
Sheep	
Duck	
Rat	
Horse	

12) Name the five diseases that affect the cattle population in your area.

13) Is there any Health camp been organized/ conducted in your area in last one year?

ANNEXURE R2 NATURE OF SCIENCE

• WHAT IS SCIENCE	
• SCIENTIFIC METHOD	
• THEORY AND FACT	
• ROLES OF THEORY AND FACT	
• DIFFERENCES BETWEEN THEORY AND FACT	
• SCIENCE AND SOCIAL SCIENCE	
• COMPARISON BETWEEN NATURAL AND SOCIAL SCIENCE	
• RESEARCH DESIGN	
• IMPORTANT FEATURES OF RESEARCH DESIGN	
• CHARACTERISTICS OF A GOOD RESEARCH DESIGN	
• TYPES OF RESEARCH DESIGN	
• STEPS IN RESEARCH DESIGN	
• TOOLS AND TECHNIQUES OF DATA COLLECTION	
• OBSERVATION	
• INTERVIEW	
• QUESTIONNAIRE	
• CASE STUDY METHOD	
• SAMPLING	
• ANALYSIS	
• QUALITATIVE ANALYSIS	
• MEASURES OF CENTRAL TENDENCY	
• STANDARD DEVIATION	
• QUALITATIVE ANALYSIS	
• CODING	
• CONTENT ANALYSIS	

ANNEXURE R2

NATURE OF SCIENCE

What is science?

The word Science is derived from the Latin word Sceri which means 'to know'. Science is difficult to define primarily because people often confuse the content of Science with its methodology. Although Science has no particular subject matter of its own, we do not view every study of phenomena as science.

Science is that body of knowledge which deals with the ongoing understanding of the phenomena occurring in the universe. Science is the accumulation of systematized knowledge based on facts.

As famous scientist Infield and Einstein say "Science is the attempt of the human mind to find a connection between the world of ideas and world of phenomena. All the essential knowledge in science were born in a dramatic conflict between reality and our attempt to understanding the same". Science is believed to arrive at practical solutions of all the problems to a great extent but this does not mean that this is the only path to understand the reality.

Science has also been failed to unravel certain persisting mysteries of life. But since its basis is mostly on facts and finally leads to the education of theories, and these theories are further able to give a generalized understanding of the existing relationship between the existing phenomena.

Science seeks to discover and exhibit logical relations between or among the facts.

Will Durant in his definition of Science say, " Science is the captured territory (in the siege of truth). As soon as a field of enquiry yields knowledge susceptible of exact formulation, it is called Science.

Science is an intellectual thought model and its aim is to conceptualize the impersonal facts of experience in verifiable terms, as exactly as possible, as simply as possible, as completely and meaningful as possible. It is concerned with physical as well as psυχical process; as well as with nature. It takes the knowable universe

for its subject. It has to do with everything to which its methods can be applied. What makes a science is not of course the nature of things with which it is concerned but the method by which it deals with these things. According to Karl Pearson, " Science is an objective, logical and systematic method of analysis of phenomena devised to permit the accumulation of reliable knowledge. It is a systematized form of analysis... not any particular body of knowledge".

Science attempts to account for particular events by reference to general laws together with the actual conditions under which these laws act to account for laws by reference to principles still more general.

SCIENTIFIC METHOD

Karl Pearson said, "There is no shortcut to the truth... no way to gain knowledge of the universe except through the gateway of scientific method. It refers to a method of investigation or a procedure by which scientific and systematic knowledge is acquired.

And its elements are:

1. **Reliance on empirical evidence:** A person of science is firmly committed to the belief that truth can be established on the basis of evidence that our sense organs can get at. He further believes that since knowledge of existence outside oneself is reached through experiences; it must always be uncertain and tentative. A scientist's attitude is of critical empiricism. A person of science regards rational ideas or guiding principles for making predictions or formulating explanations to be tested subsequently by observation, i.e. empirical evidence now or at some point in future. It is required for the advancement of science a continuing interplay between logical frontiers (rational) and its empirical frontiers (empirical). Both these aspects are very important for scientific methods.
2. **Use of relevant Concepts:** Concepts are logical constructions or abstractions created from sense impressions, percepts and experiences. Concepts are the symbols that science works with. The world in which we live, and in which science is discovered at work, is apparent in nature. The world which science describes is a creation of human intellect which may bear some resemblance to casual nature is not identical with it. The scientific procedure

consists in involving, defining and manipulating concepts are symbols with a view to contributing variously to the corpus of systematic knowledge and/or to establish some new bit of knowledge.

3. **Commitment to Objectivity:** The nature of scientific method is such that a practitioner of science must set aside his hopes and his intuition. The man of science is firmly committed to the belief that to go nearer to the goal of truth, he must above all things.... strive at elimination in his judgment and provide an argument which is true for each individual mind and his own.

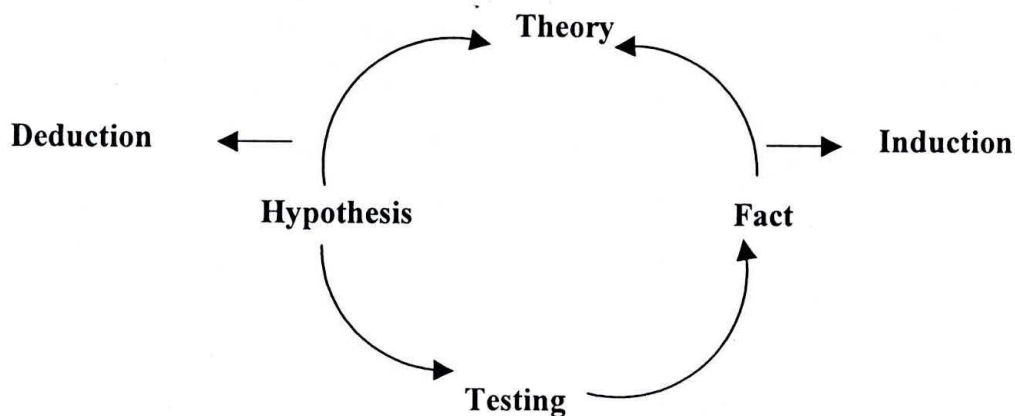
4. **Ethical Neutrality:** A man of science should be ethically neutral he should not follow favoritism, he should not be biased, he should not be follower of a school. The man of science should only respect the things, the phenomena and should have faith in them. Finding out truth should be his main objective. A scientist should keep his personal judgments away for the accurate measurement of things.

5. **Generality:** Generalization is an important aspect of scientific method; generalizations are statements of general applicability. Generalizations emerge naturally after a large enough number of particular observations. The more mature a science is, the greater is its generalizing principle.

THEORY AND FACT

The basis of modern science is the intricate relationship between theory and fact. Popular understanding of this relationship obscures more than what it illuminates. Theory is confused with speculation and thus a theory remains speculation until it is proved. When this proof is made, theory becomes fact. The relationship between theory and fact is very important in scientific enquiries, as the basic theme of science is based on the processes of induction and deduction. Induction is a process in which generalizations are made on the basis of facts and these facts or generalizations are added to the existing body of knowledge or theory. Deduction is a process in which facts are deduced from theories for the understanding of any phenomena.

So, the scientific process starts from a hypothesis, based on the theoretical knowledge the hypothesis is then tested and it becomes a fact and this fact is added to the existing theory. Thus, it goes in a cyclical fashion.



In the process of induction, a number of facts and the essence of the relationship between the facts get abstracted to form concepts. All these concepts then further add to the formation of constructs and from these constructs a theory is built, which contains very high logical activity. Induction moves from particulars to arrive at general propositions. It operates on faith that in the course of things for a long time is a basic, and regularity evidenced surely enough for the inference that it will continue so in future.

Deduction is a device for the discovery of the truth that lies concealed within a set of statements. A new relationship between the concepts is discovered. Deduction yields to propositions and propositions yield knowledge. The empirical test is the final

test and if one of the most usual pattern of explanation in science is evidently deductive, form of universal statement or statements (laws) together with some particular statement of condition is deduced a statement; describing the event to be explained.

So science never imposes anything, it states. It aims at making true and adequate statements.

ROLES OF FACTS AND THEORY

FACTS

- Facts are materials for theory building.
- Facts are essential for testing or verification.
- Facts fill in the gaps of theory.
- Facts help in reinterpretation of phenomena.
- Facts help in the initiation of theory and add to the existing theories.

THEORY

- Theory provides orientation.
- Theory is an organization of facts.
- Theory helps in ordering or systematization of facts.
- Theory helps in analytical interpretation.
- Theory helps in the classification of phenomena based on facts.
- Theory is needed for interpretation.
- Theory is a source of prediction.
- Theory is a source of identification of new areas of research.
- Theory helps in identification of gaps or lacunae in existing store of facts.

DIFFERENCES BETWEEN THEORY AND FACT

1. Fact is a categorically singular entity, whereas a theory always refers to relation between phenomena and entity.
2. Fact may stand as an isolate, but theory is integrative in nature.
3. Fact is elemental in nature while theory is systematic.
4. Fact is idiosyncratic and theory is homothetic.
5. Fact tends to be descriptive in nature but theory tends to be interpretive and conclusive in nature.

6. Facts are concrete, theory is abstract.
7. Facts are based on observation, theory is derived from facts.
8. Facts are basic building blocks whereas theory refers to the context which imparts meaning to the facts.
9. Facts are relatively unchangeable, theory is highly changeable, amenable to modifications.

BASIC ASSUMPTIONS OF SCIENCE

The scientific approach is grounded on a set of basic assumptions that are unproven and unprovable. These fundamental premises are necessary pre-requisites for the conduct of scientific discourse.

Epistemology the study of the foundations of knowledge examines the nature of these premises and how they work. By examining these assumptions we can better understand scientific approach and its claim of superiority over other approaches to knowledge.

1. **Nature is orderly:** The basic assumption of science is that there is a recognizable regularity and order in the natural world, events do not occur randomly.
2. **We can know nature:** Nature is no more provable than nature is orderly and that laws of nature do exist. Individuals and phenomena exhibit sufficient recurrent orderly and empirically demonstrable phenomena to be amenable to scientific investigation.

That is, the human mind is not only capable of knowing nature but also of knowing itself and minds of others.

3. **All natural phenomena have natural causes:** The assumption that all natural phenomena have natural causes or antecedents epitomize the scientific revolution. Until scientists can explain the phenomena in natural terms they reject the argument that some other supernatural explanation is necessary. This assumption directs scientific research away from a research for omnipotent supernatural forces and towards the discovery of the empirical regularities and order that underlie natural phenomena.

4. **Nothing is self-evident:** Scientific knowledge is not self evident, claims for truth must be demonstrated objectively. Scientists cannot exclusively rely on tradition. Subjective beliefs and common sense to verify scientific knowledge. Scientific knowledge is skeptical and critical.

5. **Knowledge is derived from the acquisition of experience:** If science is to help us to understand the real world, it must be empirical, that is it must rely on perceptions, experience and observations. Perception is a fundamental tenant of the scientific approach, and it is achieved through our senses.

6. **Knowledge is superior to ignorance:** This argument does not mean that everything in nature can or will be known. Rather scientists assume that all knowledge is tentative and changing. Truth in science is always relative to the evidence the methods and the theory employed and is always open to modification.

SCIENCE AND THE SOCIAL SCIENCE

The ultimate goal of the social and all other sciences is to produce a cumulative body of verifiable knowledge. Such knowledge enables us to explain; predict and understand the empirical phenomena that interest us.

In the words of Richard Braithwaite: The function of science is to establish general laws covering the behaviour of empirical events or objects with which the science in question is concerned and thereby to enable us to connect together our knowledge of the separately known events and to make reliable predictions of events as yet unknown of science is in a highly developed state... the laws which have been established will form a hierarchy in which special laws appear as logical consequences of a small number of highly general laws.... of the science is in an early stage of development the laws may be nearly like generalizations involved in classifying things into various classes.

Two basic types of scientific explanations are needed in social sciences :

Deductive Explanation: A deductive explanation call for a) a universal generalization b) a statement of the conditions under which the generalizations hold true c) an event to be explained, and d) the rules of formal logic.

In deductive reasoning the premises lead necessary to the conclusion; that is if the premises are true the conclusions must be true, if however, the premises are not true, the conclusion will not be true.

Probabilistic explanation: Not all scientific explanations are based on universal laws. This is particularly the case in the social sciences. Social scientists are primarily using probabilistic or inductive explanations. The major limitation of probabilistic or inductive generalizations, in comparison to universal laws, is that conclusion cannot be drawn about specific cases with complete certainty.

Prediction: The ability to make correct predictions has been regarded as the outstanding characteristic of science. If knowledge is deficient, prediction is impossible. The expectation that scientific knowledge should lead to accurate predictions is based on the argument that if it is known that x causes y and that x is present then we predict that y will occur. Underlying this argument is the assumption

6. In natural sciences, physical phenomena may be known directly through senses; the social phenomena are known symbolically through words or terms e.g. tradition, customs, values etc.
7. Subject matter of social sciences is qualitative and does not admit quantitative measurement.
8. There is greater heterogeneity in case of social phenomena than natural phenomena.
9. Natural sciences are known as exact sciences and controlled laboratory experiments are possible unlike social sciences.
10. In social phenomena the cause and effect relationship is difficult to segregate as compared to natural sciences.

Thus on the basis of the comparison made between natural science and social science the problems of social science research are mainly: epistemology, ethical, practical and experimental in nature.

RESEARCH DESIGN

A research design as defined by Clive Selltiz and others is “ the arrangements of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”.

The research design is a conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.

Decisions regarding what, where, when, how much by what means concerning an inquiry or research study constitute a research design. The design includes on outline of what the research will do from writing the hypothesis and its operational implications to the final analysis of data.

The design decisions happen to be in respect of:

1. What is the study about?
2. Why is the study being made?
3. Where will be the study carried out?
4. What type of data is required?
5. Where can the data be found?
6. What periods of time will the study include?
7. What will be the sample design?
8. What techniques of data collection will be used?
9. How will the data be analyzed?
10. In what style will the report be prepared?

IMPORTANT FEATURES OF A RESEARCH DESIGN

1. It is a plan that specifies the sources and types of information relevant to the research problem.
2. It is a strategy specifying which approach will be used for gathering and analyzing the data.
3. It also includes the time and cost budgets since most studies are done under time constraints.

Therefore a research design must necessarily contain – 1) a clear statements of the research problem, 2) procedures and techniques to be used for gathering

information, 3) the population to be studied and 4) methods to be used for the processing and analysis of data.

CHARACTERISTICS OF A GOOD RESEARCH DESIGN

- The concepts should be well connected to the variables.
- The choice of variables should be such that the relationship between them should be the same as the relationship between concept variables.
- The relationship between concepts should be effectively transformed to relationship between variables.
- There should be maximum focus on the research problem.
- The frame of reference should be well defined.
- It should ensure consistency.
- It should ensure objectivity
- There should be a proper organization of all the activities.
- It should be able to ensure reliability.
- It should be able to ensure replicability.

TYPES OF RESEARCH DESIGN

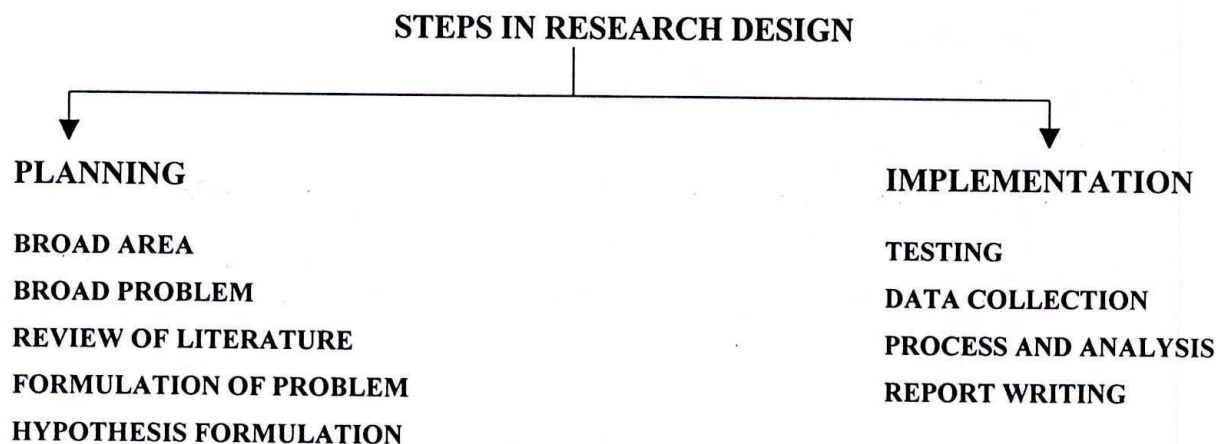
Exploratory: Used in formulative research studies. The main purpose of such studies is that of formulating a problem for more precise investigation or of developing the working hypothesis from an operational point of view. The major emphasis in such studies is on discovery of ideas and thoughts.

A research design appropriate for such studies must be flexible enough to provide opportunity for considering different aspects of a problem under study. Generally three methods of a) study of concerning literature b) experience survey and c) analysis of 'insight – stimulating' examples are used for exploratory research.

Descriptive and Diagnostic: This kind of research design is used in most of the social science research. Descriptive studies are those studies which are concerned with describing the characteristics of a particular individual, or a group whereas diagnostic research studies determine the frequency with which something occurs or its association with something else. The aim in these studies is to get the complete and accurate information; therefore the design has to be carefully planned. The design should be rigid and not flexible and must focus on:

- Formulating the objective of the study.
- Designing the methods of data collection.
- Selecting the sample.
- Collecting the data.
- Processing and analyzing the data.
- Report the findings.

Experimental: An experimental research design is used when the researcher tests the hypothesis of causal relationship between variables. Such design is used in studies which require procedures that will not only reduce bias and increase reliability, but will permit drawing inferences about causality.



DEFINING A RESEARCH PROBLEM

A research problem originates from a broad research area in which a researcher is interested. A research problem in general refers to some difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain solution for the same.

The components of a research problem are:

1. There must be some objective (s) to be attained at. If one wants nothing, one cannot have a problem.
2. There must be an individual or a group which has some difficulty or the problem.
3. There must be alternative means (or courses of action) for obtaining the objective (s) one wishes to attain.

4. There must remain doubt in the mind of a researcher with regard to the selection of alternatives.
5. There must be some environment (s) to which the difficulty pertains.

POINTS OBSERVED IN SELECTING AND DEFINING A PROBLEM

1. Subject which is over done should not be normally chosen for it will be a different task to throw any new light in such case.
2. Controversial subject should not become the choice of an average researcher.
3. Too narrow or too vague problems should be avoided.
4. The subject selected for research should be familiar and feasible so that the related research material or sources of research are within one's reach.
5. The importance of the subject, the qualifications and the training of a researcher, the costs involved, the time factor are few other criteria that must also be considered in selecting a problem.
6. The selection of a problem must be preceded by a preliminary study. This may not be necessary when the problem requires the conduct of a research closely similar to one that has been done.
7. Technical terms and words or phrases, with special meanings used in the statement of the problem, should be clearly defined.
8. Basic assumptions or postulates (if any) relating to the research problem should be clearly defined.
9. A straightforward statement of the value of the investigation (i.e. the criteria for the selection of the problem) should be provided.
10. The suitability of the time-period and the sources of the data available must also be considered by the researcher in defining the problem.
11. The scope of the investigation or limits within which the problem is to be studied must be mentioned explicitly in defining a research problem.

REVIEW OF LITERATURE

Review of literature is an important element in research design. It help in the proper formulation of a problem to be studied.

It helps in understanding the nature of problem and preparing a general background. Earlier work done by researchers is evaluated and relevant hypothesis is built upon it.

It also helps in changing a wider perspective to a narrow perspective.

So, the main functions of this exercise of reviewing the literature are:

1. To understand the scope of the subject.
2. To know the structure of the subject.
3. To understand the relations of subject with other subjects.
4. To understand the nature of earlier works.
5. To know about the methods used by earlier researchers.
6. To identify lacunae or gaps in the existing theory.
7. To identify the inconsistencies and contradictions.
8. To identify or to understand the limitations of the study.
9. To formulate a possible scheme and overcoming limitations by undertaking totally new and innovative ingenious research projects.
10. Utilizing parts of existing literature the facts, the concepts, the prepositions.

SOURCES OF LITERATURE

The literature can be derived through sources like journals, Reviews published, directory of doctoral dissertations accepted by Universities etc., public libraries, as well as private libraries. In addition to this, some governmental agencies and voluntary organizations publish listings or summaries of research in their special fields of service. Professional organizations, research groups and voluntary organizations are a constant source of information about unpublished worked in their special fields.

HYPOTHESIS

A hypothesis is a tentative statement consisting of a dependent as well as independent variable.

A hypothesis may be defined as a proposition or a set of prepositions set forth as an explanation for the occurrence of some specified group of phenomena either asserted nearly as a provisional conjecture to guide some investigation or accepted as highly probable investigation or accepted as highly probable in the light established facts.

CHARACTERISTICS OF HYPOTHESIS

1. Hypothesis should be clear and precise. If not, the inferences drawn on its basis cannot be taken as reliable.
2. Hypothesis should be capable of being tested.
3. Hypothesis should state relationship between variables, if it happens to be a relational hypothesis.
4. Hypothesis should be limited in scope and must be specific.
5. Hypothesis should be stated as far as possible in most simple terms so that the same is easily understandable by all concerned.
6. Hypothesis should be consistent with most known facts i.e., it must be consistent with a substantial body of established facts.
7. Hypothesis should be amenable to testing within a reasonable time.

TYPES OF HYPOTHESIS

Goode and Hatt have identified three levels of abstraction reached by hypotheses and classified the hypothesis.

- a. **At the lowest level of abstraction** are the hypotheses which state existence of certain uniformities. The hypotheses of this type may state that certain behaviour patterns may be expected in a specified community.
- b. **At a relatively higher level of abstraction** are hypotheses concerned with complex 'ideal types'. These hypotheses aim at testing whether logically derived relationships between empirical uniformities obtain. This level of hypothesizing

moves beyond the level of anticipating a simple empirical uniformity by visualizing a complex referent in society.

- c. **At the highest level of abstraction** hypothesis is concerned with the relation obtaining amongst analytic variables. This level of hypothesizing is not only more abstract compared to others; it is also more sophisticated and vastly flexible mode of formulation.

VARIABLES

A concept which can take on different quantitative values is called a variable. Concepts like weight, height, and income are all examples of variables. Qualitative phenomena (or the attributes) are also quantified on the basis of the presence or absence of the concerning attributes.

Phenomena which can take on quantitative different values even in decimal points are called 'continuous variables'. But all variables are not continuous. If they can only be expressed in integral values, they are non-continuous variables or in statistical language discrete variables.

Age is an example of continuous variable and no of children is an example of non-continuous variable.

Dependent Variable: If one variable depends upon or is the consequence of the other variable it is termed as dependent variable e.g. height is a dependent variable.

Independent Variable: The variable that is antecedent to the dependent variable, i.e. does not depend on the other variable is called as independent variable e.g. age is an independent variable.

Extraneous Variable: Independent variables that are not related to the purpose of the study, but may affect the dependent variable are termed as extraneous.

RESEARCH DESIGN

EXERCISE

Broad Research area: Enculturation and Socialization

The process of learning one's own culture is called enculturation. Every human being has to go through the process of enculturation for without the adaptations it describes, it becomes difficult to become a member of the society. The difference between the nature of enculturation experience in the early years of life and later is that the range of conscious acceptance or rejection by an individual continuously increases as he or she grows older. By the time he or she has reached maturity a person has been conditioned so that he or she moves easily within the limits of expected behaviour, set by his group. After this acquisition of skills of learning behaviour through the intimate institutions like family, a person has to apply these skills of learning behaviour through.

REVIEW OF LITERATURE

A. Thio, Socialization (1996:100)

Socialization is a process that does not end at childhood, though it begins at childhood. It continues with emergence of adulthood and stop only when the person dies. Being socialized is learning new role. Like children, adult learn many new roles as they go through various stages of life. At the same time adult's specific socialization experiences do differ from those of children.

Alan C. Kerckhoff. Socialization and Social class (1972:232)

Socialization has been described as a process in which the socializee interacts with socializers in such a way that he acquires skills, knowledge, values and motives that are functional in this later programme of adult roles. In the course of the process, the socializee becomes increasingly instrumental in determining the degree and nature of his interaction with the socializers.

- Individualism vs. co-operation.
- Parent-child relationship: factors affecting it.
- Attitudinal changes

- Changes in value orientation.
- Status of children based on sex: male and female.
- Impact of westernization etc.

PLAN OF DATA COLLECTION

Can include observation as a tool, interviewing, group discussion and case studies.

OBSERVATION

- Observing the changes from past way of life.
- Observing the patterns of interaction.
- Observing the child-parent relationship.
- Observing the changes in attitudes.
- Observing the impact of westernization through media etc.
- Observing the factors responsible for certain trends in child rearing.
- Observing the value orientation etc.

PROBLEM STATEMENT

In the emerging content of cosmopolitan culture people have to reorient the values of children and after their patterns of socialization.

VARIABLES/ATTRIBUTES TO BE CONSIDERED

- Socialization practices in a cosmopolitan.
- Impact of the trends of an urban scene.
- Differences in characteristics of urban and rural life.
- Changes in cultural patterns.
- Impact of media.
- Religious background.
- Changes in economic status.
- Importance of social status.
- Importance of education.

Interviews: Interviews can be conducted on the basis of an interview guide and interview schedule incorporating certain questions related to the child rearing practices and the changes that have come in.

Group discussions and case studies: Group discussions and case studies of families can be taken which are useful in understanding the changes in patterns of enculturation as a result of westernization and modernization.

Plan of analysis: Qualitative analysis can be done of the data gathered. To quantify the data coding can be done for certain variables. Hypothesis should be tested and re-tested.

OBSERVATION METHOD

The observation method is the most widely used method in social sciences. Observation becomes a scientific tool and the method for data collection for the researcher, when it solves a formulated research problem, is systematically planned and recorded and is subjected to checks and controls on validity and reliability. Under the observation method, the information is sought by way of investigator's own observation without asking from the respondent.

While using this method, the researchers should keep in mind things like: what should be observed? How the observations should be recorded? Or how the accuracy of observation can be ensured?

This method is particularly suitable in studies which deal with subject who are not capable of giving verbal reports for one reason or another.

TYPES OF OBSERVATION

Structured observation: When the observation is characterized by a careful definition of the units to be observed, the style of recording the observed information, standardized conditions of observation and the selection of pertinent data of observation, then observation is called as structured observation. Structured observation is used mostly in studies designed to provide systematic description of the phenomenon or to test caused hypothesis. The use of structured observational technique presupposes that the investigator knows what aspects of the situation under study are relevant to the research purpose, and is in a position therefore to develop a specific form or plan for making and recording observations before s/he begins the collection of data. Structured observation may take place in natural field setting or in laboratory setting. Structured observation is considered appropriate in descriptive studies.

Unstructured observation: When observation takes place without any definition of the limits to be observed, then it is unstructured in nature. Unstructured observation technique is mostly used in exploratory studies. As in that case, the observer's understanding of the situation is likely to change as he/she goes along. Therefore these are shifts in the focus of observation. According to changing situations

observation changes. Unstructured observation is therefore flexible. There are no hard and fast rules in observation as the observer is always prepared to take his cues from unanticipated events in an attitude of alert receptivity.

Participant observation: If the observer, observes making himself, more or less, a member of group he is observing so that he can experience what the members of the group experience, the observation is called participant observation. In participant observation the researcher is enable to record the natural behaviour of the group. The researcher can even gather information which could not easily be obtained, if he observes in a disinterested fashion, but there may be loss of objectivity to an extent if the researcher gets emotionally involved in it.

Non-participant observation: when the observer as a detached emissary without any attempt on his part to experience through participation what others feel, the observation is termed as non-participant observation.

Controlled observation: When observation takes place according to definite pre-arranged plans, involving experimental procedure, it is termed as controlled observation.

In controlled observation mechanical instruments as aids are used for accuracy and standardization controlled observations take place in laboratory or controlled conditions.

Uncontrolled observation: If the observation takes place in a natural setting, it may be termed as uncontrolled observation, no attempt is made to use precision instruments. The major aim of this type of observation is to get a spontaneous picture of life and persons. It has a tendency to supply naturalness and completeness of behaviour allowing sufficient time for observing it. But only subjective interpretation can be done in this case.

TYPES OF BEHAVIOUR OBSERVED IN OBSERVATION METHOD

Non-verbal behaviour: The body movements of the organism, which consists of the motor movements and facial expressions, in particular convey a whole range of emotions.

Spatial behaviour: It refers to the attempts of individuals to structure the physical space around them e.g. people move away or towards a person or object; they maintain closeness or distance. The range, frequency and outcome of such movements provide significant data for a variety of research goals. Every culture develops unwritten codes regulating how closely individuals can approach each other.

Extra linguistic behaviour: Words, linguistic content make up only a small portion of observable behaviour. The non-content aspects of behaviour, such as rate of speaking loudness, tendency to interrupt, pronunciation peculiarities constitute a fruitful source of data and is referred to as extra linguistic behaviour or Para language.

Linguistic behaviour: Linguistic behaviour refers to the manifest content of speech and the various attributes of verbal communication. The study of these characteristics can be applied to a number of research goals.

Timing and recording in observation method: A major consideration in observation concerns the timing and recording of observation.

Time sampling refers to the process of selecting observation units at different points in time, as it is not possible to observe all the events, or activities.

This technique ensures the representative ness of the chosen ongoing activities.

In developing a time sampling design, the researcher must also develop a coding system for recording the observations.

In order to transform the complexity of ongoing events into data that can be expressed numerically and quantified, the researcher must first categorize data and assign a code for each category. Recording is done by cameras, tape-recorders etc.

Inferences drawn from observation: The inferences drawn from the observations are also of great consideration. When an observer, observes a certain act or behaviour, he or she must process this information and infer as to whether or not the behaviour indicates a certain variable. As a means of increasing the reliability of inferences researchers designed training programmes appropriate to various

INTERVIEW METHOD

The interview method of collecting data involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses. The interview approach, involves a person designated as the interviewer asking questions in a face-to-face contact to the other person or persons, designated as interviewees, who give answers.

TYPES OF INTERVIEW

Structured interview: Such interviews involve the use of a set of predetermined questions and of highly standardized techniques of recording. Thus, the interviewer in a structured interview follows a rigid procedure laid down, asking questions in a form and order prescribed. Structured interviews mostly involve the use of fixed, alternative questions. The alternative questions or close-ended questions are those in which the responses of the subjects are limited to certain pre-designated alternatives. Structured interviews may also involve the use of open-ended questions but the questions and their order are predetermined. Generally the interviewer has no freedom to waive a question except to get clarification of the subject's responses, and these questions must be non-directive or non-suggestive.

Unstructured interview: These are characterized by a flexibility of approach to questioning unstructured interviews, do not follow a system of predetermined questions and standardized techniques of recording information. In a non-structured, the interviewer is allowed much greater freedom to ask, in case of need. Supplementary questions or at times he/she may omit certain questions if the situation so requires. He/she may even change the sequence of questions. He/she has relatively greater freedom while recording the responses to include some aspects and exclude others. But this sort of flexibility results in lack of comparability of one interview with another, and analysis of unstructured responses becomes much more difficult and time consuming than that of the structured responses obtained in case of structured interviews. Unstructured interview because of its being more economical, providing a safe basis for generalization and requiring relatively lesser skill on the part of the interviewees.

Other types of interviews which may be partially structured or unstructured at times, are

- a. **Focused interview:** Focused interview is meant to focus attention on the given experience of the respondent and its effects. Under it the interviewer has the freedom to explore reasons and motives. This main task of the interviewer in case of a focused interview is to confine the respondent to a discussion of issues with which he seeks conversance. Such interviews are used generally in the development of hypothesis and constitute a major type of unstructured interview.

- b. **The clinical interview:** This type of interview is quite similar to the focused interview, the primary difference between them being that the clinical interview is concerned with broad underlying feelings or motivations or with the course of individual's life experience, rather than with effects of the specific experience, as in the focused interview. As in the focused interview here too, the interviewer knows in advance what aspects of feelings or experience he wants the respondent to talk about but the method of eliciting information is more or less completely left to his discretion.

- c. **The non-directive interview:** In case of non-directive interview, the interviewer's function is simply to encourage the respondent to talk about the given topic with a bare minimum of direct questioning. The interviewer often acts as a catalyst to a comprehensive expression of the respondent's feelings and beliefs and of the frame of reference within which such feelings and beliefs take a personal significance.

MERITS AND DEMERITS OF INTERVIEW METHOD

MERITS

1. More information can be obtained and that too in greater depth.
2. Interviewer by his own skill can overcome the resistance, if any, of the respondents; the interview method can be made to yield an almost perfect sample of the population.
3. There is greater flexibility under this method as the opportunity to restructure questions is always there, especially in case of unstructured interviews.
4. Observation method can as well be applied to recording verbal answers to various questions.
5. Personal information can as well be obtained easily under this method.
6. Samples can be controlled more effectively as there arises no difficulty of the missing returns; non response generally remains very low.
7. The interviewer can usually control which person(s) will answer the questions.
8. The interviewer may catch the informant off-guard and thus may secure the most spontaneous reactions than would not be the case if mailed questionnaires are used.
9. The language of the interview can be adopted to the ability or educational level of the person interviewed and as such misinterpretation concerning questions can be avoided.
10. The interviewer can collect supplementary information about the respondent's personal characteristics and environment which is often of good value in interpreting results.

DEMERITS

1. It is a very expensive method, especially when large and widely spread geographical sample is taken.
2. There remains the possibility of the bias of interviewer as well as that of respondent.
3. Certain types of informants such as important officers an executive or people in high income group may not be easily approachable under this method and to that extent the data may prove inadequate.
4. This method is relatively more time consuming specially when the sample is large and re-calls upon the respondents are necessary.
5. The presence of the interviewer on the spot may over stimulate the respondent, sometimes even to the extent that he may give imaginary information just to make the interview interesting.
6. Under the interview method the organization required for selection training and supervising the field staff is more complex with formidable problems.
7. Interviews at times may also introduce systematic errors.
8. Effective interview presupposes proper rapport with respondent; this is often a difficult requirement.

QUESTIONNAIRE METHOD

The questionnaire method is the heart of a survey operation. A survey research most often includes questionnaire as a method of a data collection.

It is therefore, popularly used for big enquires. In this method a questionnaire is either mailed or given particularly to individuals from which data has to be gathered. It usually consists of a number of questions printed or typed in a definite order in a form or set of forms.

The questionnaire is provided to respondents who are expected to read and understand questions properly and write down the reply in the space provided/meant for the purpose in the questionnaire, itself. The respondents have to answer the questions on their own.

A questionnaire has to be carefully constructed for carrying out the research successfully. If the questionnaire is not properly set up, then the survey is bound to fail. The main aspects of a questionnaire should be considered like the general form, question sequence and question formulation and working. Before using this method it is better to conduct 'pilot study'/pilot survey for testing the questionnaires. Pilot survey in fact is the replica and rehearsal of the main survey. Such as survey, brings to light the weakness, if any of the questionnaire and also of the survey techniques.

ASPECTS OF A QUESTIONNAIRE

General Form: The form of questionnaire can either be structured or unstructured.

Structured questionnaires are those in which there are definite, concrete and pre-determined questions. The questions are presented with exactly the same wording and in same order to all respondents. A highly structured questionnaire is one in which all questions and answers are specified and comments in the minimum. But in unstructured questionnaire, these characteristics may not be seen. The interviewer is generally provided with a general guide on the type of information to be obtained, but the exact question formulation is generally, largely his own responsibility and the replies are to be taken in respondent's own words.

Question sequence: In order to make the questionnaire effective and to ensure quality to the replies received, a researcher should pay attention to the question sequence in preparing the questionnaire. A proper sequence of questions reduces considerably the chances of individual questions being misunderstood.

Questions that put too great a strain on the memory or intellect of the respondent or are related to personal character or wealth should be avoided. Thus, question sequence should usually go from the general to the more specific, and the researcher must remember that the answer to a given question is a function of the question itself, but of all previous questions as well.

QUESTION FORMULATION AND WORDING

1. Question must be very clear otherwise can harm the survey irreparably.
2. Question should be impartial.
3. A question should be easily understood.
4. A question should be simple.
5. A question should convey only one thought at a time.
6. Words with ambiguous meanings should be avoided.
7. Danger words catch words, or words with emotional connotations should be avoided.
8. A question should be short and simple.
9. Size of the questionnaire should be kept to minimum.
10. Technical terms and vague expressions capable of different interpretations should be avoided.

MERITS AND DEMERITS OF A QUESTIONNAIRE

MERITS

1. There is low cost even when the universe is large and is widely spread geographically.
2. It is free from the bias of the interviewer, answer are in respondents own words.
3. Respondents have adequate time to give well thought out answers.

4. Respondents, who are not easily approachable, can also be reached conveniently.
5. Large samples can be made use of and thus the results can be more dependable and reliable.

DEMERITS

1. Low rate of the duly filled in questionnaire, bias due to no response is often indeterminate.
2. It can be used only when respondents are educated and co-operating.
3. The control over questionnaire may be lost, once it is sent.
4. There is inbuilt inflexibility because of the difficulty of amending the approach once questionnaire have been dispatched.
5. There is also the possibility of ambiguous replies or omission of replies altogether to certain questions, interpretations of omissions is difficult.
6. It is difficult to know whether willing respondents are truly representative.
7. This method is likely to be the slowest of all.

TYPES OF QUESTION

Close ended: In a close-ended question, respondents are offered a set of answers and then asked to choose the one that most closely respondents their view.

- a. Daily ()
- b. Once in a week ()
- c. Once in a month ()
- d. Rarely
- e. Never

Close-ended questions are easy to ask and quick to answer, they require no writing by other respondents or interviewee and their analysis is straight-forward. Their major drawback is that they may introduce bias, either by forcing the respondent to

close from given alternatives or by offering the respondent alternatives that might not have otherwise come to mind.

Open-ended: These questions are not followed by any kind of specified choice, and the respondents answer are recorded in full e.g. what is your opinion about the Bill Clinton's visit to India?

The virtue of the open-ended question is that it does not force the respondent to adapt to preconceived answers. Open-ended questions enable the interviewer to clear up misunderstandings and they encourage rapport. However, open-ended questions to analyze.

Contingency question: A contingency question is a special case of close-ended question applies to subgroup a student of any college?

- a. No ()
- b. Yes ()

If yes, then

- i. Which college are you studying in?
- ii. Which stream have you opted for?

DIFFERENCES BETWEEN QUESTIONNAIRES AND INTERVIEW SCHEDULE

1. The questionnaire is generally sent through mail to informants to be answered as specified in a covering letter. The schedule is generally filled by the researcher.
2. To collect data through questionnaire is relatively cheaper than schedules.
3. Non response is relatively higher in questionnaire than in schedules.
4. In case of questionnaire, the identify is generally not known but in case of schedules it is known.
5. The questionnaire method is very slow as compared to schedule.
6. Personal contact is generally not possible in questionnaire but in interview schedule it is not so.

7. Risk of collecting incomplete and wrong information is relatively more under the questionnaire method, than schedules.
8. Wider and more representative distribution of sample is possible in questionnaire method as compared to schedules.
9. Questionnaire method can be used only when respondents are literate but in interview schedule it is not so.
10. Along with schedules, observation method can be used but in case of questionnaire it cannot be done.

INTERVIEW SCHEDULE

EXERCISE

Prepare an interview schedule to understand the status of women in a middle class Maharashtrian family in Pune.

- What is the age and educational level of the person?
- When did the respondent get married?
- Which place she belongs to?
- What is the occupation of her husband?
- How many children does she have?
- How many members are there in the family she has got married into?
- What status she enjoy in her own family. (i.e. father's house)?
- What is the nature of the family she has married into; joint or nuclear?
- How many earning and non-earning members are there in the family?
- Is her husband the head of the family?
- Does she have any responsibilities in her husband's family, like unmarried siblings of her husband, parents etc?
- Who manages the financial matters in the family?
- What are the levels of interactions within the family, with whom does she share a good rapport apart from her husband?
- What role does she play in decision making in the family?
- Is she a working woman? If yes, was she working before her marriage or not?
- If no, has she stopped working after her marriage?
- Is she satisfied with the present status in the family or does she require certain changes, if yes, in what way?

INTERVIEW GUIDE

EXERCISE

Prepare an interview guide to understand the problem of tribal identity with reference to a particular tribe.

DEFINITION OF A TRIBAL

- History of the tribe
- Geographical location of the tribe
- Political organization
- Economic organization
- Religious organization
- Educational level
- Beliefs and practices
- Modes of living: dress patterns, language, specialized skills etc.

AGENTS OF CHANGE

- Interference of other cultural groups
- Interference of government
- Urbanization
- Industrialization
- Non-governmental organizations
- Social organizations

IMPACT OF CHANGE

- Changes in occupational patterns
- Migrations
- Inter community relations
- Effects on modes of living: language, dress patterns, etc.
- Awareness on account of education
- Break from past way of life

CASE STUDY METHOD

The method of exploring and analyzing the life of a social unit/entity, be it a role-incumbent (person), family, an institution or a community, is customarily known as case study method. The aim of case study method is to locate or identify the factors that account for the behaviour patterns of a given unit and its relationship with the environment. The case data are always gathered with a view to trace the natural history of the social unit, and its relationship with the social factors and factors operating and involved in its surrounding milieu.

The major credit for introducing case study method into the field of social investigation must go to Frederick Leplay.

Anthropologists and ethnologists interested in the systematic description and the study of primitive as well as modern cultures have liberally utilized the case study method. The specific method of case study would depend upon wit, common sense and imagination of the person doing the case study. The investigator makes up his procedure as he goes along. Saturating oneself in the situation is very important. The adequacy of case history has been an important criteria for evaluating a case study. John Dollard has proposed seven criteria for evaluating such adequacy.

1. The subject must be viewed as a specimen in a cultural series. The scrutiny of the life histories of persons must be done with a view to identifying community values, standards and their shared way of life.
2. The organic motors of action must be socially relevant. In other words, the social meaning of behaviour must be taken into consideration.
3. The strategic role of the family group in transmitting the culture must be recognized.
4. The specific method of elaboration of organic material onto social behaviour must be recognized.
5. The continuous related experience from childhood to adulthood must be stressed.
6. The 'Social situation' must be carefully and continuously specified as a factor.
7. The life history material itself must be organized according to some conceptual framework; this in turn would facilitate generalizations at higher level.

A case study may be considered the final destination of abstract knowledge. It is the interpretations of the peculiar and the concrete that contribute to the continual growth of abstract knowledge.

During the last few decades, case study techniques have shown a steady trend toward formalization, that is case studies can now be conducted in such a manner that the data are amenable to quantification and statistical treatment. Case study techniques have become indispensable for administrative and therapeutic purposes. The materials collected by research minded social workers can be very useful for 'pure' or 'basic research.'

SAMPLING

In a research process, typically generalizations are not based on data collected from all the observations, all the respondents, or all the events that are defined by the research problem. Instead, researchers use a relatively small number of cases (a sample) as the basis for making inferences about all the cases (a population) as it is often impossible, impractical or extremely expensive to collect data from all the potential units of analysis covered by the research problem. Researchers can draw precise inferences of all the units (as set) based on a relatively small number of units (a subset) when the subsets accurately represent the relevant attributes of the whole set.

To accurately estimate unknown parameters from the known statistics, researchers have to effectively deal with three major problems:

1. The definition of the population,
2. The sample design and
3. The size of the sample.

POPULATION

A population is the “aggregate” of all cases that conform to designated set of specifications e.g. by employing the specifications “students” and “enrolled in state universities in India”, we define a population consisting of all the students enrolled in state universities in India. Therefore one of the first problems facing a researcher who wishes to estimate a population value from a sample value is how to determine the population involved. The population has to be defined in forms of : (1) Content, (2) Extent and (3) Time. E.g. a) All working women over 18 years of age living in urban cities, (b) In India, (c) As of June 2002.

FINITE AND INFINITE POPULATION

A population may be finite or infinite, depending on whether the sampling units are finite or infinite. A finite population contains a countable number of sampling units. An infinite population consists of an endless number of sampling units.

SAMPLING UNIT

A single member of a sampling population is referred to as sampling unit. Usually sampling units have numerous attributes, one or more of which are relevant in the research problem.

e.g. if the population is all the first division holders in graduation, then the sampling units are all first division holders.

A sampling unit can be a unit, a university, a city, or a nation.

SAMPLING FRAME

Once researchers have defined the population they draw a sample that adequately represents the population. The actual procedures involve selecting a sample from a sampling frame comprised of a complete listing of sampling units. Ideally, the sampling frame should include all the sampling units in the population.

TYPES OF SAMPLING

PROBABILITY SAMPLING

The characteristics of probability sampling is that for each sampling unit of population you can specify the probability that the unit will be included in the sample. In the simplest case, all the units have the same probability of being included in the sample.

NON-PROBABILITY SAMPLING

In non-probability sampling, there is no way of specifying the probability of each units inclusion in the sample, and there is no assurance that every unit has some chance of being included.

SIMPLE RANDOM SAMPLING

Simple random sampling is the basic probability sampling design, and it is incorporated into all the more elaborate probability sampling designs. Simple random sampling is a procedure that gives each of the total sampling units of the population an equal and known nonzero probability of being selected.

Random selection procedures ensure that every sampling unit of the population has an equal and known probability of being included in the sample; this probability is $\frac{n}{N}$, where n stands for the size of the sample and N for the size of population.

SYSTEMATIC SAMPLING

Systematic sampling consists of selecting every K^{th} sampling unit of the population after the first sampling unit is selected at random from the total of sampling units. Thus, if we wish to select a sample of 100 persons from a population of 10,000 you would take every 100th individual.

$$(K = \frac{N}{n} = \frac{10,000}{100} = 100)$$

Systematic sampling is more convenient than simple random sampling. With systematic sampling, each sampling unit in the population has a $1/K$ probability of being included in the sample. However, if there may be a pattern in the data systematically occurring at every K^{th} unit, this phenomenon may bias the sample.

STRATIFIED SAMPLING

Researchers use stratified sampling primarily to ensure that different groups of a population are adequately represented in the sample, so as to increase the level of accuracy when estimating parameters. The underlying idea in stratified sampling is to use available information on the population to divide it into groups such that elements.

CLUSTER SAMPLING

This is another type of probability sampling used by social scientists because it is the least expensive sample design. Cluster sampling involves first selecting larger groupings, called clusters, and then selecting the sampling units from the clusters. The clusters are selected by a simple random sample or a stratified sample.

SAMPLING

EXERCISE

1. A social scientist is interested in investigating the relationship between parent's occupation and the grade point averages of students on a large urban campus ($N=35,000$). As the information needed can be obtained from the students records, a sample of $n=700$ records is selected. (Use systematic sampling)

Sol.: The first step is to determine the sampling interval R as $N = 35,000$ and $M = 700$,
$$K = \frac{35,000}{700} = 50, \quad \text{i.e. } K=50.$$

We now select the first record at random from the first $K = 50$ records listed and then select the fiftieth thereafter until we have reached the sample size of 700.

2. In a study of revitalization in an urban area, we plan to examine the attitudes of new residents towards their community. We anticipate that the attitudes of homeowners may differ from those of renters. Therefore, as means of ensuring the proper representation of both the groups, we have to use proportionate stratified sample with two strata: new homeowners and new renters.

Sol.: The population consists of $N = N_1 + N_2$ with N_1 denoting the homeowners and N_2 the renters. $N_1 = 200$, $N_2 = 300$.

Therefore $N = 500$. We decide to select a proportionate sampling fraction of $1/10$ from each strata. Thus $N_1 = 20$ homeowners and $N_2 = 30$ renters.

Then the simple random sampling procedure can be applied separately to each strata.

STATISTICS

Since 1950s, all social science disciplines have experienced a rapid increase in the use of statistics and they have become essential to the field. Without statistics, we cannot see the patterns and regularities in the phenomena we study. We need statistical methods to organize data, to display information in a meaningful manner, to describe and interpret the observations in terms that will help us to evaluate our hypothesis.

The word 'statistics' has a dual meaning. Although it is used to refer to numbers e.g. per capita income, batting average etc. it is also a field of study. We refer to statistics as a field of study and some basic statistical principles are used in social sciences.

Role of Statistics: The field of statistics involves methods for describing and analyzing data and for making decisions or inferences about phenomena represented by the data. Thus, there are two types of statistics.

- a) **Descriptive statistics:** Enables researchers to summarize and organize data in an effective and meaningful way. They provide tools for describing collections of statistical observations and reducing information to an understandable form.
- b) **Inferential statistics:** Allows the researchers to make decisions or inferences by interpreting the data patterns. Researchers use inferential statistics to determine whether an expected pattern designated by the theory and hypothesis is actually formed in observation.

Both descriptive and inferential statistics help social scientists to develop explanations for complex social phenomena that deal with relationships between variables. Statistics provides the tool to analyze, represent and interpret those relationships.

TERMS USED IN STATISTICS

1. **Raw Data:** It is the data that appears or may appear in the same way as they have recorded in the field e.g. the age of the people of village Wadap of 20 individuals is, -12, 24, 33, 48, 21, 16, 11, 8, 9, 14, 19, 25, 29, 47, 52, 18, 31, 17, 44, 27.

2. **Rounding off decimals (if any):** If the data contain any decimal no, then it is rounded off for convenience e.g. 4.27, 8.72, 21.64 can be written as 4.5, 8.8, 21.7 and further again if needed to round off then 5,9,22.
When rounding off "even-integer-principle" is followed the decimals are converted into the nearest even integers not the odd integer. Because it is seen that after rounding off the number, the automatic summation value of the new even numbers approximates have closely with the actual numbers summation, than when the numbers are converted to odd number integers.
3. **Array:** This is the process of arranging the data in ascending or descending order of variables.
4. **Range of data:** Differences between the highest and the lowest values of the range of the data.
5. **Frequency:** The number of times a particular value occurs in the data is called the frequency of that value e.g. in a distribution of age of children between 0-5 years, if the ages recorded are 3,2,2,2,1,5,1,3,1,2 then the frequency of age 2 years is 4 and of 3 and 5 years is 1.
6. **Classifying the data:** The whole range of the data may be put under different class intervals for convenience. The number of classes may vary according to the need of the research and how he / she decides to use the number of categories and the cutting point of each categories.
7. **Class Interval:** The difference between the two end points of the class.
8. **Class midpoint / class work:** The middle point between the two class limits.
9. **Class frequency:** The number of items that fall into each class intervals is the frequency of that class.

From the given raw data, we can see how it can be arranged into different class intervals.

The raw data arranged in ascending order can be written as:

1,1,2,2,3,3,3,3,5,5,6,7,8,9,9,11,12,14,16,18,21,24,31,33,37,43,47,48,65

Range of data = 65-1 = 64

Class Interval (age in yrs.)	Frequency (f)	Real class limit	Midpoints
0 - 9	16	- 0.5 - 9.5	4.5
10 - 19	5	9.5 - 19.5	14.5
20 - 29	2	19.5 - 29.5	24.5
30 - 39	3	29.5 - 39.5	34.5
40 - 49	3	39.5 - 49.5	44.5
50 - 59	0	49.5 - 59.5	54.5
60 - 69	1	59.5 - 69.5	64.5

Class width = Upper class limit - lower class limit
 = 9-0 = 19-10 = = 9

MEASURES OF CENTRAL TENDENCY

When only a short summary of the data is required, the entire distribution need not be presented. In most cases, distribution tend to cluster around a control value or around a certain range of values. This property allows the researcher to represent a distribution using a single value rather than a large table and makes it easier for them to compare different distributions.

e.g. the average age of a population that is located halfway between the smallest and the largest observation in the distribution. When the observations are arranged in ascending or descending order. To obtain the median of an ungrouped data, the middle observation is identified. For odd no of observation, the median value is equal to $\frac{n+1}{2}$ th observation, for even number of observations the median value is half way between two central observations,

i.e.
$$\left[\frac{n^{th} + n + 1^{th}}{2} \right]$$

e.g. 2,7,8,10,12; Md = 08

2,7,8,10,12,14; Md = $\frac{8+10}{2} = 9$

For grouped data median is located by interpreting within the interval containing the middle observation:

$$Md = Lf \left[\frac{N(0.5) - cf \text{ below}}{f} \right] \times w$$

Where L = Real lower limit of the interval containing median.

cf below = cumulative sum of frequency below the interval containing the median

f = frequency of the interval containing the median

w = width of the class interval containing the median.

N = total no. of observations.

Or the average of income range of a population group is easier to represent characteristics of a population that can be easily compared with that of the other population graphs. So statistical measures that reflect a typical or an average characteristic of a frequency distribution are referred to as measures of central tendency. The three measures that the social scientists generally use are:

- a. Mean
- b. Median
- c. Mode

Arithmetic Mean: It is the most frequently used measure of central tendency. When people talk about the average height of the students of a class or the average age of the participant members or so, they indicate actually towards the arithmetic mean.

The arithmetic mean is defined as "The sum total of all observations divided by their member"

Median: It is a positional measure that divides the distribution into two equal parts. It is defined as the observation.

Mode: It is the category or observation that appears most frequently in the distribution, it is identified by singling out the category containing the largest number of responses. Most distributions are unimodal i.e. they include only one category in which the most cases are concentrated. However, sometimes the distribution may be bimodal or trimodal.

MERITS AND DEMERITS OF ARITHMETIC MEAN

MERITS

- 1) It is rigidly defined.
- 2) It is easy to understand and easy to calculate.
- 3) It is based upon all the observations.

DEMERITS

- 1) It cannot be determined by inspection, nor can it be located graphically.
- 2) This cannot be used if we are dealing with qualitative characteristics, which cannot be measured quantitatively.
- 3) Arithmetic mean is affected very much by extreme values.

MEDIAN

MERITS

- 1) It is also rigidly defined, easy to understand and easy to calculate.
- 2) It can also be located merely by inspection
- 3) It is not at all affected by extreme values.

DEMERITS

- 1) In case of even numbers of observations, median cannot be determined easily. We merely estimate it by taking the mean of two middle terms.
- 2) It is not based upon all the observations.
- 3) It is not amenable to further mathematical treatment.

STANDARD DEVIATION

The most useful and frequently used measure of dispersion is the standard deviation or root mean square deviation about the mean. The standard deviation is defined as the square root of the arithmetic mean of the square of the deviations about the mean. Symbolically

Where (σ) stands for standard deviation. For the sum of the square of the deviations measured from mean and N for the number of items.

e.g.

Roll No.	Marks obtained
1	31
2	35
3	38

4	41
5	49
6	54
7	59
8	66
9	68

Solution

Roll No.	Marks Obtained X	Deviation from mean (X- \bar{X} = d)	d ²
1	31	-18	324
2	35	-14	196
3	38	-11	121
4	41	-8	64
5	49	0	0
6	54	5	25
7	59	10	100
8	66	17	289
9	68	19	361
N=9			$\Sigma D^2 = 480$

$$\sqrt{\frac{\Sigma d^2}{N}} = \sqrt{\frac{1480}{9}}$$

$$= 164.44 = 12.82 \text{ (approx.)}$$

CODING

Coding schemes: The number assigned to an observation is called a code. This code should be consistent across cases or units of analysis when the same condition exists, e.g. if an code '1' means 'male' the variable associates with gender should be coded 1 for each 'male'. Information on what a code means should be listed in a code book that accompanies the data set.

Rules of coding

1. Code numbers should make intuitive sense for variables that can be rank ordered - for example, higher code should be assigned higher code numbers.
2. In deductive coding, categories should be linked to the theory from which the research hypothesis was derived.
3. The coding categories must be mutually exclusive - each unit of analysis should fit into one and only one category.
4. The coding scheme must be exhaustive - every response must fit into a category with few responses being classified as 'others'
5. Categories must be specific enough to capture differences using the smallest possible number of categories - the criterion of detail.

EXERCISE: - A CODE BOOK IS CONSTRUCTED ON BASIS OF THE QUESTIONNAIRE.

CONTENT ANALYSIS

Information about culture is available through newspapers, films, novels, etc.(communication material). It reflects the socio-cultural world of any society. It tells what a society is, what it aspires to be and how it at itself.

The method of analyzing this communication material is known as the method of content analysis. This method has been used for last many years in one for or the other by historians, literary persons, journalists, etc.

Difference between tradition at method of content analysis and modern method is that it has developed a method of quantification of qualitative research. It is developed by B. Balson.

DEFINITION

A research technique for the objective, systematic and quantative description of manifest content of communication.

TECHNIQUES

Content analysis involves coding, tabulating and analyzing existing data. The intent may be either quantitative or qualitative. That is, it may be directed towards determining the time frequency or duration of an event. Or it may be directed towards more subjective information such as motives, attitudes or values.

- **Hypothesis and formulation of research problem**

A hypothesis has to be formulated even for a content analysis project, as any research needs a direction.

- **Code categories**

The next step is of developing appropriate coding categories codes should be constructed that the categories closely approximate the meaning contained in the original communication. This reduces the likelihood of erroneous interpretation at the data-analysis stage. The choice of code categories is perhaps the most important.

Coding categories may take following forms:

- 1) The number of occurrences of a symbol.
- 2) The prominence of a symbol.
- 3) The attitude towards a symbol.
- 4) The intensity of feelings about a symbol.

One may tabulate the chronological course of event occurring.

Content analysis can provide a basis for inference. Three types of inferences may be drawn:

1. Trend inferences: such inferences related to changes over time in the quantity, prominence, attitude and intensity of feeling about a symbol.
2. Co variation inferences: Such inferences are based on the joint concurrence in two or more symbols contained in the material being analyzed.
3. Causal inferences: Such inferences are based on perceived relationship between the environment and the use of a symbol.

The techniques of content analysis can be used as the sole technique used for a particular research or as supplementary to other methods of data analysis.

ANNEXURE R3

EPIDEMIC SURVEILLANCE

In one of the villages (Pangare) in the project area, there was an 'outbreak' of Hepatitis. The information about the 'outbreak' was reported by one of our trainee Sahyogini's. To conduct active surveillance, a questionnaire was prepared with the trainees. Trainees and FRCH staff were divided into groups. A map of the village and population list were used while dividing the groups. Each group comprising 3 individuals surveyed 70-90 households and the required information was filled in the questionnaire. The identification of patients suffering from jaundice was based on the following two clinical features namely *yellowish discolouration of the eyes and high coloured urine*. All the identified jaundice patients were examined by FRCH clinicians. Line listing of all the cases was prepared to identify the index case. (See Annexure -)

Spot mapping of the case was attempted.(See Annexure-).

We were unable to detect the index case, though a broken water pipe line was detected. Interviews of Watermen and Panchayat members confirmed that bleaching powder is added regularly and in enough quantities to the water tank. But this activity is performed only once in the morning and the water tank is filled twice a day. May be this issue needs to be addressed in the early future.

Clinical services were provided to patients who wanted to get examined by FRCH clinicians. A total of 12 cases were detected satisfying the definition of yellowish discolouration of eyes and dark coloured urine.

Information about the leakage from the pipeline and about the precautions to be taken if jaundice was detected was disseminated.

Following this a focus group discussion was held in the village to find out the communities perception of why jaundice occurs and what needed to be done.

The facts, which emerged after Focus Group Discussion were :

- Jaundice is considered as a physical ailment, which has no cause and effect relation to supernatural (like God, ghost or planets) powers.

- The Community is well aware of the symptoms of 'Jaundice' such as yellowish discolouration of eyes, dark coloured urine, no appetite, nausea, vomiting etc.
- People in the community believe that oil and water are the causative factors of jaundice.
- People in the community believe that there is no medicine for Jaundice in allopathy or western system of medicine, thus they take the help of traditional healers. They use the juice of 'castor leaves' to treat jaundice. They visit the allopath to get "Shakti injections/medicines".
- The villagers had classified jaundice into two groups namely "Kamin" and "Kavil". When there is yellowish discolouration of eyes and nails it is considered to be 'kamin'. When there is an abdominal pain and vomiting and dark coloured urine it is considered "kavil". If someone is suffering from 'kavil' only then, the help of a doctor is sought.
- The community also feels that the first rains are bad and bring most illnesses.

On the basis of the focus group the trainees has planned what information is to be provided. Through this exercise, trainees have learned how to handle and manage epidemic cases.

(Sanchita, Joyita, Ramshish -- West Bengal)

ANNEXURE E-1
SYLLABUS FOR VILLAGE HEALTH FUNCTIONARY (V.H.F)

Sr.No	Subject	Topic	Time	Type
1.	Introduction	Relationship	One day (6 Hrs)	Dialogue
2.	Development	Definition of Development. Health is a part of development. Environment is a part of health, Sanitation, Social and Economic issue	10 days (60 Hrs)	Monologue, dialogue, audio-visual show, negotiation, practical(build rock-pit)
3.	Health	Concept of Health, Know Your Body, Position of different organ, Function of Human Organ	7 days (62 Hrs)	Monologue, Dialogue Practical(body mapping)
4.	Disease of Health	<p>Common Illness: FEVER Influenza. Malaria, Pneumonia, Typhoid, Gastroenteritis, Chicken pox, Measles, With wounds, UTI, periparturient Sepsis, Filariasis, Rheumatic Fever, Meningitis.</p> <p>PAINS & ACHES Neck, Eye, Ear, Tooth, Chest. Back, Hand, Leg, Abdomen.</p> <p>REPRODUCTIVE SYSTEM Ovaries, Fallopian Tubes, Uterus, Pregnancy, White discharge, Periods, Prolapse, Miscarriage, Delivery.</p>	<p>15 days (90 Hrs)</p> <p>10 days (60 Hrs)</p> <p>10 days (60 Hrs)</p> <p>10 days (60 Hrs)</p>	<p>Dialogue, Monologue, Practical (Temperature measurement, Blood Pressure check, Haemoglobin test, Urine Protein test, Pulse, Respiratory rate, heart sounds.</p> <p>Dialogue, Monologue, Practical</p> <p>Dialogue, Monologue, Practical (slide show)</p> <p>Dialogue, Monologue, Practical (General Examination)</p>

Sr.No	Subject	Topic	Time	Type
		RESPIRATORY SYSTEM Pharyngitis, Laryngitis, Bronchitis, Diphtheria, Tuberculosis, Whooping cough, Tracheitis, Tonsillitis.		
5.	Medicine	Use of medicine, Allopathy, Homeopathy, Ayurvedic, Home made medicines, Use of medicine in particular disease, Exercise	5 days (30 Hrs)	Monologue, Practical (Exercise) dialogue
6.	Emergency	Problem of breathing, bleeding, shock, Loss of consciousness, Fractures, Sprain and dislocation, Snake bite, Burn	8 days (48 Hrs)	Monologue, dialogue
7.		Gender, Caste, Illiterates(Pre- literate), Political system Panchayati Raj	10 days 60 Hrs	
8.	Nutrition	Balanced diet	2 days	
9.	Poverty		2 days	

ANNEXURE E-1 SYLLABUS FOR VHF TRAINING

- 1) Village environment
 - Forest
 - Water source, Air, Aquatic creatures
 - Land
 - Wild Animal
 - People
- 2) Occupational practices
 - Shifting cultivation
 - Daily labour
 - Farming
- 3) Religious cultural practices
 - Rites and rituals
 - Taboos
- 4) Superstitions
 - Do's and don'ts
- 5) Gender situation
 - Acknowledgement of women folk
 - Liberty, independency between men, women
- 6) Community development
- 7) Food intake
 - Animal source
 - Agro source
 - Natural source
- 8) Sanitation
 - Drainage
 - Toilets
 - Soak pits

9) Drinking water

- Spring
- Dug well
- Tube well
- Jack well

10) Know your body

- Respiratory system
- Digestive system
- Reproductive system
- CVS

11) Cause and effect of minor/major illness

- Pains and aches
- Cold, Cough, Fever, RTI
- Diarrhoea, Gastritis, Gastroenteritis, Typhoid
- Measles, Small pox, Miscarriage, Uterine Prolapse
- Perpeurial sepsis, Anaemia, Pneumonia, Bitot's spot, Beri beri, Conjunctivitis
- Urinary Tract Infection
- Jaundice, Pneumonia

12) Health care practices

- Traditional healer
- Quack
- PHC
- Sorcery

13) Vitamins and minerals and its functions and sources - A, B, C, D, E, K

14) Emergency – RTA, Burning, Shock, Fracture, Drowning

15) Identification and utilisation of Herbal medicinal plants

16) Physical exercises and Yogas

17) Application of Homeopathy medicines

18) Application of Allopathic medicines

19) Utility of Naturopathy

ANNEXURE E2
MULTIPLE CHOICE QUESTIONS
For the evaluation of the trainees

1. Where does the Respiratory System begin from?
 1. Nose
 2. Respiratory Tract
 3. Throat
 4. Mouth

2. Which organs are present in Digestive system ?
 1. Nose, Mouth, Liver, Lungs
 2. Mouth, Oesophagus, Stomach, Pancreas
 3. Mouth, Oesophagus, Stomach, Small intestine
 4. Abdomen, intestines, liver, lungs

3. This organ is a part of the Reproductive system
 1. Abdomen
 2. Appendix
 3. Ovaries
 4. Kidney

4. What is the causative agent of Tuberculosis?
 1. Bacteria
 2. Pollution
 3. Virus
 4. Parasite

5. What is the average duration in days of a woman's menstrual cycle?
 1. 22 - 35 days
 2. 16 - 20 days
 3. 40 - 50 days
 4. 27 - 28 days

6. How many days prior to menstruation do the eggs emerge from the ovaries?
1. 16 days
 2. 14 days
 3. 18 days
 4. 28 days
7. Common Cold due a to viral infection means -
1. Water - like clear fluid/liquid
 2. Viscous - white liquid
 3. Viscous - white liquid and blood
 4. Green phlegm / mucus
8. How is Tonsillitis diagnosed?
1. Inflammation in throat glands and fever
 2. Inflammation in back-wall of throat and change in voice
 3. Pain in chest and wheezing
 4. Difficulty in breathing and cough
9. Greenish-yellow phlegm/mucus is
1. Seen in germ infection
 2. Seen in Bronchitis
 3. Seen in Tuberculosis
 4. Seen in Tonsillitis
10. What is the recommended level of Haemoglobin in a healthy woman?
1. 1 mg %
 2. 6 mg %
 3. 11 mg %
 4. 8 mg %
11. What is the cause of Malaria?
1. Insects spread by air / wind
 2. Polluted water
 3. Mosquito bite
 4. Unhygienic food

12. A child is suffering from Diarrhoea, what will you administer / do immediately

1. Give ORS
2. Send to a doctor
3. Give something to eat
4. Nothing

13. What causes viral jaundice?

1. Insects in air
2. Water
3. Drinking tea
4. Sneezing

14. What will you take for high-fever?

1. Brufen
2. Sleep under rugs
3. Cotra
4. Paracetamol

15. What are the symptoms of Typhoid ?

1. Rise and fall in body temperature
2. Continuous tears from eyes.
3. Continuous rise in fever
4. None of the above

16. Air-cells are situated in -

1. Digestive tract
2. Small intestine
3. Lungs
4. Blood vessels

17. Anus is attached with -

1. Kidney
2. Large intestines
3. Small intestines
4. None of the above

18. Anaemia means -

1. Lack of iron in blood
2. Lack of water in blood
3. Lack of calcium in blood
4. Lack of proteins in blood

Fill in the blanks -

Which disease, do the following symptoms point at :

19. Curd-like discharge, sour smell, itching immediately after menstruation

20. Yellow-green discharge, continuous itching _____

21. Ash-coloured discharge, fishy smell and itching _____

Which traditional cures will you use for the following problems :

22. Candidiasis

1. Wash vaginal tract with curd.
2. Eat rice and wash vaginal tract with rice-extract
3. Nothing

23. Bacterial vaginosis

1. Eat and wash vaginal tract with turmeric
2. Eat and wash vaginal tract with curd
3. Wash vaginal tract with extract of crushed Neem leaves
4. Wash with curd and tobacco.

24. Trichomoniasis

1. Drink ginger-extract
2. Put unpeeled garlic pip in vaginal tract
3. Eat curd
4. Nothing

25. What will you administer for bacterial disease ?
1. Cotrimoxazole
 2. Paracetamol
 3. Mebendazole
 4. Brufen
26. What will you advise for abdominal pain during menstruation ?
1. Avoid onion-intake
 2. Drink ginger tea
 3. Avoid jaggery intake
 4. All of the above
27. How will you recognize excessive bleeding during menstruation ?
1. Feel the need to change clothes twice in a day
 2. Woman can't get up from bed
 3. Low haemoglobin
 4. Feel the need to change clothes at least 4-6 times
28. Which of the following is a dangerous situation ?
1. Always excessive discharge during menstruation
 2. Always less discharge during menstruation
 3. Discharge in between two menstruation periods
 4. None of the above

From the following, when will you advise a patient to consult a doctor?

29. In respiratory system
1. A child is coughing excessively
 2. Greenish-yellow phlegm/mucus
 3. Area between ribs is being sucked in
 4. The child is crying
30. If a child has fever in which situation will you send him/her to a doctor ?
1. Fever is at 101.5° F
 2. Joint-ache along with fever
 3. Diarrhoea with fever
 4. Cold with fever

31. On noticing which of these symptoms will you send to a doctor ?

1. Headache
2. Inflammation in throat glands
3. Chin does not touch chest
4. Greenish-yellow phlegm / mucus

32. How will you know that the pain is serious ?

1. Light pain in chest, which does not spread
2. Patient cannot sleep at night
3. Pain increases while working or lifting weights
4. No relief even after cotra is administered

33. Where is the pain located in appendicitis?

1. Navel and the area between Navel and left thigh
2. Navel and the area between Navel and right thigh
3. Below the abdomen
4. Below left ribs

34. How will you identify internal bleeding?

1. Drying of skin
2. Increased pulse rate
3. Bluish-yellow skin colour
4. Severe headache

35. Whose fault is it if a female-child is born?

1. Woman
2. Man
3. Fate / Result of bad-deeds in previous birth
4. No one

36. If a couple is not able to conceive, whom would you advice to consult a doctor?

1. Woman
2. Man
3. Both
4. No one

37. In case of Sore throat what will you do
1. Give Cotra
 2. Give CPM
 3. Aspirin gargle
 4. All of the above
38. How will you calculate expected date of delivery
1. When labour pain starts
 2. Nine months from LMP
 3. Send to the doctor to calculate
 4. months and 7 days
39. From when should a pregnant woman take Iron Folic acid tablets?
1. From when periods stop
 2. After 6 months of pregnancy
 3. After delivery
 4. After 3 months
40. If a pregnant women complains of severe headache, difficulty in seeing, abdominal pain what condition will you think of
1. Pre Eclampsia
 2. UTI
 3. Anaemia
 4. None of the above
41. A pregnant woman complains of mild bleeding per vaginal in her 4th month of pregnancy. What will you do?
1. Reassure her it is normal
 2. Advice her to take rest
 3. Send to the nearest doctor
 4. Give Iron and folic acid tablets
42. A 13 year old boy complains of fever, headache, and rash over the body in different shapes and sizes. The diagnosis is
1. Measles
 2. Typhoid
 3. Chicken pox
 4. Sore throat

43. A patient is brought and the following signs are seen cold hands and legs, fast and weak pulse, severe abdominal pain. The diagnosis is
1. Severe dehydration
 2. Typhoid
 3. Internal haemorrhage
 4. All of the above
44. Which of the following signs show internal bleeding?
1. Strong and fast pulse
 2. Severe thirst
 3. Increased sleepiness
 4. None of the above
45. Respiratory diseases are more commonly seen in
1. Big houses
 2. Small houses
 3. In poor people
 4. In over crowded houses
46. In suspected TB you will
1. Diagnose and start treatment
 2. Take sputum and send to PHC
 3. Take patient to the government hospital
 4. None of the above

True or False

47. Malaria is caused by a bacteria _____
48. TB is treated by antibiotics for 6 months _____
49. Typhoid fever shows the pattern of increasing and decreasing every day _____
50. Epidemiology is the study of illness _____
51. Anatomy is the study of why disease occurs _____

Fill in the blanks

52. Chicken pox is caused by a _____
53. Colour of Typhoid stool is _____
54. The formula for calculating IMR is _____
55. The drug of choice to treat Pneumonia is _____
56. Rheumatic fever starts with a _____
57. Severe Pneumonia in a 1 month old baby will have a respiratory rate of _____
58. In case of nose block what is given? _____
59. The most common cause of cold is _____
60. A break in the continuity of skin or mucosa is called a _____
61. Disease is caused when there is a imbalance between agent host and _____
62. Percentage of women having Anaemia in India is
1. > 70%
 2. 50%
 3. > 50%
 4. < 50%
63. How much Iron does the baby take from the mother?
1. 5.5 gm
 2. 1-4 gm
 3. 3.5 gm
 4. None of the above

64. In Vitamin D deficiency the following may be seen
1. Weakness
 2. Bowing/bending of leg bone
 3. Bitots spots
 4. All of the above
65. Which of the following has largest protein content for 100 grams.
1. Fish
 2. Mong dal
 3. Mutton
 4. Soyabean
66. Vitamin A is found in
1. Papaya
 2. Carrot
 3. Liver
 4. All of the above
67. Vitamin C is necessary for
1. Formation of Hemoglobin
 2. Formation of antibodies
 3. All of the above
 4. None of the above
68. A pregnant women should gain weight as follow
1. 1.5 kilos totally
 2. 1 kg per month
 3. 500 gm every 2 weeks
 4. None of the above
69. Placenta is formed at the end of
1. 4 weeks
 2. 3 months
 3. 21 days
 4. None of the above

70. Fat soluble vitamins are

1. A
2. A, E
3. D
4. All of the above

71. Measles can cause

1. Diarrhoea
2. Vitamin A Deficiency
3. All of the above

True or False

72. Tetanus injection is given during pregnancy _____
73. Throat infection may cause heart disease _____
74. Iodine is found most in cabbage _____
75. Mid arm circumference is used to detect malnutrition _____
76. Lightening means baby's head is near the ribs _____
77. Amoebiasis causes pain in right iliac fossa _____
78. Patients having ulcer in 1st part of small intestine (duodenum) are young individuals _____
79. Appendix has no function _____
80. Absorption of food takes place in large intestine _____
81. Growing baby gets nutrition from mother through ovaries _____
82. Cancer means swelling, pain, redness and loss of function _____
83. Malaria can cause brain damage _____
84. Pneumonia affects the larynx _____
85. After chewing food, it enters the stomach _____
86. Diphtheria may affect the Pharynx, Larynx and nose _____

87. Blood amount in our body is 3-5 liters _____
88. Pancreas produces 1 hormone _____
89. Our brain regulates heart rate, respiratory rate and temperature _____
90. Expectorant cough syrup is given in dry cough _____
91. Antibiotics are given in viral diarrhoea _____
92. Drug of choice in cold is cotromoxazole _____
93. High fever means temperature $> 102^{\circ}$ F _____
94. Malaria is a bacterial infection _____
95. CPM is given in ulcer disease _____
96. Measles vaccine is given at 4 months _____
97. Amniotic fluid is composed mostly of baby's urine _____
98. Vomiting in early pregnancy is due to progesterone _____
99. Deep breathing is one exercise during pregnancy _____
100. Cotrimoxazole can be given to the pregnant woman _____