Effectiveness of Selected Traditional Aids of Rajasthan for Educating Anganwadi Workers (ICDS)

BY

Geeta Mohan

A THESIS SUBMITTED TO THE BHARATHIAR UNIVERSITY, COIMBATORE, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

April - 1988

Acknowledgement

ACKNOWLEDGEMENT

The author wishes to place on record her heartfelt and deep sense of gratitude to Dr.(Miss) S.Sithalakshmi, M.Sc., Ph.D. (Madras), Professor and Head of the Department of Home Science Extension Education, Sri Avinashilingam Home Science College for Women, Coimbatore, for her keen interest, support, valuable and inspiring guidance and timely encouragement given throughout the study.

She wishes to express her thanks to Dr. (Mrs.) Pankajam Sundaram, M.Sc., Ph.D (Ohio State), Dean, College of Home Science, Rajasthan Agriculture University, Udaipur, for her valuable suggestions and constant encouragement in conducting the study.

She records her thanks to Dr. (Mrs.) Rajammal P. Devadas, M.A., M.Sc., Ph.D (Ohio State), D.Sc.(Madras), Director and Dean of Post Graduate Studies, and Dr. (Mrs.) Lakshmi Santa Rajagopal, M.S., (Tennessee), Ph.D (Madras), Principal, Sri Avinashilingam Home Science College for Women, Coimbatore, for the opportunity given to undertake this study.

The author records her sincere thanks to Tmt. S.Radha Devi, M.Sc., (Kerala) M.Phil., Dip.Ed. (Madras), Professor, Department of Statistics, Sri Avinashilingam Home Science College for Women, Coimbatore, for her valuable help in processing the data.

Great indebtedness is acknowledged to the Heads of the ICDS Training Centres, Udaipur District for their excellent co-operation throughout the study.

Last but not the least, to her parents and friends for all their encouragement and help, she remains ever grateful.

TABLE OF CONTENTS

Chapter		Page No.
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF APPENDICES	
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	6
	A. Meaning & Scope of Communication	6
	B. Communication and Learning	8
	C. Role of Audio Visual Aids in Communication	10
and	D. Use of Folk media for Education	12
III	METHODOLOGY	18
	A. Selection of the Locale & Sample for the Study	18
	B. Selection of the Subject Matter	20
	C. Selection of Experimental and Control Groups	21
	D. Preparation of Aids	22
	E. Development of Tools for Evaluation	31
	F. Conduct of the Study	31
	G. Analysis of the Data collected	32

Chapter		Page No.
IV	RESULTS AND DISCUSSION	33
	A. Socio Economic Background of the Respondents	34
	B. Knowledge Scores obtained by the Experimental & Control Groups for the different Topics selected	36
	C. Effectiveness of the different Aids on Knowledge Gain and Retention	39
	D. Association of Age & Educational Status with Knowledge Gain and Retention	43
V	SUMMARY AND CONCLUSION	51
	BIBLIOGRAPHY	55
	APPENDICES	63

LIST OF TABLES

Tables		Page No.
I	SAMPLE FOR THE STUDY	20
II	DETAILS OF EXPERIMENTAL AND CONTROL GROUPS	21
III	AGE OF THE RESPONDENTS	34
IV	EDUCATIONAL STATUS OF THE RESPONDENTS	35
V	SCORES FOR KNOWLEDGE GAIN & RETENTION	36
VI	ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH KAVAD	39
VII	ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH PAD	40
VIII	ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH PUPPETS	41
IX	ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH LECTURE METHOD	42
X	AGE Vs KNOWLEDGE GAIN AND RETENTION - MILESTONES OF DEVELOPMENT	43
XI	EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - MILESTONES OF DEVELOPMENT	44

Tables		Page No.
XII	AGE Vs KNOWLEDGE GAIN AND RETENTION - PROTEIN CALORIE MALNUTRITION	45
XIII	EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - PROTEIN CALORIE MALNUTRITION	46
XIV	AGE Vs KNOWLEDGE GAIN AND RETENTION - POPULATION EDUCATION AND FAMILY WELFARE	47
XV	EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - POPULATION EDUCATION AND FAMILY WELFARE	48
XVI	AGE Vs KNOWLEDGE GAIN AND RETENTION - IMMUNIZATION	49
XVII	EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - IMMUNIZATION	50

LIST OF FIGURES

Figure		Page No.
1	UDAIPUR DISTRICT MAP SHOWING THE LOCATION OF THE TRAINING CENTRES	19
2	FOLDED KAVAD	23
3	UNFOLDED KAVAD	23
4	KAVAD PANELS SHOWING THE MILESTONES OF DEVELOPMENT OF CHILDREN 0 - 2 YEARS	25
5	PAD PAINTING ON PROTEIN CALORIE MALNUTRITION	27
6 (a to d)	DIFFERENT STAGES OF THE PUPPET PLAY	28,29
7	USE OF LECTURE METHOD	30
8	COMPARISON OF EXPERIMENTAL AND CONTROL GROUPS FOR THEIR KNOWLEDGE GAIN AND RETENTION	38

LIST OF APPENDICES

Appendix		Page No.
I	KAVAD SONG ON MILESTONES OF DEVELOPMENT	63
II	PAD SONG ON PROTEIN CALORIE MALNUTRITION	69
III	PUPPET PLAY ON POPULATION EDUCATION AND FAMILY WELFARE	75
IV	LECTURE NOTES ON MILESTONES OF DEVELOPMENT	91
V	LECTURE NOTES ON PROTEIN CALORIE MALNUTRITION	99
VI	LECTURE NOTES ON POPULATION EDUCATION AND FAMILY WELFARE	113
VII	LECTURE NOTES ON IMMUNIZATION	120
VIII	INTERVIEW SCHEDULE TO ELICIT BACKGROUND INFORMATION OF THE RESPONDENTS	128
IX	KNOWLEDGE TEST ON MILESTONES OF DEVELOPMENT	129
X	KNOWLEDGE TEST ON PROTEIN CALORIE MALNUTRITION	131
XI	KNOWLEDGE TEST ON POPULATION EDUCATION AND FAMILY WELFARE	134
XII	KNOWLEDGE TEST ON IMMUNIZATION	136

Introduction

INTRODUCTION

The main pivot of human development is education and the keystone of education is communication. Communication is vital for learning and therefore modern educators pay much attention to the means of communication and are experimenting to develop appropriate tools for communication.

Developing countries face a number of problems which are of vicious nature such as malnutrition leading to poor health, disease, low work output, low standard of living etc. Illiteracy and ignorance coupled with poverty are the causative factors for many of these problems. Concerted efforts are therefore made by the Governments to initiate intervention programmes to alleviate poverty and to combat health and nutrition disorders.

Provision of free services alone will not solve the problems as they ultimately become only 'dole' programmes. Experiences with earlier intervention programmes have pointed out the need of education to involve the beneficiaries through a parallel programme to enable them to effectively participate in the efforts with understanding.

As a corollary, planners and policy makers have started designing the health intervention programmes with a package of educational components to go hand in hand with the 'service' components. Imparting training to personnel with emphasis on grass root level functionaries implementing the programmes as well as educating the beneficiaries themselves are the two major aspects contemplated in all the intervention programmes of recent origin.

The Integrated Child Development Service Programme (ICDS) is today the largest countrywide nutrition and health intervention programme in India. With its humble

beginnings in 1975, with just 33 districts spread over 22 states, today the ICDS has grown in its stature both in terms of number of preschoolers and the mothers covered as well as its scope of services for the target groups.

ICDS provides a package of services such as Immunization, growth monitoring, health check ups, referral services, supplementary nutrition, nutrition and health education and non-formal preschool education, the target group being children between 0-6 years, expectant and nursing mothers and other women between 15-45 years. The concept of providing a package of services is based on the fact that the overall effect will be much larger if all the services converge on the same child in an integrated manner (Mistry, 1986).

ICDS has provision for health and nutrition education not only to the target groups of beneficiaries but also to the personnel involved in monitoring the programme. Thus training of the Anganwadi workers in the subject matter as well as the means of imparting these messages to the respective groups of children and their mothers assumes great significance.

The National Institute of Public Co-operation and Child Development (NIPCCD) has outlined the syllabus for a three months' job training for Anganwadi workers to be given by institutions of repute in the different parts of the country. While there is uniformity in the duration and syllabus for training of the Anganwadi workers, the approaches to teaching and the channels of communication used vary with the training institutes concerned.

The impact of the use of a variety of channels of communication, in terms of methods of education and audio-visual aids has been well established through a number of

studies. With the advancement of science and technology, the availability of communication media is also improving. Today, television and radio reach even the remotest villages in many parts of the country. However human contact inputs through community level workers are still required for effective and lasting impression of the messages to be communicated. This is specially so when illiteracy is a constraint on mass utilisation of the infrastructure. The value of audio-visual communication in effectively transferring messages directly through the workers is therefore obvious.

No communication can take place in a cultural vacuum. We cannot ignore the cultural norms and attitudes in planning communication strategies (Shyam, 1975). Traditionalism plays a significant role in acceptability of ideas.

Folkways of communication have been in vogue through centuries preserving the cultural heritage and thus becoming an integral part in the way of life of the people of the community. Rural communities are rich in folkways communication, which are locate specific, varying from state to state and region to region. The folk media of each locality have to be utilised to the fullest possible extent to strengthen the familiarity and involvement. These are transmitted from one generation to another and the people are aware of them. They can be effectively adapted and used to convey useful information (Food and Agriculture Organisation, 1981).

The use of folk media of communication for education has however been very sporadic and casual. Research studies establishing the credibility of their media have been scanty.

More concerted efforts are needed in this direction, keeping in view the richness of our culture and the problems of communication in India. It is with this objective, this study was undertaken to compare the effectiveness of the use of certain traditional folkways of communication in the state of Rajasthan in imparting training to Anganwadi workers.

Pad, Kavad and Puppets are the major folkways of communication in Rajasthan state, the home state of the investigator. These are particularly used by wandering nomadic preachers who narrate mythological stories and religious tenets to the local folks. They are portable and handy and the people are also familiar with these forms of communication. They do not involve complicated operational techniques. Their indigenous nature is highly acceptable to the masses.

In the great tradition of folk arts, 'Pad-chitran' or Pad paintings expose a wonderful world of an art form, combining music, dance, poetry and the art of story telling. A 'Pad' or 'Padh' is a piece of painting on a big cloth or canvas depicting the great events in the life of a folk-hero or a famous personality, used by the interpreter to convey messages and meanings to the illiterate masses.

Similar to this, is the Kavad, another indigenous device, a kind of magic box made with folding panels on which pictures are painted, which attract the rural folk profusely. The painted stories are explained through musical narration by the Kavad singer. The visuals painted on the panels of the Kavad are unfolded by him one after another to arouse the curiosity of the audiance as he proceeds with the narration of the story.

Puppets which have a distinctive position in theatrical art, is known all over the world as an effective medium of entertainment and communication. Puppetry is popular among the rural masses and can depict any theme in a simple, yet effective version and in a manner to catch the eyes of the audience, and make them identify themselves with the theme and learn from it.

These colourful traditional aids have been found to work wonders with illiterate folks, when used extensively in the villages of Rajasthan. They can be adapted to be effective teaching aids with lasting effects for class room communication and extension work.

This study was therefore undertaken with the following objectives in view:

1 To study: the effectiveness of three selected traditional aids namely Kavad, Pad & Puppets in comparison with the commonly adopted lecture method on gain and retention of knowledge by the Anganwadi workers, and

2 the impact of socio-economic variables like age and education on gain and retention of knowledge through exposure to the selected aids.

Assumptions:

1 Traditional aids provide familiar, realistic audio and visual experiences and therefore are more effective than lecture method.

2 Traditional aids differ from each other, in terms of their effectiveness with regard to different components or contents of teaching.

Review of Literature

II REVIEW OF LITERATURE

A survey of Literature dealing with the problem under study revealed that there have been very few studies conducted which were directly relevant to the present study.

However, a critical review presented below would provide a comprehensive basis to the scope and requirements of this investigation. The review has been done on the following aspects:

A. Meaning and Scope of Communication
B. Communication and Learning
C. Role of Audio Visual Aids in Communication
and D. Use of Folk media for Education

A. Meaning and Scope of Communication:

The word communication originated from the word 'communis', which means common. Communication in an act by which a person shares the knowledge, fellings, ideas, information, etc. in ways that each gains a common understanding of the meaning, intent and use of the message.

The sociologists, educationists and psychologists have defined communication in various ways and according to the disciplines to which they belong.

To Loomis and Beegle (1950) it is "The process by which information, decisions and directions pass through a social system and the ways in which knowledge, opinions and attitudes are formed or modified".

According to Schramm (1955), "Communication occurs when two corresponding systems coupled together through one or more non-corresponding systems assume identical status as a result of a single transfer along the chain".

Brown (1958) defined communication as "a process of transmitting ideas or thoughts from one person to another for the purpose of creating understanding in the thinking of the person receiving communication".

As Leagan (1961) stated, "It is a process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of the message. In essence, it is the act of getting a sender and a receiver tuned together for a particular message or series of messages".

"Communication is a complex process involving many dimensions", (i) transmission of material from the sender to the target audience, (ii) its reception and comprehension, and (iii) its acceptance or rejection (Likert, 1961).

Hovland (1964) quoted by Dhama and Bhatnagar (1981) states "Communication is the force by which an individual communicator transmits stimuli to modify the behaviour of other individuals".

Rogers (1968) explains Communication as "The process by which messages are transferred from a source to one or more persons".

"It is the interchange of symbols between persons", says Vardaman (1970). Gist (1980) cited by Dhama and Bhatnagar (1981) also points out that "when social interaction involves the transmission of meaning through the usage of symbols, it is known as communication".

According to Goyer (1980), "Communication is any occurrence involving a minimum of four sequential ingredients: (1) a generator of a (2) sign-symbol system which is (3) projected to (4) atleast one receiver who assigns meaning".

Dhama and Bhatnagar (1981), Stevens (1980), and Warren & Weaver (1980) view communication as discriminatory response of an organism to stimulus and a procedure by which one mind can affect another.

Taking a cue from the foregoing definitions, it can be concluded that (i) communication means sharing of ideas with some one. To establish "commonness" with intended audience is the goal of communication process (ii) Communication process involves source, encoder or transmitter, signal, decoder, receiver or destination and feed back. (iii) Each person in the communication process acts both as a source and as a receiver.

B. Communication and Learning:

Learning is basic to all educational process and is considered a fundamental process or characteristic of mind.

According to Kolesnik (1963) learning may be defined in non-technical terms as the acquisition, retention and application of knowledge, skills, attitudes, ways of thinking or some other type of new response.

To Rogers (1968), learning is a relatively enduring change in response to stimulus. Communication has its central interest in those behavioural situations in which a source transmits a message to (a) receiver (b) with conscious intent to effect better behaviour (Miller, 1983).

Godfrey (1967) expresses that learning is acquisition of something by a process other than maturation. There are certain factors which affect the process of learning. These factors can be grouped as internal and external factors. The external factors are guidance, length of task, meaningfulness of task and learning the task as a whole. Similarly,

there are several internal factors, such as age, intelligence, previous experience, motivation and reinforcement. Among the internal factors age plays an important role in the acquisition phase of the learning process.

Another important factor which is considered to affect knowledge and retention is education. Education plays a significant role in shaping the beliefs, values and even knowledge and skills of an individual.

Beal and Sibley (1967) point out that, an individual's ability to read and write, and the amount of formal education he possesses will affect the manner in which the individual gathers data and relates himself to his environment.

Retention along with acquisition is an integral part of the learning process. Whenever any task is learnt, it is retained too. During the process of learning a person acquires knowledge but with the lapse of time he forgets. Hence retention refers to the amount of knowledge retained over a particular period.

Good retention depends on the quality of learning, qualities of the learners and utility and applicability of the subject matter to the learner. Things considered important are remembered better than things that do not make any difference to the learners.

Leagans (1971) explains retention as an unconscious activity. As a result of learning and experience our brain undergoes changes, so that certain of the nerve cells are more likely to be excited again, given the slight stimulus.

C. Role of Audio Visual Aids in Communication:

Lecture is the most commonly used method by the educationists and extension workers. But it is found that it is more effective, when combined with supportive visual aids.

A study conducted by extension specialists on "effectiveness of extension methods on retention of knowledge and adoption of practices in seed treatment of cotton, "revealed that lecture alone and lecture with flashcards was used to desseminate the knowledge to the farmers. The result was that the latter combination i.e. with flashcards was superior to lecture alone. Through lecture alone the gain in knowledge was 9.29 per cent while in combination with flashcards it increased to 12.24 per cent.

Subramanyam (1976) reports that talk with slides, flannel and discussion was the best combination. Talk along with discussion, was the next best combination and talk with slide and discussion also gave good results.

Bharti (1983) stating on the effectiveness of selected traditional aids on gain and retention of knowledge in nutrition, reported that in case of retention of knowledge, lecture was the least effective, more knowledge was retained through traditional aids, as compared to lecture method alone.

Audio-visual materials are not substitutes for good teaching. They are complementary materials which assist the teacher in the communication process. While there is no one way to use these materials, there are guidelines which should be considered, if one is to get the greatest amount of good teaching and learning from them.

The purpose of audio visual education is to improve learning. Visual communication has a very special role in any system of communication. It has been determined that the most effective learning takes place when the individual has experience with the subject under study. Traditional methods of teaching by lecture and text book frequently result in students memorizing meaningless facts without actually learning.

Knowtton (1948) had defined audio visual communication, in its role as a potential scientific discipline, as designating that part of the broad field of education concerned with the study of pictoral messages as these have a bearing on the learning process.

Dent (1949) states that each visual aid would produce extremely satisfactory results in education if properly used at the appropriate time and place.

There are three modes of communication, "Speaking-Listening, Visualizing-observing, and writing-reading". Audio-visual materials are used in all the three types of communication. It is observed in a UNESCO study (1958) that audio visual communication is more easily understood than auditory ones alone atleast by the people of limited education.

Blake & Bates (1961) mention that visual and audio aids offer the extension worker a variety of opportunities to increase the effectiveness and to clear ideas being transferred. They enable the learner to see and hear.

Rao (1967) and Kaur (1970) report that audio visual aids are highly effective in changing knowledge, skill, attitude and behaviour.

Kidd (1980) views that audio visual devices do not replace the teacher, but they can be effective and economical means to good learning.

D. Use of Folk Media of Education:

There is a growing awareness of a need to integrate development with culture. Social scientists and educators have found the positive relationship between culture and development.

Gandhiji's outlook was modern and scientific but he aimed to integrate the modern with indigenous. It is with the above awareness, that social educators and communicators are finding the traditional media of education equally useful in comparison with modern media.

Dale (1969) while pointing to the advantages of the channels of communication stated that when agriculture information is channeled through traditional media, it looked familiar to the farmer and he understood it easily. The message became more effective because he was habituated in receiving information in that particular style.

Dubey (1973) in his study on India's Changing Villages found that the media of communication which were alien to the experience of the common village folk and had no place in their culture, were not effective. The success of communication depended upon the symbol and language of the people.

Krishnamurthy (1975) in his study revealed that folk and traditional forms in Rajasthan and Madhya Pradesh had proved that they were effective vehicles of communication.

The study team of Vidhyalankar (1978) had observed that traditional media had great appeal to the masses and also had touched the deepest emotion in them. The rich tradition of plastic and performing arts gave rise to the numerous visual vocabulary. Not only gestures (mudras) but even combination of colours carried narrative and emotive messages without the aid of the spoken word.

Studies have stressed that no mass media can exist in a cultural Vacuum. Communication is fully realised only when it passes through the attitudes and behavioural pattern of the people.

Chawala (1979) has stated that whatever the medium used, the message acquired a relevance and effectiveness if the folk form prevalent in a particular region can be judiciously used.

As Rehman (1979) stated, we can indeed exploit the richness and variety of traditional forms and also take note that though these forms are essentially Visual, they invariably rely on the communication of the message by the use of words which are as direct and easy to understand as the supporting, reinforcing visual forms. He further suggested that "traditionally accepted visual forms are essentially visual forms of communication".

Prasad (1979) in his paper on the problems of rural communication in India stated that the Indian communicator had to find his answers within the country and not through technology transfer. Indian reality is multi dimentional and will not yield to single point approach. In the same paper Prasad drew attention to Asian countries having a long history of using visual symbols to convey ideas.

Kidd and Colletta (1980) pointed out that culturally rooted development strategies have focussed on the use of folk arts as a medium for development. The entire range of folk culture can form the accessible building blocks for improving the human condition.

The exposure of the rural population to social education through the folk media is as significant as the modern media. And, at the slow rate at which radio, TV and the press are expanding and at which literacy, and the economic development of the rural areas are proceeding, the age old media will contimue to thrive for years to come.

India, with its vastness in area has also variation in her folk lore. The tamasha is an extremely lively and robust form of folk media with the star performer being the female singing the favourite songs of the patrons as they shout out "Daulat Ziada" (May the wealth of the donar increased !).

Powada of Maharashtra is a folk ballad form dramatic in nature, dominated by tales about the events of history. It is sung to the accompaniment of musical instruments generally by a group with a leading voice while singing the leader indulges in dramatic gestures, and the tempo is heightened by a refrain or chorus which rounds off each stanza.

An interesting variation is the tamasha performed by the Dangi tribals of Gujarat. The roles of women are played by men, and are interspersed with songs and dances.

The Dashavatar is a religious folk form, a re-enactment of the ten incarnations of Vishnu, and the story of the Lord and His devotees. The hall mark of this folk form is improvisation to cater to the preferences of the

villagers of different areas and is performed within the precincts of a temple with only male artists being allowed to play various roles.

Nautanki is a North India folk drama form performed on an open and bare stage. Music is of prime importance in this folk drama, for it gives it the pace and tempo required. As in opera, the dialogues are sung to popular folk melodies.

Yakshagana, is 'the song of the Yakshas', the popular folk drama of Karnataka. The narrator sings verses and exchanges witty remarks with the players and handles the cymbals and gongs.

The origin of jatra (journey), the folk theatre of Bengal and Orissa, is obscure. To begin with, jatra compositions focussed on episodes from the lives of Krishna and Radha, and they proved to be successful in propagating the Bhakti cult. Whatever themes are taken up, the basic structure and style of the Jatra has remained unchanged.

The Villuppattu of Tamilnadu uses a big bow which is struck with painted sticks, as it rests on the neck of a large earthen pot. It provides accompaniment to the ballad singer. The singers are frequently divided into two groups and indulge in musical question and answer contents.

There are many echoes from the past that make us sure that puppetry in India is one of the most ancient arts. The most interesting act is, that even today puppetry is practised in almost all the countries of the world. It has been weaving itself slowly and permanently into the cultures of all the peoples, both East & West.

It is fun to learn with puppets as they serve two purposes, i.e. learning as well as entertainment. Puppets are small models which can be used to act out stories which are interesting not only for children but also for adults and can convey messages on health, nutrition, sanitation and social problems etc. in an interesting manner.

Puppets are widely used for communication purpose, all over the world. There are many studies available which confirm the effectiveness of puppets as means of communication.

Fred (1967) reported that illiterate adult villagers preferred decorative, wall painting, and puppet style methods, while literate adults in the village preferred more realistic forms.

The Indian Institute of Mass Communication (1973) confirmed that puppets and films were effective and popular in appealing to the audiance.

'Kavad' and 'Pad' are the traditional forms of communication in North India specially in Rajasthan and Madhya Pradesh.

Bhatnagar (1981) in her study in Rajasthan revealed that traditional aids like Puppetry and Kavad are the most effective aids than the modern aids, like radio and flip book in communicating educational message to rural women.

Upadhyaya (1981) has stated that in recent years puppets have also begun to be used by advertising firms to push the sales of soap, vanaspati or fertilizers and by Governments to promote family planning.

Apart from its effectiveness as a teaching aid, puppet according to Sambar (1982) can also help in:

a) Improving speech habit and remove stuttering.
b) Eradicating emotional problems and stamerring problems of children.
c) Rehabilitation of physically & mentally handicapped children, and
d) Treating mental disorders of students.

Bharti (1983) presented in her study that traditional aids like puppet were the most effective aids for gain in knowledge than Kavad, lecture method and Padh in conveying the useful and educational message to the rural women.

In Bustar district of Madhya Pradesh, an experiment was conducted by Parmar (1975) to convey the message on Nutrition Diets to tribal boys through Kavad. Each visual illustration was supported by suitable explanation. He concluded that all these experiments worked well.

Bhatnagar and Mathur (1982) had reported that Kavad secured second place in effectiveness when tested against slides, flip book, radio and puppet show in imparting nutrition education to rural home-makers.

They further evaluated the utility of Kavad as perceived by extension workers and reported that it was ranked in the category of excellent aid.

Bharti (1983) has reported that pad secured third place in effectiveness when tested against puppets, lecture method and Kavad, used in imparting nutrition education to rural home-makers.

The folk media are the closest to the hearts and minds of the masses, and therefore their appeal is at a personal, intimate level. True, they cater to small audiences at a time, but these audiences are so completely caught up in the folk forms, that the effects on them is at a much deeper level.

Methodology

III METHODOLOGY

The methodology adopted for this study included the following steps:

A. Selection of the Locale and Sample for the Study

B. Selection of the Subject Matter

C. Selection of the Experimental and Control Groups

D. Preparation of Aids

E. Development of Tools for Evaluation

F. Conduct of the Study, and

G. Analysis of the Data collected

A. <u>Selection of the Locale and Sample for the Study:</u>

Rajasthan, the home state of the investigator, was selected to be the locale for this study for practical convenience. All the four ICDS training centres in Udaipur District, Rajasthan, namely the College of Home Science, Rajasthan Agriculture University, Vidhya Bhavan Rural Institute, Rajasthan Mahila Vidhyalaya and Mangalmurti Indira Gandhi Janta College, Dabok were purposively selected for this study. Figure 1 shows the location of the centres. Table I gives the details of the sample selected.

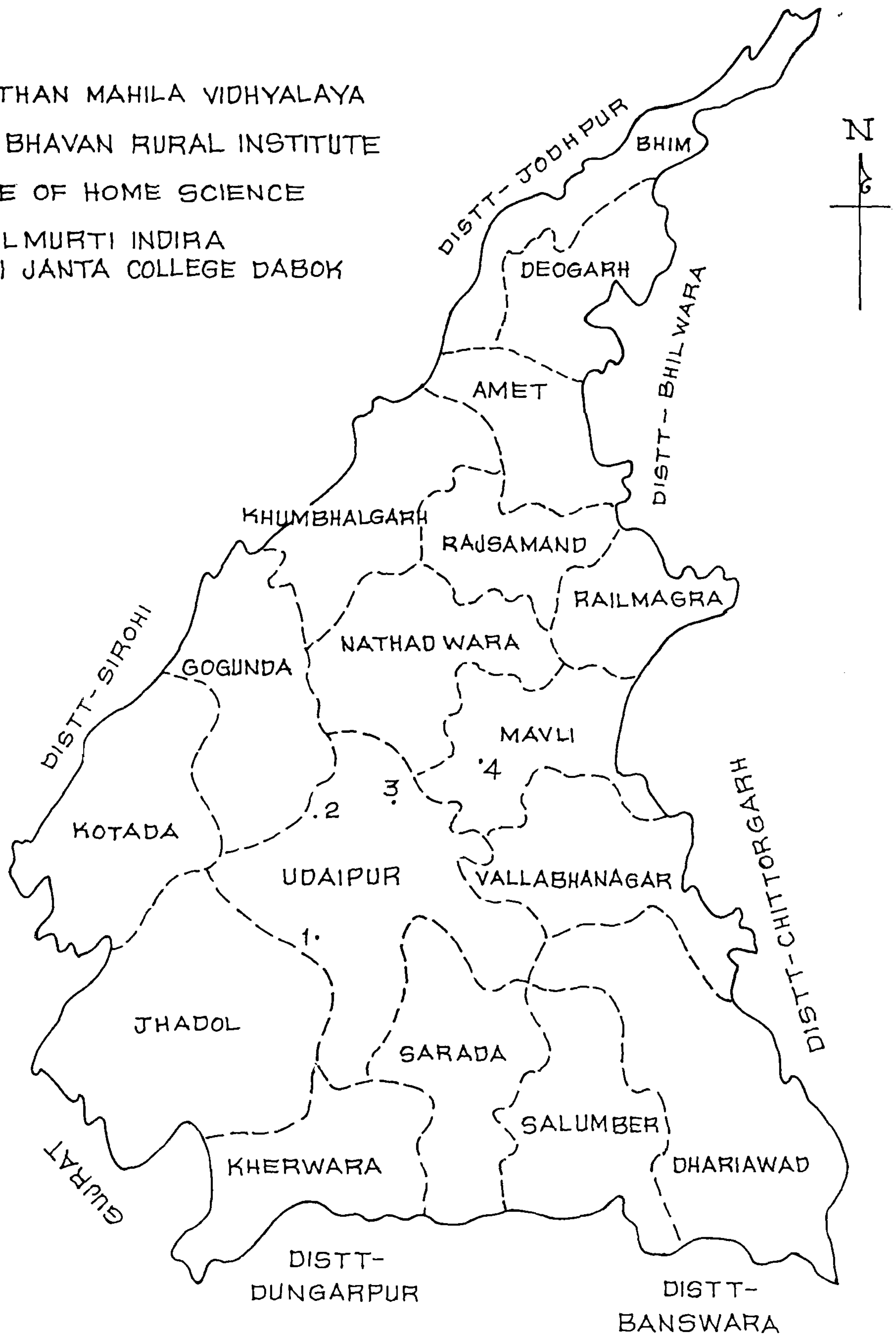


Figure. 1. UDAIPUR DISTRICT MAP SHOWING THE LOCATION OF TRAINING CENTRES

TABLE - I

SAMPLE FOR THE STUDY

Sl No	Training Centres	Number of Trainees		
		Rural	Tribal	Total
1	College of Home Science	40	12	52
2	Vidhya Bhavan Rural Institute	35	21	56
3	Rajasthan Mahila Vidhyalaya	38	6	44
4	Mangalmurti Indira Gandhi Janta College	21	25	46
	Grand Total	134	64	198

The sample for the study included all the 198 Anganwadi Workers (134 rural and 64 tribal) undergoing training in the four training centres during November, '87 to January, '88.

B. Selection of the Subject Matter:

The syllabus for the Anganwadi workers' training as furnished by the National Institute of Public Co-operation and Child Development, New Delhi, the nodal agency for child welfare training in India was carefully analysed by the investigator in order to select the subject matter. The following topics were selected, keeping in view the significance of the subject matter:

1. Milestones of Development of a child 0-2 years
2. Protein Calorie Malnutrition
3. Population Education and Family Welfare

and 4. Immunization

C. Selection of Experimental and Control Groups:

Out of the four training centres, two were selected to be the experimental groups to test the effectiveness of the aids and two were treated as control, the teaching method used for them being only lecture.

Table II gives the details of experimental and control groups:

TABLE - II

DETAILS OF EXPERIMENTAL AND CONTROL GROUPS

Sl No	Training Centres	Topics and aids used			
		Milestones of Development	Protein calorie Mal-nutrition	Population Education & Family Welfare	Immuni-zation
1	Experimental				
a.	Rajasthan Mahila Vidhyalaya	Kavad	Pad	Puppets	Lecture
b.	Mangalmurti Indira Gandhi Janta College, Dabok	Kavad	Pad	Puppets	Lecture
2	Control				
a.	College of Home Science	Lecture	Lecture	Lecture	Lecture
b.	Vidhya Bhavan Rural Institute	Lecture	Lecture	Lecture	Lecture

As shown in the Table, lecture method alone was used for one topic for both experimental and control groups.

D. Preparation of Aids:

This aspect of the study included the following steps:

1. Preparing the course outline for the topics chosen:

Detailed course outlines were prepared for each of the four topics selected so as to cover each topic in one hour either through lecture or through the use of aids.

2. Getting ready the aids:

After deciding on the details to be taught, the help of the artists of the Lok Kala Mandal, Udaipur was sought to prepare the Kavad, Pad and Puppets to be used in this study.

a) Kavad:

The theme for Kavad namely the Milestones of Development of children 0-2 years was divided into 12 sub-headings to be shown and explained through 12 panels.

The Kavad was prepared with 13 panels, one on the major theme and 12 for the stages of development as shown below:

Panel I - Opening panel showing the main theme of Kavad
Panel II - Child responds to light
Panel III - Child smiles at mother
Panel IV - Child Kicks well
Panel V - Child manages to hold the neck
Panel VI - Child tries to reach and get things

FOLDED KAVAD

Figure. 2

UNFOLDED KAVAD

Figure. 3

Panel VII - Child picks up things from a higher place

Panel VIII - Child starts crawling

Panel IX - Child holds things

Panel X - Child sits with support

Panel XI - Child stands with support

Panel XII - Child walks independently

Panel XIII - Child climbs on stairs

Each panel of the Kavad was of the size 14"x10"x8". The Kavad had three folding panels (with six frames - three in the front and three at the back) on either side of the central panel. Each panel when opened out would explain one stage of development in a sequence. Figure 2, 3 & 4 depict the Kavad folded, unfolded and details of individual panels respectively.

The explanation for the subject matter depicted on various panels of the Kavad namely the stages of development, was given through musical narrations in the traditional form of Kavad singing. Music was recorded on tapes to accompany the explanation. Appendix I gives the Kavad song used by the investigator along with its translation in English.

b) <u>Pad</u>:

A Pad is a piece of painting on a stretched cloth or canvas. Sometimes a bamboo or wooden stick may be attached to the Pad and hung on the wall.

The Pad which was developed for this particular study was made up of a starched white cotton cloth of 120 x 90 cms on which the illustrations were painted with fabric paint.

FRONT VIEW

BACK VIEW

KAVAD PANELS SHOWING THE MILESTONES OF DEVELOPMENT OF CHILDREN 0-2 YEARS

Figure. 4

The illustrations included a village scene where children were growing up, marriage of young women, birth of children one after another, symptoms of Kwashiorkar and Marasmus and supplementary feeding, leading to healthy child (Figure 5).

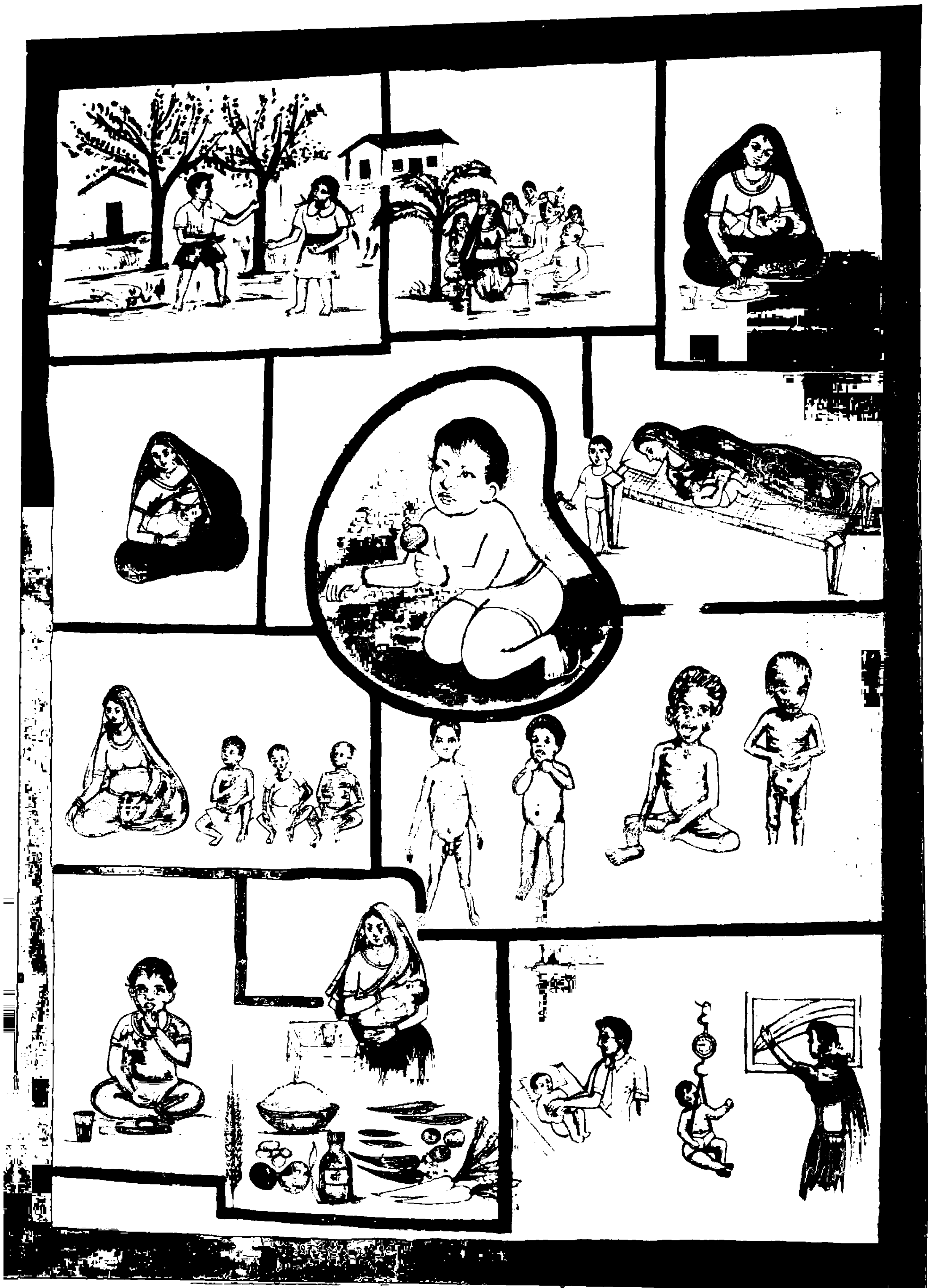
The Pad was put up on the wall and explained through folk music. Appendix II gives the song developed and used by the investigator along with its English translation.

c) Puppets:

Hand and glove puppets were selected for this study for operational convenience. A puppet story on theme Population Education and Family Welfare was prepared (Appendix III) with 13 characters. The assistance of four members from the Lok Kala Mandal was taken for operating the puppets after orienting them to the story developed. Figure 6 (a, b, c & d) illustrate the different scenes in the puppet play. The explanation was again through recorded talk and music.

d) Lecture:

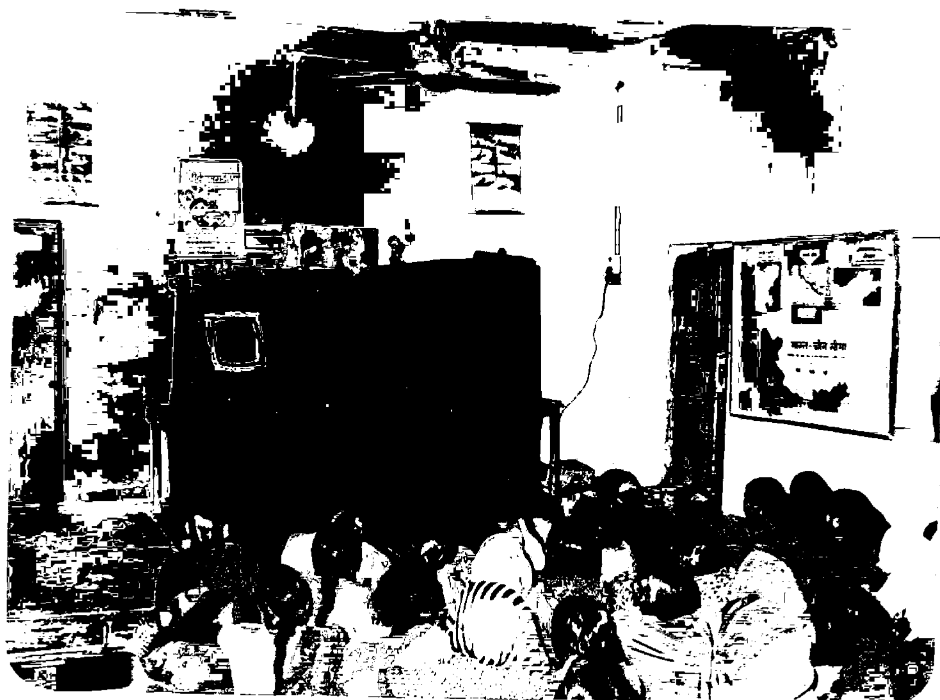
Detailed lecture notes were prepared for all the four topics selected to be used for the control groups and for both the groups for the topic Immunization. Appendices IV, V, VI & VII give the lecture notes for topics Milestones of Development, Protein Calorie Malnutrition, Population Education and Family Welfare and Immunization. Figure 7 illustrates the lecture method in use.



PAD PAINTING ON PROTEIN CALORIE MALNUTRITION

Figure.5

(a)



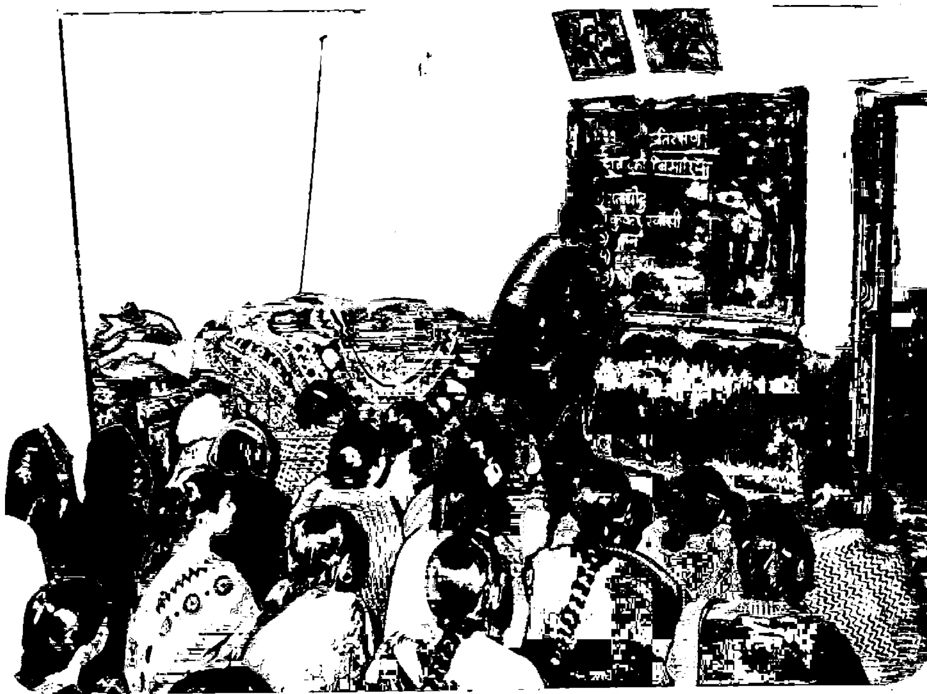
(b)

(c)

(d)

DIFFERENT STAGES OF PUPPET PLAY

Figure.6. (a to d)



USE OF LECTURE METHOD

Figure.7

E. Development of Tools for Evaluation:

Bloom (1966) has categorised learning as cognitive, affective and psychomotor. In order to measure the cognitive aspect of learning in this study (knowledge gained and knowledge retained), knowledge tests were individually developed on the four themes selected. Subject matter specialists were consulted while developing the knowledge tests.

The knowledge tests constructed in English and then translated in Hindi, were presented on 10 Anganwadi Workers not included in the final study to judge the clarity of language and coverage of the subject matter. Modifications were done based on the pretest.

An interview schedule was prepared to elicit background information about the respondents (Appendix VIII).

The knowledge tests finalised are given in Appendices IX, X, XI & XII).

F. Conduct of the Study:

Official permission was obtained to conduct the study in all the four ICDS training centres.

After establishing rapport with the trainees, the background information was collected from them. The knowledge tests prepared on all the four topics were administered to all the trainees in order to assess the initial scores by the participants, prior to exposure to the classes with various aids.

Classes were conducted topic by topic either through lectures alone (for the control group) or with the help of the aids developed (Refer Table II). Before exposure to the aids the respective experimental groups were given adequate orientation on the topics to be dealt with through the specific aids.

The same knowledge tests were repeated after completion of each topic, to assess the changes in the scores obtained by the respondents which would indicate acquisition of knowledge on the subject matter.

After a lapse of 15 days, the knowledge tests were repeated to assess the level of retention of the subject matter by the respondents.

G. Analysis of the Data Collected:

The initial, final and retention scores for the four topics as registered by the experimental and control groups were tabulated and analysed. Statistical tests namely 'F' tests (analysis of Variance) were applied and the levels of significance between experimental and control groups were noted. The findings are discussed in Chapter IV.

Results and Discussion

IV RESULTS AND DISCUSSION

The data collected and processed are presented under the following headings:

A. Socio Economic Background of the Respondents

B. Knowledge Scores obtained by the Experimental and Control Groups for the different Topics selected

C. Effectiveness of the different Aids on Knowledge Gain and Retention

and D. Association of Age and Educational Status with Knowledge Gain and Retention

A. Socio Economic Background of the Respondents:

The socio economic variables studied were the age of the respondents, their educational status, type of family and marital status.

Table III presents the age of the respondents.

TABLE - III

AGE OF THE RESPONDENTS

Sl No	Age in Years	Percentage of the Respondents (N:198)
1	Below 21	14
2	21 to 30	63
3	31 and above	23

A majority of 63 per cent of the respondents belonged to the age group of 21 to 30 years.

The educational status of the respondents is given in Table IV.

TABLE - IV

EDUCATIONAL STATUS OF THE RESPONDENTS

Sl No	Educational Status	Percentage of the Respondents (N:198)
1	Illiterate	16
2	Primary level	43
3	Middle level	30
4	Secondary level and above	11

Eighty four per cent of the respondents were literate with 43 per cent at primary, 30 per cent at middle and 11 per cent at secondary levels.

While 49 per cent were from joint families, 51 per cent hailed from nuclear type families.

Ninety three per cent of the respondents were married.

B. Knowledge Scores obtained by the Experimental and Control Groups for the different Topics selected:

The gain in knowledge and retention by the experimental and control groups for the four topics are given in Table V.

TABLE - V

SCORES FOR KNOWLEDGE GAIN AND RETENTION

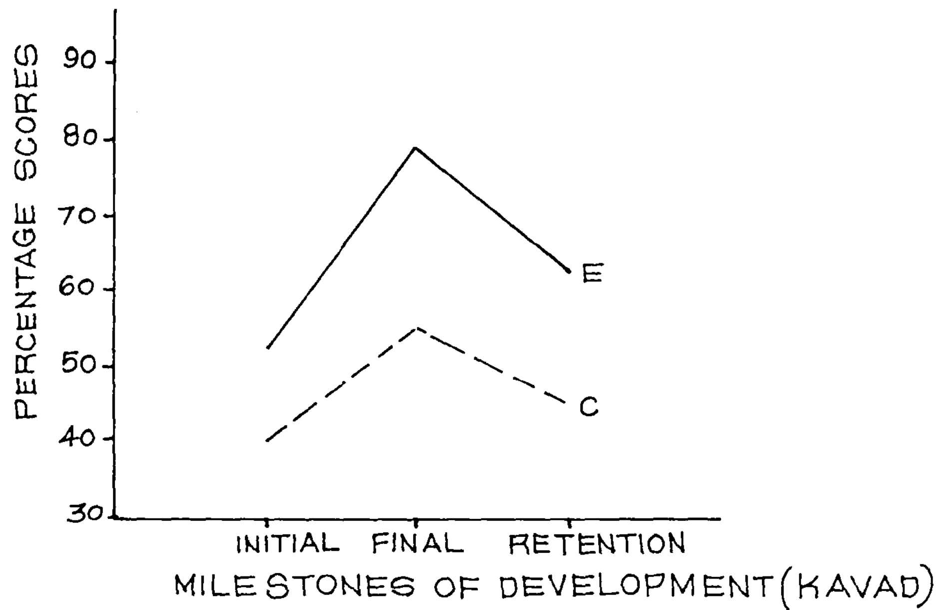
Sl No	Topics	Total scores for the topics	Percentage scores					
			Experimental Group (N:90)			Control Group (N:108)		
			Initial	Final	Retention	Initial	Final	Retention
1	Milestones of Development	36	53	79	63	40	55	45
2	Protein Calorie Malnutrition	48	55	83	65	44	62	50
3	Population Education & Family Welfare	32	60	93	73	49	69	55
4	Immunization	42	50	64	50	38	52	44

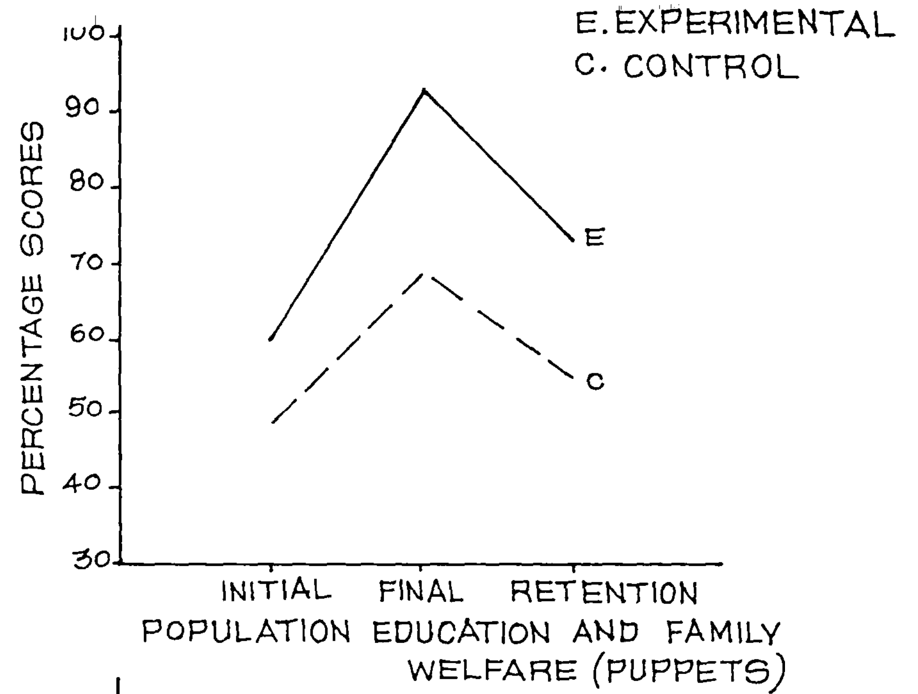
A comparison of the percentage scores before and after exposure to different aids points out an increase for all the topics for both the experimental and control groups. The increase was more for the experimental group compared to that for the control group, the difference ranging from 14-33 for the former and 14-20 for the latter for gain. For retention, the range was 10-13 for the experimental and 5-6 for the control groups.

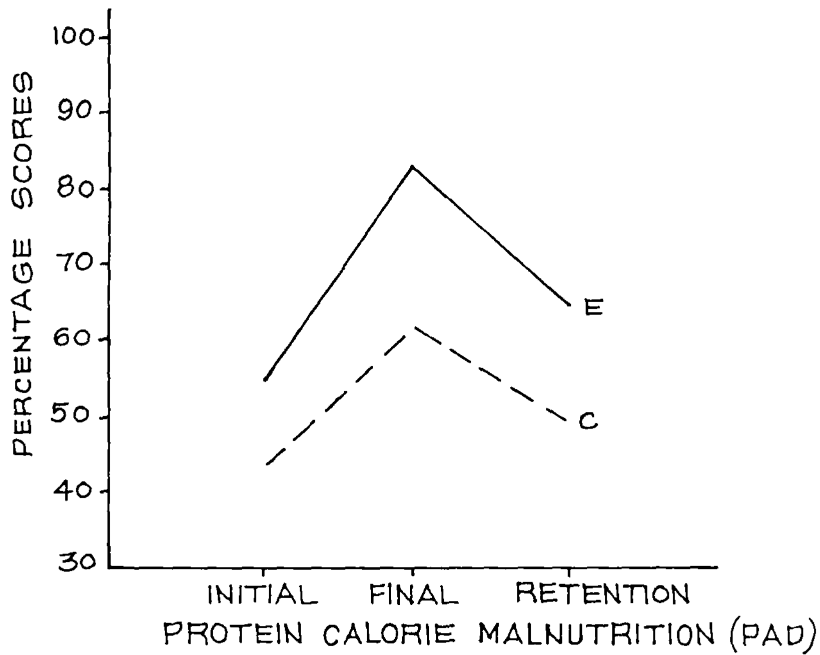
Topic-wise, the increase registered for Population Education and Family Welfare was the highest followed by Protein Calorie Malnutrition, Milestones of Development and Immunization.

Comparison of the scores for knowledge gain and retention revealed that there was a decline in the retention scores obtained by both the experimental and the control groups.

Figure 8 illustrates the comparative picture for gain in knowledge and retention for both the experimental and control groups.







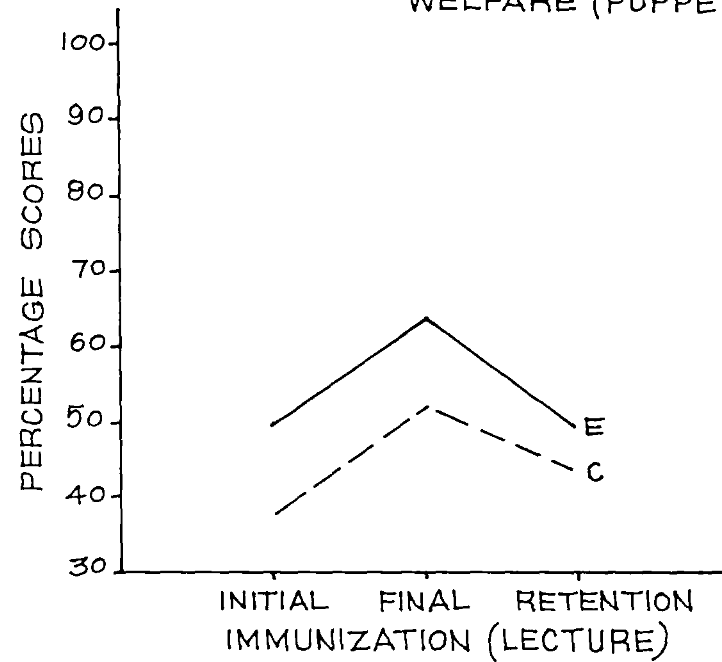


Figure. 8. COMPARISION OF EXPERIMENTAL AND CONTROL GROUPS FOR THEIR KNOWLEDGE GAIN AND RETENTION

C. Effectiveness of the different Aids on Knowledge Gain and Retention:

Table VI gives the analysis for the knowledge gain and retention by the experimental and control groups for the topic Milestones of Development 0-2 years.

TABLE - VI

ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH KAVAD

Sl No	Groups	Mean scores			'F' ratio	
		Initial	Final	Retention	Gain	Retention
1	Experimental	0.593	0.784	0.760	64.808**	63.640**
2	Control	0.567	0.668	0.600		

** Significant at 0.01 per cent level

As proved through Table VI, statistically, there was a significant difference between the experimental and control groups (at 0.01 per cent levels) for both gain in knowledge and retention.

This clearly indicates the superiority of the use of Kavad over the lecture method for imparting knowledge on Milestones of Development as well as enabling the respondents to retain the knowledge gained.

The statistical analysis to compare the experimental and control groups for knowledge gain and retention on the topic Protein Calorie Malnutrition is presented in Table VII.

TABLE - VII

ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH PAD

Sl No	Groups	Mean scores			'F' ratio	
		Initial	Final	Retention	Gain	Retention
1	Experimental	0.729	1.205	0.939	39.113**	24.139**
2	Control	0.694	1.162	0.909		

** Significant at 0.01 per cent level.

A perusal of Table VII shows that, statistically there were significant differencesbetween the experimental and the control groups at 0.01 per cent levels for both gain as well as retention of knowledge.

Thus it was proved that the aid 'Pad' exercised greater influence on knowledge gain and retention when compared to lecture method.

Statistical analysis for the knowledge gain and retention for the topic Population Education and Family Welfare is presented in Table VIII.

TABLE - VIII

ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH PUPPETS

Sl No	Groups	Mean scores			'F' ratio	
		Initial	Final	Retention	Gain	Retention
1	Experimental	0.623	1.571	1.495	82.129**	14.488**
2	Control	0.619	1.528	1.460		

** Significant at 0.01 per cent level.

The differences between the two groups for gain in knowledge and retention were statistically significant at 0.01 per cent level, thereby indicating greater effectiveness of puppets compared to the use of lecture method.

Table IX gives the results on analysis of the knowledge gain and retention by the experimental and control groups for the topic Immunization.

TABLE - IX

ANALYSIS FOR KNOWLEDGE GAIN AND RETENTION THROUGH LECTURE METHOD

Sl No	Groups	Mean scores			'F' ratio	
		Initial	Final	Retention	Gain	Retention
1	Experimental	0.366	0.884	0.800	31.787**	158.903**
2	Control	0.579	0.879	0.782		

** Significant at 0.01 per cent level.

As indicated in Table IX, there are significant differences for gain and retention of knowledge between the experimental and control groups though both had lecture for this topic. The differences may probably be due to the great variation exhibited by the two groups even at the initial stage (Refer Table V).

D. Association of Age and Educational Status with Knowledge Gain and Retention:

Table X gives the statistical analysis for association of age with knowledge gain and retention through Kavad.

TABLE - X

AGE Vs KNOWLEDGE GAIN AND RETENTION - MILESTONES OF DEVELOPMENT

Sl No	Age in Years	Mean scores		
		Initial	Final	Retention
1	Below 20	0.589	1.563	0.791
2	21 to 30	0.606	1.572	0.777
3	31 and above	0.582	1.577	0.801
	'F' ratio	Gain	- 0.065[Ns]	
		Retention	- 0.737[Ns]	

Ns - Non-significant

As proved through Table X, age seemed to have no bearing on the knowledge gain and retention through Kavad.

Table XI shows the statistical analysis for knowledge gain and retention through Kavad as influenced by the educational status.

TABLE - XI

EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - MILESTONES OF DEVELOPMENT

Sl No	Educational Status	Mean Scores		
		Initial	Final	Retention
1	Illiterate	0.600	1.594	0.815
2	Primary level	0.583	1.573	0.779
3	Middle level	0.610	1.575	0.793
4	Secondary level and above	0.623	1.551	0.771
	'F' ratio	Gain - 0.689^{Ns} Retention - 0.510^{Ns}		

Ns - Non-significant

As revealed through statistical tests, the educational level of the respondents did not influence the gain and retention of knowledge through the use of Kavad.

Table XII indicates the statistical analysis for the association of age with the knowledge gain and retention through Pad.

TABLE - XII

AGE Vs KNOWLEDGE GAIN AND RETENTION
- PROTEIN CALORIE MALNUTRITION

Sl No	Age in years	Mean scores		
		Initial	Final	Retention
1	Below 20	0.569	1.186	0.832
2	21 to 30	0.593	1.211	0.945
3	31 and above	0.583	1.202	0.992
	'F' ratio	Gain - 2.836*		
		Retention - 1.392 Ns		

* Significant at 0.05 per cent level.

Ns - Non-significant

As revealed in Table XII while the gain in knowledge of the respondents exposed to Pad had association with their age (Significant at 0.05 per cent level), retention of the knowledge was not influenced by the age.

Table XIII gives the statistical analysis for the knowledge gain and retention through Pad as influenced by the educational status of the respondents.

TABLE - XIII

EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - PROTEIN CALORIE MALNUTRITION

Sl No	Educational Status	Mean scores		
		Initial	Final	Retention
1	Illiterate	0.417	1.250	0.851
2	Primary level	0.526	1.208	0.939
3	Middle level	0.590	1.198	0.937
4	Secondary level and above	0.852	1.210	0.961
	'F' ratio	Gain - 7.584**		
		Retention - 6.256**		

** Significant at 0.01 per cent level

The educational status of the respondents as confirmed through the statistical analysis (Table XIII) had influenced the knowledge gained and retained by the participants exposed to Pad.

Table XIV presents the statistical analysis for the differences in scores for knowledge gain and retention by the groups exposed to puppets in contrast to those taught through lecture.

TABLE - XIV

AGE Vs KNOWLEDGE GAIN AND RETENTION - POPULATION EDUCATION AND FAMILY WELFARE

Sl No	Age in Years	Mean scores		
		Initial	Final	Retention
1	Below 20	1.464	1.563	1.464
2	21 to 30	1.469	1.572	1.469
3	31 and above	1.470	1.577	1.470
	'F' ratio	Gain - 0.181^{Ns}		
		Retention - 0.017^{Ns}		

Ns - Non-significant.

Table XIV proves that statistically there was no significant association for Age with gain and retention of knowledge through puppets.

Table XV shows the statistical analysis for knowledge gained and retention through puppets as affected by the educational status of the respondents.

TABLE - XV

EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - POPULATION EDUCATION AND FAMILY WELFARE

Sl No	Educational Status	Mean scores		
		Initial	Final	Retention
1	Illiterate	0.391	1.594	1.407
2	Primary level	0.526	1.573	1.458
3	Middle level	0.659	1.575	1.486
4	Secondary level and above	0.935	1.551	1.466
	'F' ratio	Gain - 9.260** Retention - 9.177**		

** Significant at 0.01 per cent level.

Table XV has revealed the positive effect of educational status over the knowledge gain as well as retention (Significant at 0.01 per cent levels) by the Anganwadi Workers taught through puppets.

The association between age and the knowledge gain and retention through lecture is shown in Table XVI.

TABLE - XVI

AGE Vs KNOWLEDGE GAIN AND RETENTION - IMMUNIZATION

Sl No	Age in Years	Mean scores		
		Initial	Final	Retention
1	Below 20	0.550	0.905	0.780
2	21 to 30	0.667	0.881	0.789
3	31 and above	0.539	0.882	0.763
	'F' ratio	Gain - 2.486^{Ns} Retention - 2.001^{Ns}		

Ns - Non-significant

As revealed through Table XVI, age had no bearing on the knowledge gain and retention through lecture method.

Table XVII presents the relationship between the educational status of the respondents and knowledge gain and retention through lecture method.

TABLE - XVII

EDUCATION Vs KNOWLEDGE GAIN AND RETENTION - IMMUNIZATION

Sl No	Educational Status	Mean scores		
		Initial	Final	Retention
1	Illiterate	0.391	0.845	0.750
2	Primary level	0.526	0.872	0.763
3	Middle level	0.659	0.899	0.787
4	Secondary level and above	0.935	0.898	0.855
	'F' ratio	Gain - 15.008**		
		Retention - 6.604**		

** Significant at 0.01 per cent level.

Educational level of the participants had a definite bearing on their knowledge gain and retention through lecture as revealed by statistical tests, being significant at 0.01 per cent levels.

Summary and Conclusion

V. SUMMARY AND CONCLUSION

The present study was undertaken to test the effectiveness of certain traditional teaching aids of Rajasthan State, in educating the Anganwadi Workers of the ICDS programme. 'Kavad', 'Pad' and 'Puppets' were the traditional aids chosen.

Four ICDS training centres in Udaipur District of Rajasthan were selected to conduct the study, two as experimental and two as control, where only lecture method was used. Altogether there were 198 Anganwadi Workers participating in the study.

From the stipulated syllabus for Anganwadi Workers by NIPCCD, four topics were selected. The study was designed as follows:

Topics	Teaching aids / Experimental	Methods used Control
Milestones of Development	Kavad	Lecture
Protein Calorie Malnutrition	Pad	Lecture
Population Education and Family Welfare	Puppets	Lecture
Immunization	Lecture	Lecture

The aids were developed pertaining to the topics and then used for the experimental groups.

For evaluating the effectiveness of the aids, knowledge tests were developed for each topic. The tests were administered on all the respondents three times.

1 prior to exposure to any aid/method to know the initial level of knowledge

2 immediately after the use of aid/method to assess the gain in knowledge

and 3 after 15 days, after exposure to the aid/ method to find out the retention level of the knowledge gained.

The knowledge tests were administered through interview method. The data was processed and statistical tests were applied to estimate the level of significance.

Findings of the Study:

The major findings of this study are as follows:

1 A majority of 63 per cent of the respondents belonged to the age group of 21 to 30 years.

2 Eighty four per cent of the respondents were literate with 43 per cent at primary, 30 per cent at middle and 11 per cent at secondary levels.

3 Forty nine per cent were from joint families and 51 per cent hailed from nuclear type of families.

4 Ninety three per cent of the respondents were married.

5 A comparison of the percentage scores for knowledge before and after exposure to different aids as well as retention scores points out greater increase for the experimental group compared to that for the control group, for all the topics, the differences ranging from 14-33 for the former and 14-20 for the latter, for gain. For retention, the range was 10-13 for the experimental and five to six for the control groups.

Topic-wise, the increase registered for Population Education and Family Welfare was the highest followed by Protein Calorie Malnutrition, Milestones of Development and Immunization.

Thus, it can be concluded that puppet was the most effective aid as far as gain in knowledge as well as retention were concerned, followed by Pad and Kavad.

On the other hand, lecture was the least effective both in the case of knowledge gain and retention.

Statistical tests proved that there were significant differences between the experimental and control groups (at 0.01 per cent levels) for both gain in knowledge as well as retention, as far as the use of all the three aids were concerned, thereby pointing out the superiority of the use of traditional aids over the lecture method, used alone.

6 Age and educational status seemed to have no bearing on the knowledge gain and retention through Kavad.

7 While the gain in knowledge of the respondents exposed to pad had association with their age, retention of the knowledge was not influenced by age. On the other hand, educational status of the respondents influenced both the knowledge gain and retention by the participants when 'Pad' was used.

8 When age had no significant association with gain in knowledge and retention through puppets, educational status influenced both.

9 The knowledge gain and retention through lecture method were not influenced by age, but only by the educational level of the participants.

Suggestions:

Based on the findings of the present study the following suggestions are put forth:

1 Home Science extension workers must be made familiar with, and trained in the use of the folk methods of the locality for imparting messages to the rural communities.

2 Exploratory studies may be undertaken to find out the traditional aids used in the different States of India for educational purposes.

3 Similar studies can be taken up with different subject matter from other areas of the Home Science like Child care, Health, Resource Management, Home Food Production etc., which have scope for the use of traditional media.

Bibliography

BIBLIOGRAPHY

Bajaj, E.D. (1982) "Swasthya Guide Ka Manual", Swasthya Aur Parivar Kalyan Manthralaya, New Delhi, PP. 81, 82 & 91.

Barse, S. (1981) "Dashavatar", Folk Theatre of Maharashtra, Indian Express - Sunday Standard - March 1.

Beal, G.M. and Sibley, D.N. (1967) "Adoption of Agriculture Technology by the Indians of Guatemala", Rural Sociology Report, 62, Ames Iowa, Iowa State, P. 60.

Bharti, C. (1983) "Effectiveness of selected Traditional Aids in Gain and Retention of Knowledge in Nutrition", Sukhadia University, Udaipur.

Bhatnagar, S. (1971) "Effectiveness of selected Audio-Visual Aids in Gain and Retention of Knowledge in Home-making Practices", University of Gujrat, Ahmadabad.

Bhatnagar, S. and Mathur, S. (1982) "Kavad - A New Visual Aid", Indian Journal of Adult Education, Vol. 43, No.6, P. 23.

Blake, R.R. and Bates, P. (1961) "Visual Aids in Extension Education in Community Participation", Directorate of Extension, Ministry of Food and Agriculture, Government of India, New Delhi, PP. 260 & 276.

Bloom, B.S. (1966) "Taxonomy of Educational Objectives", Longman Green, New York, P. 17

Brown, C.A. (1958) "Communication means Understanding", Personal Administration, January - February, PP 12 & 16

Chawala, N.L. (1979) "A Perspective on Rural Communication", Journal of Indian Institute of Mass Communication, Vol. 12, No. 2, P. 36

Dhama, O.P. and Bhatnagar, O.P. (1981) "Education and Communication for Development", Oxford and IBH Publishing, New Delhi, PP. 347 & 348

Dent, E.C. (1949) "The Audio Visual Hand Book for Visual Education", Society for Visual Education, Chicago, P. 1

Dubey, V.K. and Chaturvedi, T. (1973) — "Effectiveness of Visual Aid in relation to Agrarian Provinces", Indian Journal of Extention Education, Vo. 20, No.9, PP.9 & 78

Edgar, D. (1969) — "Audio Visual Methods in Teaching", The Dryden Press, New York, P.18

Food and Agriculture Organisation (1981) — "Introducing Population Concepts in Rural Women's Programme", FAO, Social & Economic Development Paper, Rome, PP. 27 & 28

Fred, Z. (1967) — "Indian Signs and Symbols", A Study of their Relevance in present day Communication and Education, Literacy House, Lucknow, P. 67

Ghosh, S. (1977) — "Shishoo aur Baccho Ka Ahar aur Unki Dekhbhal", Voluntary Health Association of India, UNICEF, New Delhi, PP. 13, 15, 52, 53 & 54

Ghosh, S. (1981) — "The Feeding and Care of Infants and Young Children", Voluntary Health Association of India, UNICEF, New Delhi, PP. 52, 53, 54 & 55

Ghosh, S. (1983) — "Bachho Ka Swasthya aur Poshan", Sayunth Rastra Bal Kosh, Lodi Estate, New Delhi, PP. 2, 3, 13, 19, 27, 40, 41, 67 & 68

Godfrey, V. (1967) "Conditioning and Learning in the concept of Education", R.S. Peters Routledge and Kesan Paul, London, P. 129

Govt. of India, Ministry of Health and Family Welfare, (1984) "Country Statement", International Conference on Population, Maxico, August, P.24

Govt. of India, Ministry of Health and Family Welfare, (1985) "Revised Strategy for National Family Welfare Programme", - A Summary, Department of Family Welfare, New Delhi, PP. 3 and 6 to 9

Govt. of India, Ministry of Health and Family Welfare, (1985) "Towards Universal Immunization,1990", New Delhi, PP. 1, 2, 3, 27 & 28

Indian Institute of Mass Communication, (1973) "Report of the Effectiveness of Puppetry & Film", Department of Traditional Media, New Delhi, P. 29

Kidd, J.R. (1959) "How Adults learn?", Association Press, New York (7th Edition) P. 21

Kidd, R. and Coletta, N (1980) "Tradition for Development of Indigenous Structures and Folk Media in Nonformal Education", German Foundation for International Development and International Council for Adult Education, New Delhi,PP.257,280 & 629

Kieffer, R.E., de. and Cochran, Lee. W. (1966)	"Manual of Audio Visual Techniques", Prentic-Hall of India (P) Ltd., New Delhi, PP. 1 & 9
Knowtton, A. and James, Q. (1948)	"A Conceptual Scheme for the Audio Visual Field", Bulletin of the School of Education, Indiana University, Vol. 40, No. 3, P. 5
Kolesnik, W.B. (1963)	"Educational Psychology", Mc Graw Hill Book Company, New York, P. 1
Krishnamurthy, P.V. (1975)	"Teaching Literacy through Media", Indian Journal of Adult Education, Vol. 41, No.1, P.12
Kulandaivel, K. (1961)	"Audio Visual Aids", Sri Ramakrishna Mission Vidhyalaya, Coimbatore, P. 5
Kumar, K.J. (1981)	"Mass Communication in India", Jaico Publishing House, Bombay, PP. 169 to 176
Kumar R. (1985)	"Phad Paintings of Rajasthan", India and Foreign Review, Vol. 22, No. 17, PP. 29 & 30
Leagans, J.P. (1961)	"India's Experience with Training in Extension Education for Community Development", Cornell University, Ithaca, New York, P. 26 & 78

Likert, R. (1961) "New Patterns of Management", Mc Graw Hill Book Company, New York, P. 90 & 91

Loomis, C.P. and Beegle, J.A. (1950) "Rural Social System", A Text Book in Rural Sociology, Prentice Hall, New York, P. 3 and 4

Millar, H. (1983) "Sheer Ignorance", Indian Express, Sunday Magazine - February 10th, P. 2

Mistry, Y. (1986) "Indepth study of Non-formal Preschool Education Component of ICDS Project, Baroda", National Institute of Public Co-operation and Child Development, New Delhi, PP.1 & 7

National Institute of Nutrition, Hyderabad, (1984) "A Manual of Nutrition", Indian Council of Medical Research, Hyderabad, PP. 22 & 23

National Institute of Public Co-operation & Child Development, New Delhi (1975) "Fun with Puppets", New Delhi, PP 1 to 4

National Institute of Public Co-operation & Child Development, New Delhi (1985) "Bachho Ka Jeevan Me Vikas Ke Charan", New Delhi, PP. 1 to 8

Prasad, H.Y. (1979)	"The Difficult Art of Reaching Rural Eyes and Ears", Limited Role of Technology Transfer, Journal of Indian Institute of Mass Communication, New Delhi, P. 23
Rehman, S. (1979)	"Visual Communication in India", Journal of the Indian Institute of Mass Communication, New Delhi, P. 28
Rogers, E.M. (1968)	"Diffusion of Innovations", The Free Press, New York, P.77
Sambar, D. (1982)	"Puppets - As an Educational Method", Journal of Education October - December, P. 43
Schamm, W. (1955)	"The Process and Effects of Mass Communication", University of Illinois, U.S.A., PP.286 & 287
Shyam, P. (1975)	"Traditional Folk Media in India", Geka Books, New Delhi, PP. 8
Subramanyam, U.S. (1976)	"The Relative Knowledge Gained through Selected Extension Methods and their Combination", Indian Journal of Extension Education, Vol.40, No.12, P. 65

United Nations Educational, Scientific & Cultural Organization, (1958) — "What Research gave in Audio Visual Aids", Technical Report, PP. 6, 8, 13, 16 & 19

United Nations Educational Scientific and Cultural Organization, (1983) — "Maternal and Young Child Nutrition", Nutrition Education Series-3 PP. 3, 9, 10, 17 & 29

United Nations Children's Fund (1985) — "Health Technology", (PATH Seatte), PP. 1 to 7

United Nations Children's Fund (1982) — "Infant Weaning and Mal-nutrition in Preschool Children", PP.6 & 9 to 16

Upadhyaya, U. (1981) — "Little Folks on Strings" Illustrated Weekly of India, October, P. 25

Valerian, P.K. (1986) — "Immunizing all Children", United Nations Children's Fund, New Delhi, PP. 1, 3, 4 and 7

Vardaman, G.T. (1970) — "Effective Communication in India", Norstrand Reinhold Company, New York, PP. 13

Vidhyalankar, (1978) — "Towards a Sociology of Mass Communication", Collier - Mac Millan Co., London, PP. 46 and 47

Wilson, D, Fisher, H. and Fuqua, E., (1971) — "Principles of Nutrition", Willey Eastern Private Ltd., New Delhi, PP.458 & 459

Appendices

APPENDIX - I

KAVAD SONG ON MILESTONES OF DEVELOPMENT

बालक के जीवन में विकास के चरण । कावड़ ।

बालक रे जीवन री मां, आछी वाँता बतावा जी आछी वाँता बतावा जी ।

1- बालक देश का निर्माता, बालक ही कर्णधारजी
बालक ही कर्णधार जी,
बालक रो विकास कितना, किस तरह
देखो बतावां जी,
बालक रे--------

2- बालक री आयु, विकास रो पहलो/कदम जी, (पहलो)
भिन्न-भिन्न चरणों सु जातो, या मारी धरोहर जी,
बालक रे-----

3- पहला चरण में कदम राखे, एक माह रो बालक जी
प्रकाश ने देखे, आंखा चमकावे, अपनी नजर टिकावे जी ।
बालक रे-----

4- थोड़ो घड़ो बढो बधो, दूसरा तीसरा महीना लागो,
मुस्कावे है, आवाज सुने, प्रतिक्रिया दिखावे जी ।
बालक रे-------

5- हौले-हौले बढता बालक, देखो जी,
हां हौले-हौले बढ़ता बालक
मां को पहचाने है, आवाज सुने और देखे है,
बालक रे------

6- बढ़ता बच्चा, तीन-चार माह का हो जावे
अपना सिर संभाले, अपने आप गर्दन भी टिका ले जी ।
बालक रे---------

7- तीन-चार महीना रो बालक, अब आप
करवट बदले , अपने आप करवट बदले जी,
मुँह सो गर्र-गर्र री आवाज भी निकाले जी ।

8- धीरे-धीरे आगे बढता, पांच से सात महीने लांघे जी,
अपने आप बैठे है, और धीमे धीमे दांत भी निकाले जी,
बालक रे------

9- सुनो रे भाई-बहना, मेरे, आठ नो महीने का बालक,
अपने आप, घुटनों के बल चाले जी ।
बालक रे---------

10- आगे देखो-------
जब छोटा बालक दस से बारह माह का हो जाये जी,
सहारे से खडा हो जावे, सहारे-सहारे चाले जी ।
बालक रे--------

11- जब हो जाये बालक तेरह माह से ऊपर,
देखो तेरह माह से ऊपर जी,
धीमा-धीमा चाले देखो, अपने आप चाले जी ।
बालक रे-----

12- अपने आप बोले, अपनी बांता अलग करे जी,
देखो अपनीबाता करें,
अपनी ही भाषा में, बोले, चाचा, मामा काकाजी
बालक रे------

13- और देखो जी बालक को, अठारह माह से उपर हो गया जी,
अपने आप लगा चढने सीढी को, अपने आप उतरे भी,
हां अपने आप उतरे भी ।
बालक रे-------

14- थोड़ा घडो तो बोले है, कुछ-कुछ तो समझावे जी,
धीमे-धीमे, खावे है, अपने आप खावे जी ।
बालक रे-------

15- यदि इन चरणा में देर से पहुंचे
बालक, ओ हो देरे से पहुंचे बालक जी,
देर ना करो, अस्पताल ले जाओ जी,
नर्स को दिखाओ जी,
बालक रे------

16- अपना बालक स्वर्ग सु महान रे,
इसकी रक्षा करना, या तो म्हारो थारो पहलो काम जी ।
बालक रे------ ।

MILESTONES OF DEVELOPMENT - KAVAD

Tell the good things of the child's life
Oh ! tell the good things -

1 The child is the country's constructor, he is the steersman

Yes ! he is the steersman

How much has he developed, how has he developed

Oh ! do tell me

The child's life ......

2 His age is the first step in his development.
Different, different steps have to be crossed.

Oh ! this is the foundation.

The child's life ......

3 On the first step, places his foot, a one month old baby, trying to see the light

Oh ! The eyes twinkle as he fixes his glances

The child's life ......

4 As he grows into the third and fourth month of life,
Smiles ever, heeds to sound, and responds to all

The child's life ......

5 See gradually developing child
Oh ! the growing child
Recognises his mother, listens to her voice and
Oh ! looks at her

The child's life ......

6 The growing child is now three-four months old -
Control over his head he has and
Can keep his neck in a proper position, too.

The child's life ......

7 The three-four month child turns over on his own

Yes ! turns over on his own

Oh ! Coos and babbles too

The child's life ......

8 Slowly and steadily he moves ahead
Crosses over to five to seven months
Sits on his own and slowly begins teething

The child's life ......

9 Listen, Oh ! brothers and sisters
My eight-nine month child can now crawl on his knees

The child's life ......

10 Look ahead !
When the child is ten to twelve months old -
He can stand with support
Oh ! and can walk with support too

The child's life ......

11 When he crosses thirteen months
See more than thirteen months -
Slowly, slowly can he walk,
On his own can he walk

The child's life ......

12 Talking, does he start, on his own
His own language does he talk
See ! he talks his own language
and says chacha, mama, kaka, Oh !
The child's life ......

13 Oh ! look at him now, he is crossed eighteen months -
Starts climbing steps on his own, and
gets down on his own, too !
Yes ! gets down on his own
The child's life ......

14 He speaks quite a few words, tries to explain
some too !
Slowly, slowly does he eat,
On his own does he eat
The child's life ......

15 If he reaches these steps late,
Oh ! if he develops slowly,
Don't delay, rush him to the hospital
Oh ! show him to the nurse
The child's life ......

16 One's child is great as the heaven
Oh ! take care of him
For this is our first responsibility !
The child's life ......

APPENDIX - II

PAD SONG ON PROTEIN CALORIE MALNUTRITION

प्रोटीन-कैलोरी कुपोषण ।पड।

इस जीवन के सुख:दुख का दरसन में करावा जी, दरसन में करावा जी,
दरसन में करावा जी ।

1- एक साफ-सुथरे गांव में, दो बच्चे देखो खेले जी,
जीवन के रथ को वह जैसे आगे आगे खींचे जी ।
इस जीवन------

2- उम्र हुई तो शादी कर ली हो गये लोग लुगाई जी,
गृहस्थ धर्म की करनी है देखो, अब इनको भरपाई जी ।
इस जीवन------

3- हरी सब्जी फल का आहार, और लिया जी दूध,
छाछ में किया ना खोट, तन्दरुस्त दो बच्चा जना, धन्य हो
गयी कोख, आ हां धन्य हो गयी कोख ।
इस जीवन------

4- तीन माह के टाबर को काफी नहीं जी
मां का दूध, काफी नहीं जी मां का दूध,
इस जीवन------

5- रस मिले फल सब्जी का, और दालों का सूप,
शरीर बने निरोग बच्चे का, निखरा आये उसका रूप,
अजी निखरा आये उसका रूप ।
इस जीवन------

6= अब क्या हुआ जी------
हुआ दूसरा टाबर जल्दी, दूध नहीं, मिल पाया मां को,
दूध नहीं मिल पाया जी, सूजन रोग लग गया उसको,
फूल नहीं खिल पाया जी,
इस जीवन------

7- बाल लगे झड़ने जल्दी से, रूखे भूरे होकर जी,
सूज-सूज कर चेहरा उसका लगने लगा भयंकर जी,
लगने लगा भयंकर जी, लगने लगा भयंकर जी,
इस जीवन------

8- चमड़ी गलने लगी, घाव पर घाव हो गये कितने देखो,
उल्टी दस्त लगी दुख देने, भूख नहीं है लगती जी,
इस जीवन------

9- टाबर सूख गया---
सूख गया, टाबर लकड़ी सा, लगा कौन सा रोग जी,
"सूखा रोग" इसे कहते हैं, गिन लो हड्डी पसली देखो
ढीले ढीले कपड़े देखो, ढीली हो गयी हसली जी,
इस जीवन------

10- रोता ही रहता है बच्चा, हरदम गलता रहे शरीर
हरदम गलता रहे शरीर,
देख देख टाबर री हालत, सब होररे अधीर
देखो सब हो रहे अधीर,
इस जीवन------

11- मेरी बात सुनो---
मेरी बात सुनो भाई देखो, हिम्मत मत, हारो रे लोग
लुगाई, सुन लो भई लोग लुगाई,
तीन महीने टाबर माँ का दूध पीये,
मोटा तगड़ा होकर लंबी उम्र जीये, देखो भई लम्बी उम्र जीये-----
इस जीवन------

12- लोग-लुगाई थें सब सुन लो मेरी बात भाई---
तीन महीने बाद फलों का रस, दाल, दूध,
हरी-सब्जी का रस दो मेरे भाई------
इस जीवन------

13- डेढ साल का टाबर हो तो, रोटी तो खिलावो जी,
दाल सब्जी, दूध-दही, रा सेवन तो करावो जी,
करावो जी------
इस जीवन------

14- ऐसा टाबर स्वस्थ रहेगा, खेलेगा, कूदेगा मस्त रहेगा,
सूखा-सूजन रोग भगेगा, अपनी नींद सोयेगा और जागेगा
सुन लो मेरे भाई, हां,
इस जीवन------

15- फिर भी रोग लगे तो उसको अस्पताल ले जाओ जी,
डाक्टर को दिखाओ जी, जल्दी जल्दी टाबर को ले जाओ जी,
रोग छिपाओ मती टाबर रो, अतरो म्हारो कहणों,
खूब जियेगा, बच्चा सुन लो मेरे भाईबहना ।
इस जीवन------

PROTEIN - CALORIE MALNUTRITION - 'PAD'

In the moments of happiness and sadness, life's
vision, I see, a vision I see, a vision I see ......

1 In a neat and clean village, I see children playing.
As they pull life's chariot on and on.
This life's vision I see ......

2 When they came of age, they got married to become
husband and wife
And what's family life, they experienced then.
This life's vision I see ......

3 They are healthy, ate fruits and vegetables, drank
milk and butter-milk.
And then was blessed the mother's womb with a
healthy child.
This life's vision I see ......

4 Three months old and there is not enough of his
mother's milk for him.
Oh ! there is not enough for him.
This life's vision I see ......

5 May he obtain the juices of fruits and vegetables
And the soups of pulses
To have a healthy and beautiful body
Oh ! to have a beautiful body
This life's vision I see ......

6 Now look what happened, came along the 2nd child
No milk for the mother to drink
Oh ! no milk to drink
Set in did odeama and so stopped the blossming
of the child

This life's vision I see ......

7 His hair fell, Oh ! so fast
Sorry did he look, with a swollen face
Oh ! so scary, Oh ! so scary !

This life's vision I see ......

8 Layer by layer peeled his skin and
many wounds did he obtain
The turned gave his pain and
lose did his appetite

This life's vision I see ......

9 The child in his shrivelled like a dry stick
Oh ! how sick he was
This is Marasmus, his ribs and bones protruding
Loose, loose garments hanging all out

This life's vision I see ......

10 The baby cries on and on
his body wasting fast
Looking at him, impatient are all

This life's vision I see ......

11 Listen to me, don't loose hope
Three months did the child drink his mother's milk
Healthy did he become & lived a long life
This life's vision I see ......

12 Listen to me, you people
After 3 months, fruits & vegetables must he eat
& soups of pulses & milk must he drink

This life's vision I see ......

13 When he is a year and half old,
chappatis do give to eat,
pulses vegetables, milk and curd too

This life's vision I see ......

14 Oh ! so healthy will be the child
Jump and play with her,
Run a mile, without his illness, and sleeps
peacefully will he, walking up for more

This life's vision I see ......

15 Still, if he falls sick to hospital do take
Rush to the doctor, ignore not his illness
This is my advice, long will he live
This is my advice to you, my brothers and sisters !

This life's vision I see ......

APPENDIX - III

PUPPET PLAY ON POPULATION EDUCATION AND FAMILY WELFARE

जनसंख्या शिक्षा और परिवार कल्याण।कठपुतली।

साधु से फिर साधु

शैली-छड या सूत्र, दस्ताना ।

पात्र: शंकर ।चेला। गुरू, शम्भू ।चेला।, औरत।गुरूआईन।, लडका, शंकर की पत्नी, लडकी, लडका तथा चार पांच छोटे बच्चे, गाय, बिल्ली ।

पहला दृश्य:

।शंख, घण्टे, घडियाल की आवाज, गुरूजी शिव ओम कहते हुए प्रवेश करते हैं, चेले शंकर का प्रवेश ।

शंकर- गुरूजी प्रणाम ।

गुरू- जीते रहो बेटा, कहां की तैयारी कर ली तूने ?

शंकर- गुरूजी मैं तीर्थ यात्रा पर जा रहा हूं । आपके लिए यह नया भगवा ले आया हूं ।

गुरू- बेटा व्यर्थ मोह माया बढ़ाने से क्या लाभ ?

शंकर- एक ही भगवा होने से नहाने, धोने तथा सुखाने में आपको बडी दिक्कत रहती है ।

गुरू- मैं दुनिया की मोह माया को छोड़ चुका हूं- मगर तू प्रेम से लाया है तो ला रख दे इधर । ।चेला भगवा चबूतरे पर रख देता है ।

शंकर- मैं जा रहा हूं गुरूजी । बारह वर्ष के तीर्थ के बाद आपके दर्शन करने आऊँगा ।

गुरू- ।हाथ उठाकर। जाओ बेटा- भोलेनाथ तुम्हारी यात्रा सफल करे । ।चेले का प्रस्थान, गुरू ध्यानमग्न बैठ जाते हैं, कुछ चूहों का प्रवेश भगवा वस्त्र काटने लगते हैं, गुरूजी उन्हें भगाते हैं, चूहे फिर आ जाते हैं ।

गुरू- ।परेशान होकर। अरे शम्भू-----ओ शम्भू----

शम्भू- ।नेपथ्य से । आया गुरूजी- ।प्रवेश करता है। क्या आज्ञा है गुरूजी ?

गुरू- अरे देख यह चूहे क्या मुसीबत कर रहे हैं ?

शम्भू- । चूहों को भगाता है, अंत में परेशान होकर । गुरूजी आप इस भगवा को ही क्यों नहीं फैंक देते ?

गुरू- बेटा शंकर की भेंट की हुई चीज को कैसे फैंक दूं ? तू तो इन चूहों का कुछ प्रबन्ध कर ।

शम्भू-अभी करता हूं गुरूजी । प्रस्थान करता है ।

।गुरूजी भजन करने लगते हैं, चूहे परेशान करते हैं, गुरूजी उन्हें भगाते हैं,, कुछ देर बाद शम्भू का बिल्ली लिये प्रवेश, बिल्ली चूहों पर झपटती है, चूहे भाग जाते हैं ।

गुरू- बहुत अच्छा किया बेटा, देख इसके आते ही चूहे कैसे भाग गये ?

।शम्भू चला जाता है, बिल्ली इधर-उधर घूमती है म्याऊं-म्याऊं करती है, गुरूजी उसे पुचकारते हैं, फिर भी चिल्लाती रहती है ।

गुरू- ।परेशान होकर। ओफ अब क्या करूं । म्याऊं।-------कैसे इसे चुप करूं ।म्याऊं। अरे शम्भू-------ओ शम्भू---------

शम्भू-।नेपथ्य से। आया गुरूजी ।प्रवेश करता है ।

गुरू- देख यह बिल्ली भूखी है ।

शम्भू-मैं इसके खाने को कुछ लाता हूं । प्रस्थान करता है ।

गुरू- अब तक मैं संसार की मोह माया में नहीं फंसा फिर भी इस बिल्ली का मुझ पर कितना स्नेह हो गया है । बिल्ली म्याऊं-म्याऊं करती है, गुरूजी उस पर हाथ फेरते हैं ।

शम्भू-।प्रवेश कर। बिल्ली के लिये रोटी ले आया हूं ।देता है। ले खा----खा------। बिल्ली मुंह फेर लेती है। अरे खा----लेखा-----

गुरू- ।हंसकर। इसे चाहिये दूध,घी, मक्खन-------मैं रहा साधु, भिक्षा से जो भी आता है खा लेता हूं-----इसके लिए दूध कहां से लाऊं ।

शम्भू-गुरूजी पिछले माह सेठ बनवारीलाल ने आश्रम के लिए गाय भेंट देने को कहा था,आप कहें तो गाय ले आऊं ।

गुरू- ले आ बेटा-------गऊ सेवा का धर्म में भी बड़ा महत्व है ।शम्भू चला जाता है ।

गुरू- ।स्वत:। वाह री संसार की माया । भगुवा आया तो चूहे पीछे पड़े, चूहों को भगवाने बिल्ली आई तो उसे दूध पिलाने की गाय की जरूरत महसूस हुई-----इस माया का भी कोई अन्त है ?

।नेपथ्य में गाय की आवाज, शम्भू का गाय लिये प्रवेश ।

शम्भू- गुरूजी गाय ले आया हूं ?

गुरू- वाह कितनी अच्छी है-- साथ में बच्चा भी है--चलो अब दूध तो मिलेगा ही कभी-कभी स्पेशल चाय भी पी लिया करेंगे ----जा बेटा इसे बांध दे ।चेला गाय हांकता है, गाय भड़कती है, मारती है, गुरूजी खड़े देखते हैं ।

दूसरा दृश्य :

।गुरूजी बैठे बिल्ली को पुचकार रहे हैं, शम्भू गाय को खींचता हुआ लाता है ।

शम्भू- गुरूजी------गुरूजी-------इसने बड़ा परेशान कर रखा है,बार-बार दूसरों के खेतों में घुसकर नुकसान करती है, कल हीरालाल पटेल के खेत में गेहूं चर गई । वह लट्ठ लेकर आता ही होगा ।

गुरू- जा जाकर बांध दे----परेशान मत कर । ।गाय लिये चेले का प्रस्थान ।

गुरू- गाय-गाय--गाय क्या रखें----सुबह शाम चारों पहर उसका इन्तजाम खिलाओ-पिलाओ तथा सुबह शाम उसकी दुआरी करो---धर्म ध्यान, पूजा-पाठ, स्नान-ध्यान, क्रियाकाण्ड सब गये चूल्हे में, अरे शम्भू---ओ शम्भू------

शम्भू- क्या आज्ञा है गुरूजी ?

गुरू- अरे आज्ञा क्या, मैं तो अब इस गाये और बिल्ली से तंग आ गया हूं

शम्भू- गुरूजी एक बात कहूं ।

गुरू- कहो ।

शम्भू- कहते हुए शर्म आती है ।

गुरू- कहो-कहो बेटा क्या बात है ?

शम्भू- गुरूजी आपकी जिम्मेरियां देखते हुए तो यह घर अब एक गुरूआइन के बिना नहीं चल सकता ।

गुरू- ।सोचकर। सुझाव तो बुरा नहीं है, क्योंकि औरत/घर का काम करेगी और मुझे योगासन, स्वाध्याय, ग्रंथलेखन तथा ईश्वर चिन्तन का समय मिल जाएगा ।

शम्भू- गुरूजी पास के गांव में आपके विवाह का प्रबन्ध हो सकता है ।

गुरू- बेटा हम साधु सन्यासियों को कौन बेटी देगा ?

शम्भू- अभी तो आप जवान हैं---आपकी दाढ़ी-मूंछ और जटा भी काली है इन्हें कटा देने पर आप एकदम अमिताभ बच्चन जैसे दिखाई देने लगेंगे । और फिर आप ही कहा करते हैं-कि अच्छा गृहस्थ जीवन जीने से भी संसार की सेवा हो सकती है ।

गुरू- (सोचकर) अच्छा बेटा जैसी तुम्हारी मर्जी----लेकिन वह है कौन ?

शम्भू- "जात पांत पूछे नहीं कोई,
हरि को भजे सो हरि को होई"
मगर-----मगर गुरूजी वह विधवा है ।

गुरू- विधवा है-----कोई बात नहीं । इस विवाह से समाज में विधवा विवाह को बल ही मिलेगा बेटा ।

शम्भू- (कुछ कदम चलकर, रुक कर) गुरूजी उसके एक बेटा भी है ।

गुरू- कोई बात नहीं । घर का काम ही करेगा और नहीं तो चिलम ही भरा करेगा ।

शम्भू- तो गुरूजी तय कर आऊं ?

गुरू- जैसी तेरी मर्जी बेटा ।

(शम्भू झूम-झूमकर विवाह का लोकगीत गाता है)

गुरू- (विचारमग्न होकर--नया भगवा आया, फिर बिल्ली आई--फिर आई गाय--और अब आयेगी औरत---औरत आयेगी तो बच्चे होंगे--वाह रे शम्भू वाह आखिर धीरे-धीरे तूने मुझे गृहस्थ बना ही दिया)

शम्भू- (साथ में औरत और बच्चा है) आओ बहिन जी आओ-----
गुरूजी यही है वे-----

गुरू- लो सम्भालो तुम्हारा यह संसार----यह गाय (गाय की आवाज) यह बिल्ली (म्याऊं) और यह बछड़ा है, मैं चलता हूं धर्मध्यान में-------

औरत- मैं क्या गाय-बिल्ली पालने आई हूं ? मुझे चाहिये गहने-जेवर, साड़ी-लहंगे, चूड़ी-कंगन, नाक की नथ और कान की बालियां और घर में चाहिये माल मलीदे और बेसन के लड्डू ।

गुरू- हरे---हरे---हरे---हरे-----

औरत- लो मैं चली, मुझे नहीं चाहिये यह बाबाजी का आश्रम ।

शम्भू- अरे--अरे--ठहरो-ठहरो बहिन जी---हमारे गुरू बाल ब्रह्मचारी हैं---गृहस्थ जीवन का आनन्द नहीं जानते---धीरे-धीरे सब ठीक हो जाएगा, तुम तो यह शादी मंजूर कर लो । आइये मैं आप दोनों की शादी करा देता हूं । ।औरत को गुरू के पास चबूतरे पर बैठा देता है, गुरूजी उठ जाते हैं चेला उन्हें बैठाकर मंत्रोच्चार करता है ।

तीसरा दृश्य

। एक टूटी-फूटी झोंपडी है, एक ओर से शंकर, पत्नी और दो बच्चों का प्रवेश ।

शंकर- कहां है मेरे गुरूजी का झोपडी । कुछ चलकर मकान के दरवाजे को खटखटाकर । अरे कोई है---कोई---। कुछ बच्चों का प्रवेश ।

बच्चे- क्या है, कौन हो तुम ?

शंकर- बच्चों यहां एक साधुजी की झोंपडी थी ना आज से कोई बारह वर्ष पहले ।

बच्चे- यहां कोई साधु-वाधु नहीं है, चले जाओ यहां से ।

शंकर- अजीब बात है ।

पत्नी- शायद आप गलत जगह आ गये हैं ।

शंकर- नहीं-नहीं सब कुछ वही है, पीपल का पेड, मैदान सब वही है ।

। सामने से शम्भू का प्रवेश, हाथ में झोला है ।

शंकर- यह तो शम्भू जान पडता है । पास आने पर । अरे शम्भू-----

शम्भू- कौन शंकर----अब आया यार तू----और तेरे साथ यह कौन है ?

शंकर- यह मेरी पत्नी और यह दोनों बच्चे हैं----मगर पहले यह तो बता कि हमारे गुरूजी कहां हैं ?

शम्भू- गुरूजी तो पड गये गृहस्थी के चक्कर में । तेरे दिए हुए भगवे की माया से गुरूजी पूरी गृहस्थी हो गये हैं ।

बच्चे- ऊं-ऊं । बच्चों का शोर होता है ।

शंकर- ये बच्चे किसके चिल्ला रहे हैं ?

शम्भू- ये बच्चे भी गुरूजी के ही हैं- हर साल एक माडल तैयार । तुम बारह साल बाहर रहे तो तुमने दो ही पैदा किए और यहाँ तो गुरूजी ने पूरी कबड्डी की टीम तैयार कर ली ।

बच्चे- ऊँ,ऊँ,ऊँ । बच्चे चिल्लाते कूदते बाहर आते हैं ।

शंकर- बाप-रे-बाप, एक,दो,तीन,चार पाँच और छ:----तो अब गुरूजी का धर्म-ध्यान कहाँ गया ?

शम्भू- गृहस्थी की चिन्ता में ही गुरूजी का चिन्तन रह गया है भाई ।

गुरू- ।प्रवेश करते हुए। अरे शम्भू क्या सब्जी लाया है ।

शंकर- प्रणाम गुरूजी ।

गुरू- कौन ? शंकर कब आया रे तू ? बहुत बरस लगा दिये और तेरे साथ यह------

शंकर- यह मेरीपत्नी शारदा और दोनों बच्चे हैं, लेकिन आपने तो यह लम्बा चौडा संसार बसा लिया उसके लिए बधाई ---

गुरू- संसार छोडकर भी संसारी बन गया, यह सब तेरी दी हुई भगवा की ही माया है । पहिले तो मैं अकेला था, लेकिन अब इस फौज का क्या करूं ।

गुरूआइन-क्योंजी, किसके सामने रोना रो रहे हो ?

गुरू- यह मेरा चेलाशंकर है इसी ने मुझे गृहस्थ बनाया है ।

। सब बच्चे चिल्लाते हुए आते हैं ।

1- बच्चा - पिताजी हमें पतंग ।

2- बच्चा - पिताजी हमें मिठाई ।

3- बच्चा = पिताजी हमें गुलाबजामुन ।

गुरू- अरे चुप, भागो यहाँ से, देखा यह तूफान, कहाँ से लाऊँ इनके लिए यह सब, कमाने का साधन तो अब रहा नहीं । गाँव वालों ने सारी आश्रम की की जमीन छीन ली ।

शंकर- मगर अब तो इलाज कीजिये ।

गुरू- इसका इलाज तो अब संसार त्याग ही रह गया है । बेटा । मैं फिर साधु बनने जा रहा हूं ।

गुरुआइन- भाड़ में जाये तुम्हारा संसार, त्याग तुम मुझे क्यों लाये शादी करके ।

गुरू- देखा बेटा, संसार त्याग की बात आई और इन श्रीमती जी पर पहाड़ टूट पड़ा ।

गुरुआईन-तुम तो संसार त्याग दो और मैं इस बला को अपने सिर पर उठाऊँ ? लो मैं तो चली अपने पीहर, संभालो इस बला को । कहते हुए अन्दर चली जाती है, पीछे-पीछे सब बच्चे रोते हुए जाते हैं ।

गुरू- अब तू ही बता बेटा मैं क्या करूं ?

शंकर- अब भी समय है गुरूजी । ये छः से पूरे दर्जन न हो जाये इसका इलाज करिये ।

गुरू- इसका इलाज तो यही है कि मैं अब हिमालय चला जाऊँ ।

शंकर- नहीं, आइये इसका इलाज पास के परिवार कल्याण केन्द्र में है, आइये चलें ।

गुरू- चल बेटा ।

। सभी चले जाते हैं, परिवार कल्याण का तिकोना प्रकट होता है ।

POPULATION EDUCATION AND FAMILY WELFARE - 'PUPPET'

A SAINT REBORN

Cast : Shankar the follower; Guru; Shambu the follower; the Guru's wife; Shanker's wife with boy & girl; another boy and five small children; cow and cat.

Scene - I

(On the scene - a shell; bell; ticking of a clock; the guru chanting 'Shiv Om' makes his appearance with his follower Shankar)

Shankar : Salutations, Guruji !

Guru : Long may you live son ! Where are you preparing to go?

Shankar : I am going on a pilgrimage, Guruji. I have brought a new robe for you.

Guru : Son, what is the use of having unwanted illusions and desires?

Shankar : You had faced inconvenience with a single robe in bathing and washing.

Guru : I have renounced the worldly pleasures and desires but as you have brought this with such love for me, keep it here.

(Shankar keeps the robe on the stone slab)

Shankar : I take leave of you, Guruji. After 12 years of my pilgrimage, I will come to get your blessings again.

Guru : (Lifting his hand) : Go, my son ! May the Lord grant you success in your journey.

(The follower leaves. Guru sits down in meditation. Some rats come into the scene. They start chewing the robe. The Guru shoos them off, but they return).

Guru : (Worried) Oh ! Shambu, Oh ! Shambu !
(Shambu enters)

Shambu : Coming Guruji ! (enters) - What's your command, Oh Lord?

Guru : Oh ! Look what a nuisance these rats are creating !

Shambu : (Tries to shoo the rats, in the end, worried) - Oh Lord ! Why don't you throw away this robe?

Guru : How can I throw away the robe, given to me as a gift by dear Shankar? You please take care of these rats.

Shambu : As you command, Oh Lord !
(Makes his exist)

(Guru starts chanting hymns. Rats still trouble him. After some time, Shambu enters with a cat. The cat leaps on the rats at once and they disappear).

Guru : Very good, my son ! See how the rats ran away on seeing the cat.
(Shambu leaves; the cat roams around meowing; the Guru pets the cat but it persists in meowing).

Guru : (Worried) - Oh ! What do I do now?
(Meow) - How can I make it stop? (Meow)
Oh ! Shambu, Oh ! Shambu !

Shambu : Coming, Oh Lord ! (enters)

Guru : See, this cat is hungry.

Shambu : I will get something to eat (exists)

Guru : Till now, I was free from the desires of the world. Even then, I have started liking this cat. (The cat meows while the Guru strokes and pets it).

Shambu : (enters) I have brought bread for the cat. (Feeds it) Eat, eat ! (The cat turns its head away from the food) Come on, take it, eat !

Guru : (Laughing) - It wants milk, ghee, butter, but I am a renounced man. Where can I get them from? Whatever I get as alms, I eat that.

Shambu : Last month, Banwarilal Merchant had promised to donate a cow for the Ashram. If you command, I will go and get one from him.

Guru : Bring one, my son ! There is greatness in serving a cow, too (Shambu leaves).

Guru : (to himself) - Oh ! Look at this world. I got a robe, the rats came to chew it. To shoo the rats, the cat came. To satisfy its hunger, we need the cow. Is there going to be an end to this?

(The mooing of the cow from the backyard, and Shambu enters with the cow).

Shambu : I have brought the cow.

Guru : Ah ! How beautiful it is. The calf is along with it. Well, now, we will get milk and sometimes, a special tea too.... Go, my son, tie it up. (Shambu takes the cow - Hrr.....Hath ! The cow stompes and kicks. The Guru looks on).

Scene - II

(The Guru is petting the cat. Shambu enters pulling the cow along)

Shambu : Guruji ! Guruji ! ! This cow is becoming a big nuisance. It is eating away the crop in the other's fields repeatedly. Yesterday, it was in Heeralal Patel's field and ate the crop. He must be just coming with a stick.

Guru : Go, tie it up. Do not disturb me. (Shambu exits with the cow).

Guru : Cow, cow, what a headache we have taken on. All our time in this Ashram is spent on bathing it, feeding it and milking it. Prayer, chanting, meditation, all have gone up in a smoke. Oh Shambu ...... !

Shambu : What is your command, Guruji !

Guru : What do I say. I have got fed up with this cow and cat.

Shambu : Guruji, shall I tell you something?

Guru : Do tell.

Shambu : I feel ashamed of telling it.

Guru : Do not feel ashamed, my son. Go on.

Shambu : Guruji, looking at all your responsibilities, this house cannot be run without a mistress.

Guru : (thoughtfully). Your suggestion is not bad. She can take care of the house while I can concentrate on my prayer, meditation and religious duties.

Shambu : Your marriage can be arranged with a girl from the nearby village.

Guru : My son, who will give his daughter to a renounced man like me?

Shambu : You are still young. My Lord ! Your beard, moustache and hair are still black. If your long hair is cut, you will look like Amitabh himself. And you yourself used to tell that leading a happy married life is also a type of service to the world.

Guru : Oh ! My son, as you wish. But, who is she?

Shambu : Nobody asks for caste or creed. She who the 'Lord' sends belongs to the 'Lord' himself. But she is a widow.

Guru : A Widow? That is all right. If I marry her, this marriage will give strength to the widow remarriage movement in this country.

Shambu : (Takes a few steps and stops) - Guruji, she has a son, too.

Guru : No problem, he will help out in the house, or atleast, fill my pipe.

Shambu : So, shall I fix it up, Guruji?

Guru : As you wish, my son.
(Shambu, with joy sings a folk song on marriage).

Guru : (deep in thought) - I got a new robe, a cat came along, then a cow and now a woman will come ! If a woman comes, kids will follow. Great Shambu, at last, you made a householder out of me.

Shambu : (with a woman and child) - Come, sister, come. Guruji, this is the woman.

Guru : Please take care of this household, i.e. this cow (the cow moos); this cat (meow); and this calf. I will occupy myself in prayers.

Lady : What ! Have I come here to take care of a cow and cat? I want jewels, sarees, bangles and earnings, of course, sweets too.

Guru : Oh Lord ! Oh Lord !!

Lady : I will leave. I do not want to be in this ashram.

Shambu : Oh ! Wait, sister. My lord is a religious man from childhood. He does not know the pleasures of married life. Slowly, he will catch on. You please agree for this marriage.

Come, I will get you both married.

(Makes the lady sit beside the Guru. The Guru stands up but the follower makes him sit down and starts chanting hymns).

Scene - III

(A worn and torn hut - From one end, Shankar, his wife with two children enter).

Shankar : Where is my Guruji's hut? (Goes ahead and knocks on the door of the hut). Is anybody there .... Anybody there .... ? (Some children enter).

Child : What is it, who are you?

Shankar : Children, Was there not a religious man's hut here some twelve years back?

Child : There is no religious man here, go away.

Shankar : How odd !

His wife : Perhaps you have come to the wrong place.

Shankar : No, No, everything is the same, the banyan tree, the field, all are the same. (Shambu enters from the front, bag in hand).

Shankar : This looks like Shambu (When he comes near) Oh ! Shambu ......

Shambu : Who, Shankar ..... When did you come my friend? And who is this with you?

Shankar : This is my wife and these are my two children ...... But first, tell me where our Guruji is?

Shambu : Guruji has got caught in the wheel of house-holding. The magic of the robe given by you has made Guruji into a proper householder.

Children : OH ! OH !! (They start making noice).

Shankar : Why are these children shouting?

Shambu : Those are Guruji's children only. Every year a new model. You stayed away for 12 years and got only two whereas our Guruji has prepared a full Kabbaddi team itself !

Children : Oh, Oh, Oh, (shouting and jumping, they come out).

Shankar : Oh, my God ! One, two, three, four, five and six. Now, what has happened to Guruji's religion and meditation ?

Shambu : Guruji's meditation is now only on household worries, brother.

Guru : (enters) Oh, Shambu, have you brought the vegetables?

Shankar : Salutation, Guruji !

Guru : Who? Shankar ! When did you come? Many years have passed. Who is this with you?

Shankar : This is my wife Shardha and my two children. But congratulations on your establishing this huge family !

Guru : Though I renounced the world, worldly have I become, and all this is the outcome of the magic of the robe you gave. Before I was single, but what do I do with this battalion now.

The Guru's Wife : Well, whom are you crying in front?

Guru : This is my follower Shankar and he is the one who made me a householder.
(All the children enter shouting)

Ist Child : Father, we want a kite.

2nd Child : Father, we want sweets.

3rd Child : Father, we want gulabjamuns

Guru : Oh, shut up ! Run away from here.
Look at this storm, where shall I get all that from? I have no source to earn money. The villagers have snatched all the lands of the Ashram.

Shankar : But solve this problem.

Guru : The only solution to this problem is renouncing the world again. Son, I am going to become a religious man again.

Guru's Wife : Let your "renouncing the world" go to hell. Why did you marry me then?

Guru : Look son ! The topic of my renouncing the world comes up and this lady starts creating havoc.

Guru's Wife : You renounce the world and I have to bear this burden on my head.
Look, I am going to my parents house and you take care of all these.
(Saying this, she enters the hut, and all the children follow her crying).

Guru : Now, you only tell me what to do, son?

Shankar : There is still time left, Guruji. Solve the problem to see that they do not increase from 6 to 12.

Guru : The only solution to this is for me to go away to the Himalayas.

Shankar : No, the solution to this can be found in the nearby Family Welfare Centre itself, come.

Guru : Come, my son.
(All exist and the Triangle of Family Welfare is seen on the stage)

APPENDIX - IV
LECTURE NOTES ON MILESTONES OF DEVELOPMENT
विकास के चरण

समेकित बाल विकास सेवा योजना का एक अनिवार्य उद्देश्य यह देखना है कि बच्चे का विकास सही प्रकार से हो और उसमें किसी प्रकार की बाधिता न रहे । इसके लिये बच्चे के विकास पर नियमित रूप से निगरानी रखनी चाहिये । बच्चे का विकास सही प्रकार से हो रहा है, अथवा नहीं, इस बात का पता लगाने के लिये बच्चे की कुछ गतिविधियों की तुलना उसकीआयु के अन्य बच्चों की गतिविधियों से करनी चाहिये ।

विकास की प्रक्रिया में कुछ ऐसी चीजें है जिन्हें ऐक जैसी आयु के सभी बच्चे कर सकते हैं । इन्हें बच्चे के विकास के चरण का नाम दिया गया है । उदाहरण के लिये सामान्य रूप से बच्चे छ:महीने की आयु में बैठने लगते हैं । इसलिये यह समझा जाता है कि छ: महीने का बच्चा बैठने योग्य होना चाहिये । इसी तरह, यह आशा नहीं की जा सकती कि छ: महीने का बच्चा चल सकेगा । वह तभी चल सकता है जब वह लगभग दस महीने का हो जायेगा । ऐसी चीजें भी लगभग एक जैसी होती है जिन्हें अलग-अलग आयु के बच्चे कर सकते हैं । यदि कोई बच्चा संभावित आयु में किसी गतिविधी को कर नहीं पाता तो यह समझा जाता है कि उसका विकास देर से हो रहा है ।

बच्चे के विकास में विभिन्न चरणों की तुलना सड़क पर रखे गये मील पत्थरों से की जा सकती है । जिस तरह सड़क पर रखा गया प्रत्येक मील पत्थर दूरी को दर्शाता है उसी तरह प्रत्येक विकासात्मक चरण से बच्चे के विकास की उस अवस्था का पता चलता है जो कि एक सामान्य बच्चा विकास की प्रक्रिया में प्राप्त कर लेता है ।

बच्चे के विकास में पहले दो वर्ष बहुत महत्वपूर्ण होते हैं । यदि बच्चा इस अवधि के दौरान सभी चरणों को पार कर लेता है तो यह समझ लेना चाहिये कि इस बच्चे का विकास सामान्य रूप से हो रहा है । यदि बच्चा इन चरणों तक देरी से पहुंचता है तो यह समझ लेना चाहिये कि उसका विकास देरी से हो रहा है और उसकी ओर तुरन्त ध्यान देने की आवश्यकता है ।

आंगनवाड़ी कार्यकर्ता को बाल्यावस्था की कमियों का आरंभिक अवस्था में ही पता लगाने के प्रति संलग्न होना चाहिये । इनका पता लगाने पर का यह भी ध्यान रखें कि क्या बच्चा अपनी आयु के अनुसार विकास के विभिन्न चरणों तक पहुंच रहा है या नहीं, दो वर्ष तक के विकास के चरण निम्नलिखित हैं :-

1-	एक महीने का बच्चा -	प्रकाश की ओर देखने लगता है ।
2-	दो से तीन महीने का बच्चा-	आवाज सुनकर उस ओर देखने लगता है एवं मां को देखकर मुस्कराता है ।
3-	तीन से चार महीने का बच्चा-	अपनी गर्दन संभाल सकता है ।
4-	चार से पांच महीने का बच्चा-	मुंह से गर्र-गर्र जैसी आवाज निकालने लगता है ।
5-	छ: से सात महीने का बच्चा -	अपने आप बैठ सकता है ।
6-	आठ से नौ महीने का बच्चा -	घुटने के बल चलने लगता है ।
7-	दस से बारह महीने का बच्चा-	सहारे से खड़ा हो सकता है और फिर अपने आप भी चल सकता है ।
8-	तेरह से पन्द्रह महीने का बच्चा-	सीढ़ियाँ चढ़ सकता है ।
9-	पन्द्रह महीने से दो वर्ष तक का- बच्चा	किताब से तस्वीरें देखना पसन्द करताहै ।

विकास के चरण एकदम निश्चित नहीं है । कुछ बच्चे पांच महीने की उम्र में बैठना शुरू करते हैं, और कुछ छः महीने की उम्र में । यह जरूरी नहीं है कि बच्चे को छः महीने की आयु में बैठना शुरू कर ही देना चाहिये । वह $5 - \frac{1}{2}$ या $6 - \frac{1}{2}$ या 7 महीने की उम्र में भी बैठना शुरू कर सकता है । विकास के इन चरणों तक देरी से पहुंचने के कई कारण हो सकते हैं । कुछ सामान्य कारण निम्नलिखित है ।

व्यक्तिगत अन्तर :

सभी बच्चों का विकास एक जैसी गति से नहीं होता, कुछ बच्चों का विकास तेजी से होता है और कुछ का धीमा । इसी तरह, कुछ बच्चे अन्य बच्चों की अपेक्षा विकास के चरणों में शीघ्र पहुंच जाते हैं । कभी-कभी कुछ बच्चे विकास के कुछ चरणों को छोड देते हैं । इसलिये विकास के इन चरणों को मोटे तौर से सूचक समझना चाहिये । इनमें कुछ अन्तर अवश्य हो सकता है ।

बीमारी :

पुरानी या लम्बी बीमारी के कारण बच्चा विकास के कुछ चरणों तक देरी से पहुंच पाता है लेकिन यदि बच्चा विकास के सभी चरणों तक दो महीने से अधिक देरी से पहुंचता है तो डाक्टर से सलाह ले लेनी चाहिये ।

शारीरिक कमियाँ :

बच्चों में सुनने एवं देखने की कमजोरी विकास के चरणों में देरी का कारण हो सकती है । उदाहरण के लिये ऊँचा सुनने वालों बच्चों की भाषा का विकास देरी से हो सकता है ।

अधिकांश बच्चों में, उचित देखभाल के परिणामस्वरूप देरी से विकसित होने वाले विकास के चरणों में सुधार लाया जा सकता है ।

मन्द बुद्धि के कारण भी बच्चे के विकास में देरी हो सकती है, और खास तौर से बच्चे के पैदा होने के समय से विकास का कोई चरण न दिखाई पड़ना या कहीं चरण बहुत देरी से दिखाई पड़ना, मन्द बुद्धि का एक सूचक हो सकता है ।

इस निष्कर्ष तक पहुंचने से पहले डाक्टर से पूरी जांच कराना बहुत ही आवश्यक है ।

MILESTONES OF DEVELOPMENT

One of the essential aims of integrated child Development Services Scheme is to ensure that the child grows normally and has no disability. For this purpose growth of the child must be monitored regularly. In order to find out whether a child is growing normally, the child should be compared with other children of the same age with respect to certain activities.

In the process of growth, there are certain things all children of a given age can do. These are called milestones of development. For example, normally children start siting at the age of six months. So, it is expected that a six month old child should be able to sit. Similarly, a six month old child cannot be expected to walk. He acquires this skill only when he is about ten months old. The things children of various ages can do are almost universal. If a child fails to do a particular thing at the age expected, his development is considered to be delayed.

The concept of milestones in a child's growth can be compared with milestones on a road. Just as every milestones on a road indicates distance, every developmental milestone refers to a stage in development which a normal child has reached during the process of growth.

The first two years are crucial in the life of a child. If a child passes through all the milestones during this period, it means that he is growing normally. If the child is late in these milestones, it means that his development is delayed and he needs to be given immediate attention.

It is important to remember that these milestones are not absolutely fixed but generally most children go through them. Some children pass through these milestones earlier whereas others are somewhat late. But if a milestone is delayed by more than two months, it is advisable to consult a Doctor.

Milestones in the life of a child (0-2 years) can be seen step by step in the following manner:

1	One month old	:	responds to light
2	Between second and third month	:	the child smiles at the mother, he responds to sound and can kick well
3	Three to four months old child	:	can manage to hold the neck, laughs and given a thing can clasp it
4	Between four and five months	:	Makes gurgling sounds, can turn on his side and tries to reach and set things
5	Six to seven months old child	:	Can sit on his own, can pick up things from a higher place like table, looks down at fallen objects
6	Between eight and nine months	:	the child starts crawling, the child can hold a cup for drinking, can manipulate things from one hand to the other looks at the mirror image.

7	Ten to twelve months old child	:	Can stand with support gradually starts walking with support and finally can walk independently
8	Between thirteen and fifteen months	:	the child can climb stairs, is able to feed himself
9	Between fifteen months and two years	:	A child in this age enjoys pictures in a book, can show his body organs, can climb down the stairs and tries to scribbles, using a pencil

Milestones are not absolutely fixed. Some children start sitting at five months, some at six. It is not as if a child must start sitting exactly at six months of age. He may be 5½ or 6½ or 7 months old by the time he starts sitting.

There can be many reasons for delayed milestones. Some of the common reasons are:

Individual differences:

All children do not grow at the same pace; some are very fast in development and some are slow. Similarly some children pass through the milestones earlier than others. Sometimes children skip certain stages. The milestones should only be taken as broad indicators. There can be variations.

Illness:

Due to cronic or prolonged illness some of the milestones of a child may be delayed, but if all the milestones are delayed for more than two months, a doctor should be consulted.

Physical defects:

Basic impairment in hearing or vision may also be a cause of delayed milestone. For example, a child who is hard of hearing may also be delayed in speech.

In most cases, delayed milestones can be remedied. If given proper care, the delay can be checked. In extreme cases, delayed milestones may also be due to mental retardation. If a child misses or is delayed in most or all the milestones from the time of birth, it may be due to mental retardation.

Before reaching this conclusion, a thorough physical check up by a doctor is absolutely necessary.

APPENDIX - V

LECTURE NOTES ON PROTEIN CALORIE MALNUTRITION

प्रोटीन कैलोरी कुपोषण लक्षण व रोकथाम:

शिशु के विकास और अच्छे स्वास्थ्य के लिए सही आहार सबसे जरूरी है। भोजन और स्वास्थ्य का गहरा संबंध है। जो कुछ हम खाते हैं, उससे शरीर बनता है। यदि एक शिशु को पेट भर ताकतवर भोजन मिले तो उसका शरीर बढ़ कर हृष्ट पुष्ट हो जाता है। इसके विपरीत आहार की कमी से वजन कम बढ़ने के अतिरिक्त विकास में भी बाधा पड़ती है। अत: यह स्पष्ट है कि भोजन के मुख्य रूप से तीन कार्य होते हैं :-

1- शरीर को बढ़ाना है।

2- शरीर को शक्ति देना है।

3- शरीर को बीमारियों से बचाना है।

इन तीनों कार्यों को करने के लिये हमें विभिन्न प्रकार के भोज्य पदार्थों को खाना चाहिये, ठीक उसी प्रकार जैसे की एक मकान को बनाने के लिए ईंट, पत्थर, चूना तथा लोहे की आवश्यकता होती है। शरीर के विकास और उसे बनाये रखने के लिए प्रोटीन की आवश्यकता होती है। प्रोटीन पशुओं से प्राप्त होता है। जैसे मछली, मांस, दूध और इनके उत्पादों से। प्रोटीन वाली अन्य चीजें हैं दालें, बीन, सूखा मटर, चना। अनाज, जड़वाली सब्जी, शक्कर, वसा शरीर को शक्ति देते हैं। सब्जियां एवं फलों के सेवन से विटामीन एवं खनिज लवण प्राप्त होते हैं। जो शरीर को निरोग रखने में मदद करते हैं।

भारत की 80 प्रतिशत जनता ग्रामवीसनी है। इसके आय स्तर कम हैं और लगभग आधी जनता निर्धनता के स्तर के नीचे जीवनयापन करती है। अनेक सर्वेक्षणों से पता चलता है कि अधिकांश लोगों को आवश्यकता से कम भोजन मिलता है। गर्भवती, स्तनपान कराने वाली माताओं और बच्चों पर इसका सबसे बुरा प्रभाव पड़ता है। गर्भवती और दूध पिलाने वाली माताओं को ज्यादा खाना, खाना जरूरी है क्योंकि:-

1- गर्भवती मां को अपने लिए और अपने गर्भ में पनपते बच्चे के लिये खाना चाहिए ।

2- इसके अलावा ज्यादातर गर्भवती माताओं का वजन कम होता है और वे गर्भावस्था में भी भारी शारीरिक काम करती रहती है इसलिए उन्हें अतिरिक्त शक्ति की जरूरत होती है ।

3- गर्भवती मां को पौष्टिक भोजन न मिलने का असर बच्चे के वजन पर पडता है । इन बच्चों की अक्सर मृत्यु हो जाती है । जो बच जाते हैं, वे बचपन में और बच्चों से छोटे रहते हैं ।

4- बच्चे को दिए जाने वाले दूध की मात्रा माता के भोजन पर निर्भर करती है ।

5- यही नहीं स्वस्थ मां कमजोर मां की तुलना में अपने बच्चे की ज्यादा अच्छी देखभाल कर सकती है ।

गर्भवती और दूध पिलाने वाली माताओं को पौष्टिक भोजन काफी मात्रा में खाना चाहिये । जिससे कि मां का शरीर स्वस्थ रहे तथा वह अपने बच्चे को भी स्तनपान सही रूप से करवा सके । बच्चे को जन्म के तुरन्त बाद मां का दूध पिलाना शुरू कर देना चाहिये । शुरू में एक दो दिन तक गाढ़े रंग का पीला सा पदार्थ (कोलोस्ट्रोम) निकलता है । इसमें प्रोटीन और बीमारियों से बचाने वाले तत्व होते हैं । यह बच्चे के लिये बहुत जरूरी होते हैं ।

बच्चों के लिये मां का दूध कितना लाभदायक एवं उपयोगी है, इसका पूर्ण ज्ञान मां को गर्भावस्था के दौरान देना चाहिये । मां के दूध के लाभ निम्नलिखित हैं :-

1- यह बच्चे को आहार देने का सबसे आसान तरीका । गर्म और साफ दूध हमेशा तैयार रहता है । जब तक बच्चा खुश है और उसका वजन बढ रहा है, माता को यह फिक्र नहीं रहती कि बच्चे को कितने दूध की जरूरत है ।

2- माता का दूध प्राय: नि:शुल्क होता है । गरीब या मध्यम श्रेणी परिवार के लिए यह बात बहुत महत्वपूर्ण है ।

3- पशुओं के दूध की तुलना में यह आसानी से पच जाता है ।

4- समय से पहले पैदा हो गये बच्चों के लिए यह ज्यादा ठीक होता है ।

5- इसमें ऐसे कई तत्व होते हैं, जो बच्चे को छूत की बीमारियों से बचाते हैं । मां का दूध पीने वाले बच्चों को दस्त बहुत कम लगते हैं ।

6- इसमें बहुत से विटामिन होते हैं ।

7- मां के दूध से किसी तरह की एलर्जी नहीं हो सकती ।

8- मां के खुश रहने पर दूध भी ज्यादा उतरता है ।

माता को जब तक हो सके, बच्चे को अपना दूध पिलाना चाहिये । बजब तक वह आसानी से बच्चे को दूध पिला सके ।

शुरू के चार छ: महीने में बच्चे के लिए सिर्फ मां का दूध काफी होता है लेकिन इसके बाद सिर्फ मां का दूध उसके लिये काफी नहीं रहता । अत: बच्चे को अर्द्ध-ठोस आहार देना चाहिये, जिससे कि बच्चे का पेट भर सके । 4-5 महीने में मसले हुये फल या सूजी, जिसे चावल, रागी, वगैरह से दलिया बना कर दें । मौसम के अनुसार उपलब्ध फल भी देने चाहिये । 5-6 महीने का होने पर फल, दलिया तथा मौसमी सब्जियां उबाल कर या भाप में पका कर दे सकते हैं । 7-8 महीने का होने पर बच्चे को घर में तैयार होने वाली विभिन्न प्रकार की चीजें दिन भर में 4-5 बार देनी चाहिये । खिचडी, दही, अण्डा, खीर, दलिया, डबलरोटी जैसी चीजें देनी चाहिये । 9 से 10 महीने में खाद्य पदार्थों की मात्रा धीरे-बढ़ाई जा सकती है ।

हमारे देश में 1 से 5 वर्ष के बच्चों के भोजन में दालों व अनाजों की कमी से जो बीमारियां हो जाती है उनमें कुपोषण सबसे महत्वपूर्ण है तथा कभी कभी इससे बच्चों की मृत्यु भी हो जाती है ।

दालों व अनाजों की कमी से होने वाले रोगों के नाम हैं :-

1- मरास्मस (सूखा रोग)

2- क्वाशिओरकर (शरीर फूलना)

मरास्मस :

जिन बच्चों के लिए मां का दूध काफी नहीं होता और मां बच्चों को बकरी, गाय या भैंस का पानी मिला कर दूध पिलाती है अ उनमें यह रोग आम तौर पर पाया जाता है । पूरी सफाई का ध्यान न रखने के कारण उन्हें प्राय: बार-बार दस्त भी हो जाते हैं । जब मां का दूध बच्चे के लिए कम पड़ जाये और उसे कुछ और भी खाने को न दिया जाये तो भी यह स्थिति हो जाती है । रोगों के बार-बार संक्रमण से स्थिति और भी बिगड़ जाती है ।

लक्षण :

एक मरास्मस रोगी बच्चे की खाल के नीचे चर्बी और मांसपेशी बहुत कम होती है और वह चमड़ी और हड्डियों का ढांचा दिखाई देता है । सिर अधिक बड़ा दिखाई देता है और बाल भी कम होते हैं । यदि सिर के बाल काट दिये जायें तो बढ़ते नहीं है । बच्चे का अपनी अवस्था के मुकाबले वजन 60 प्रतिशत से कम होता है । तथा उसका कद भी कम होता है जो अल्पपोषण की अवधि पर निर्भर करता है । उसकी खाल निकलने लगती है और रंग भी काला पड़ जाता है । चमड़ी के नीचे तंतुओं के अभाव में उसकी पसलियां साफ दिखाई देती है और इसे गलती से रिकेट्स रोग समझ लिया जाता है । बच्चे को एक या अनेक संक्रमण भी हो सकते हैं ।

मां कदाचित ही केवल कुपोषण के विषय में सलाह देती है । बच्चा उदासीन हो जाता है और रिरियाता रहता है । रोग के गंभीर होने पर उसे अपने आसपास के वातावरण में रुचि नहीं होती और वह निढाल होकर पड़ जाता है । वह घंटों एक ही स्थिति में प्राय: आंखे बंद किये

लेटा या बैठा रहता है । गाल आखिर तक भरे हुए रहते हैं, परन्तु अन्त में यह भी सूख जाते हैं और बच्चा बूढ़े आदमी जैसा दिखाई देता है । उसे प्राय: खून की कमी भी होती है । विटामिनों की कमी भी हो सकती है और नहीं भी । शुरू में उसकी भूख अच्छी होती है और बच्चा अपनी अंगुलियां चूसता रहता है तथा उपयुक्त खुराक देने से जल्दी ही ठीक हो जाता है । किन्तु बाद में भूख बहुत कम हो जाती है और बच्चे को खिलाने में सब्र के साथ बहुत मेहनत करनी पडती है । अव्वल तो वह कुछ खायेगा नहीं और यदि कुछ मुंह में रख दिया गया तो उसे थूक देगा । वह प्राय: खाने-पीने की चीजों से मुंह फेर लेगा। ऐसी स्थिति में बडे सब्र के साथ शुरू में बच्चे की रूचि के अनुसार थोडा दूध या कोई अन्य वस्तु थोडी-थोडी दी जा सकती है ।

क्वाशिओरकर :

यह एक अफ्रीका की भाषा का शब्द है जिसका अर्थ है "वह रोग जो एक शिशु के स्तनपान को छुड़ाकर दूसरे शिशु को स्तनपान कराने के कारण हो जाता है ।" इसका आयु आघटन मरास्मस से थोडा बाद में होता है और यह एक वर्ष से कम आयु के बच्चों में बहुत कम होता है । शिशु का वजन उसकी सूजन पर निर्भर है किन्तु यह आयु के अनुसार अपेक्षित वजन के 60 प्रतिशत से भी कम होता है । कद की लंबाई मरास्मस से भी अधिक कम होती है ।

लक्षण :

शिशु का वजन बढता हुआ नजर आता है, परन्तु यह वजन शरीर में सूजन आने से बढता है । बच्चा प्राय: उदासीन एवं रूचिहीन दिखाई देता है । उदास, एवं गाल सूजा हुआ चेहरा हो जाता है । सूखे, छिदरे व भूरे बाल हो जाते हैं । चमडी काली हो जाती है, वह कहीं-कहीं

पर घाव भी दिखाई देते हैं ।

खून की कमी हो जाती है, जिससे चेहरा पीला पड़ जाता है, व बच्चा काफी कमजोर दिखाई देता है । पाचन संस्थान अव्यवस्थित हो जाता है, जिसकी वजह से भूख कम लगती है, दस्त व उल्टी की शिकायत रहती है । पाचन शक्ति कम हो जाती है ।

यह भी देखा गया है कि एक ही परिवार में एक ही प्रकार का आहार लेते हुए दो बच्चों में से एक को "मरास्मस" और दूसरे को "क्वाशिओरकर" रोग हो जाता है । जिस बच्चे को पहले सूजन नहीं होती है उसे कुछ दिन बाद हो सकती है ।

पर्याप्त कैलोरी न मिल पाना दोनों स्थितियों में समान कारण है । अत: मरास्मस या क्वाशिओरकर कहने की अपेक्षा प्रोटीन-कैलोरी कुपोषण कहना अधिक सही और अनुकूल है । इसमें परिमित खून की कमी तथा एकया अनेक विटामिनों की कमी भी हो सकती है ।

प्रोटीन-कैलोरी कुपोषण का शीघ्र पता लगाना :

बच्चे को उपर्युक्त अति कुपोषण का शिकार बन जाने तक इंतजार करने की अपेक्षा कुपोषण की प्रारम्भिक स्थिति को पहचान लेना अधिक महत्वपूर्ण है । यह कार्य बच्चे के वजन का क्रमिक अभिलेख रखकर, यह देखते हुए कि उसकी विकास-रेखा संतोषजनक है या नहीं, हो सकता है ।

जिन बच्चों में प्रोटीन-कैलोरी कुपोषण गंभीर होता है वह बार-बार बीमार पड़ते हैं । कुछ मास तक उनका वजन नहीं बढ़ता अथवा घट भी सकता है । बच्चे की प्रोटीन-कैलोरी कुपोषण अवस्था को इस स्थिति पर पहिचानना चाहिए न कि जब कुपोषण भयानक रूप धारण कर ले ।

0-6 वर्ष के बच्चे को यह बीमारी ना हो, इसलिये माता-पिता को समय पर बच्चों को खाने पीने की देखभाल करनी चाहिये । इसके लिये यह जरूरी नहीं कि बालक को दवाई देनी पड़े या सुईयां लगानी पड़े । यदि बच्चे को पेट भर कर सही किस्म की खुराक दी जाये तो इस रोग का निवारण किया जा सकता है । सही किस्म की खुराक का मतलब है कि भोजन में दालों व अनाजों को अधिक से अधिक शामिल किया जाये । इस प्रकार का उपरी आहार या खुराक बीमारी के शुरू होते ही दिया जाये तो बीमारी को बढ़ने से रोका जा सकता है ।

यदि बालक में रोग के लक्षण नजर आते हैं तो सही समय पर तथा पूर्ण मात्रा में, उपर बताये अनुसार खुराक दी जाये, तब ही रोग को आगे बढने से रोका जा सकता है । यदि रोग इसके बाद भी बढता जाये तो बालक को डाक्टर को अवश्य दिखाना चाहिये एवं उसकी सलाह भी लेनी चाहिए ।

PROTEIN ENERGY MALNUTRITION

The foods that we eat plays an important role in maintaining good health. There are many foods to choose from and the health of an individual depends upon the type and quality of foods he chooses to eat. During the first five years of the child's life, growth is very rapid. The child is developing physically as well as mentally. In order that growth and development may be normal, the child requires the right type of food in the right quantity. Food performs several important functions in the body. The three main functions are:

1 Providing energy

2 Body-building, growth and repair of tissues

3 Regulating body processes and protecting the body from infections

Foods like cereals, millets, roots and tubers, sugar, jaggary, fats, oils and pulses provide energy necessary for carrying on daily work like walking and household work, and help to satisfy our hunger. Pulses, milk, meat and fish contain large amounts of protein which help in growth and repair of body tissues. These are very important for the proper growth of infants and young children. Vegetables, green leafy vegetables and fruits are rich in vitamins and minerals and protect the body from deficiency diseases like night blindness, angular Stomatitis and anaemia.

India is a country of villages and about 80 per cent of the people live in them. The income levels are low and about half the population live below the poverty line several surveys have shown that a large number of people

eat less food than they need, the worst sufferers being pregnant women and lactating mothers and children. The child in the womb, and the child at the breast, are influenced by the nutrition of their mothers. During pregnancy, the diet deserves special consideration to make sure that it not be a limiting factor to the good health of both mother and child. Pregnant and lactating women should eat more food because:

1. Pregnant mothers should eat because miscarriages and premature and still births were more frequent if the maternal diet was inadequate.
2. Pregnant mothers will have low weight and during pregnancy, they will do all heavy works, to compensate that, a mother should eat more for extra energy.
3. Illness and deaths resulting from the illness were more frequent among infants under 6 months of age, born to mothers eating poor diets.
4. The foetus can be thought of as a parasite on the mother which takes from the mother what it needs, it still seems to suffer from the effects of maternal malnutrition.
5. A healthy mother should give better protection and care to their child instead of unhealthy mother.

The pregnant and nursing mothers must continue to eat sufficient amounts of nourishing, wholesome foods to provide a good supply of breast milk to the baby and to ensure the proper health of the infant. Breast milk is the best food for the baby. Soon after the baby is born, the breast secrete a thick, yellowish fluid which differs from milk. The early secretion is called colostrum and it is very rich in proteins and antibodies and should be given to the baby.

The advice regarding breast feeding should start ideally in the prenatal period. The advantage of breast milk feeding should be emphasised:

1. It is the simplest way to feed the baby.
2. It is easily digestable and the fats are better emulsified.
3. The mother has a feeling of satisfaction and achievement, it makes her and her child happier.
4. It contains all the necessary nutrients for the new born infant.
5. It protects the child from disease and infection.
6. Breast-feeding is much cheaper than feeding breast-milk substitutes.
7. Breast-milk is always available and no utensils or water or fuel is needed to prepare it.
8. Breast milk immediately after delivery encourages the contraction of the womb and helps the mother regain her figure quickly.

Breast feeding should be continued as long as possible. However, after 3 to 4 months, most mothers will not have enough milk for this to be the sole source of food for the baby, and so some other food will have to be started in addition. It is necessary to supplement breast milk by giving the baby milk from other animal sources such as cow's milk, buffalo's milk or goats milk. Milk substitutes can also be prepared from vegetable sources such as ragi, groundnut or soyabean. From the age of Four months the baby should be given green leafy vegetables made into a soup, or fruit juice. By the Fifth month, boiled mashed potato and mashed banana can be added to the baby's diet.

By the Seventh month, the baby can digest semisolid food such as knichadi or daila. Fruits and vegetables should be made soft and easily digestable before giving them to the baby. From the age of Six or Seven months, the baby can be given egg, khir, dalia, bread, etc. A thick roti can be softened in milk, dal or gravy. From the age of Nine to Tenth months, all the above foods can be gradually increased, and one and one half years child will be able to eat all the household diets. Dal, Khichri, etc. should be given to the child using oil or ghee.

During the first five years of the child's life, growth is very rapid. The child is developed physically as well as mentally. In order that growth and development may be normal, the child requires the right type of food in the right quantity.

When the body does not get the right type of food in the right quantity the child suffers from malnutrition. In India, out of every ten preschool children (below five years of age), eight suffer from some degree of malnutrition.

Insufficient intake of food may lead to deficiency of calories (energy) and protein (body building material). Eventually, this may be responsible for the two diseases - Kwashiorkor and Marasmus.

Marasmus:

This is commonly seen in babies where the breast milk has been inadequate and the mother has been trying to feed the baby on diluted goat, cow or buffalo milk and due to poor hygiene there is frequent diarrhoea. It also results from the late introduction of semi-solid foods when breast milk is not enough to sustain growth. Repeated injections make the condition worse.

Symptoms:

A Marasmic baby has very little subcutaneous fat and muscle and is all skin and bones. The head seems proportionately large with very little hair. If the hair has been cut, it does not grow. The child is below 60 per cent of his expected weight for age, and there is also a height deficit depending on the duration of under-nutrition. He may have some pigmented or peeling skin lesions. The ribs are visible because of absence of subcutaneous tissue and the normal costochondral junctions may appear prominent and may be mistaken for a rickety rosary. He will most probably have one or more injections.

It is rare for the mother to seek advice for mal-nutrition alone. The child is apathetic and whining. In extreme cases, he is not interested in his environment and is immobile: he lies or sits in the same position for hours, often with eyes closed. The facial pads of fat are the last to go, and when that happens, the child looks like a wizened old man. Usually there is a moderate degree of anemia and there may, or may not, be evidence of other deficiencies. In the early stages, the appetite is good and the child sucks his finger vigorously and, given adequate food, recovers quickly; but in later stages there is severe loss of appetite and it needs a lot of tact and patience to coax the child to eat. He either will not eat, or will spit out what has been put into his mouth. Often he will just turn his mouth away from food. With patience and by offering sips of milk or another food that the child might fancy, a beginning can be made.

Kwashiorkar:

The word "Kwashiorkar" was suggested by Dr.Cicely Williams in the early 1930s. It is an African word meaning "the disease that occurs when the child is displaced from the breast by another child". The age incidence is a bit later than marasmus and it is uncommon to see this condition under 1 year of age. The weight depends on the degree of Oedema, but is usually less than 60 per cent of the expected weight for age. The retardation in height is even more pronounced than in marasmus.

Symptoms:

Psychomoter changes are supposed to be more in Kwashiorkar but, they are seen as frequently in marasmus also. The main features are apathy, moon face, scanty lustreless hair and oedema. Skin changes such as pigmented or depigmented patches, peeling and even ulceration are frequently seen. There is still some subcutaneous tissue present.

It has been seen that with the same kind of diet and in the same household one child may develop marasmus, and another Kwashiorkar. A child who did not have oedema when first seen may develop it a few days later. Lack of adequate energy is common to both conditions; hence the term PEM is more correct and suitable than Marasmus or Kwashiorkar. A moderate anaemia and one or more vitamin deficiencies may be present.

Early detection of Protein Calorie Malnutrition:

It is important to recognise the early stages of malnutrition rather than to wait for the child to develop the extreme malnutrition. This can be done by keeping a

serial record of weight and seeing whether the child's growth curve is satisfactory or not. The children developing severe forms of PEM get repeated injections and do not gain weight for a few months, or may even lose weight. It is at this stage that the child should be identified for special care rather than allowing the fullblown picture of PEM to develop.

Kwashiorkar can be prevented by giving the child plenty of protein rich foods such as milk, eggs, meat, fish, dals, pulses or nuts. Marasmus can be prevented by feeding the child with sufficient amounts of food. The diet should include goods from the various food groups, i.e. Carbohydrates, eg. chppathi, protein, eg. milk and dal, green leafy and yellow vegetables, fats eg. oil or ghee and fruits.

It is therefore, very important to give every child the right type of food in right quantity, sufficient amounts of food, and also nutritional supplements, we can prevent the various types of malnutrition which take a heavy toll of life and health in children.

If the malnutrition is severe with complicating illness and the child has no appetite, or has very severe vomiting or diarrhoeá, the child will have to be hospitalised. But uncomplicated PEM, even with moderate vomiting or diarrohoea, can be treated satisfactorily in the village.

LECTURE NOTES ON POPULATION EDUCATION & FAMILY WELFARE

जनसंख्या शिक्षा और परिवार कल्याण:

हमारा उद्देश्य एक ऐसी जनसंख्या नीति को अपनाना है कि जिस पर चल कर देश का हर नागरिक अपनी पूरी क्षमता हासिल कर सके ।

-राजीव गांधी

हमारा राष्ट्र 15 अगस्त, 1947 को सुख-समृद्धि के मार्ग पर चलने की आशाओं और संकल्प के साथ गुलामी की निद्रा से जागा, किन्तु मार्ग दुर्गम था । जनसंख्या विस्फोट ने राष्ट्र को आर्थिक एवं अन्य क्षेत्रों में हुई प्रगति से मिलने वाले वास्तविक लाभों से वंचित कर दिया ।

अनेक जानलेवा रोगों पर काबू पाने के फलस्वरूप मृत्यु-दर में काफी कमी हुई और जीवन-प्रत्याशी बढ़ी । इससे देश की जनसंख्या में वृद्धि होना स्वाभाविक ही था ।

देश की बढ़ती हुई जनसंख्या राष्ट्र की सबसे बड़ी समस्याओं में से एक है । देश की अन्य समस्याएँ जैसे कि गरीबी, बेरोजगारी, अशिक्षा, और दूषित वातावरण । इस बढ़ती हुई जनसंख्या के मुख्य कारण मृत्यु दर में कमी, स्वास्थ्य सेवाओं में वृद्धि, अज्ञानता, अशिक्षा, पुराने रीति रिवाज और लड़के की चाह । इस बढ़ती हुई जनसंख्या के परिणाम जो सामने आये उनमें बेरोजगारी, खाने की कमी, रहने की कमी याने कि विकास के हर क्षेत्र में गतिरोध उत्पन्न हुआ है ।

जनसंख्या नियंत्रण कार्यक्रम के उद्देश्य, इस बात को बढ़ावा देना है कि लोग दो बच्चों के परिवार के आदर्श को स्वैच्छिक आधार पर स्वीकार करके जिम्मेदार माता-पिता बने- ये दो बच्चे, चाहे लड़के हों या लड़कियां अथवा एक लड़का और एक लड़की । लोगों को इस बात की पूरी छूट है कि वे अपनी मर्जी और आवश्यकताओं के अनुरूप परिवार नियोजन के किसी भी साधन का प्रयोग करे ।

अब परिवार नियोजन सुविधाएं समग्र स्वास्थ्य सेवाओं के एक अंग के रूप में सुलभ कराई जा रही है । भारत सरकार सभी तरह की संस्थाओं याने सरकारी, गैर सरकारी व स्वैच्छिक संस्थायें मिल कर व जनता को सहभागी बनाकर इस कार्यक्रम को पूरी तरह सफल बनाने के लिए प्रयत्नशील है ।

परिवार नियोजन को बढावा देने हेतु सबसे पहले समाज में इसके बाबत् जागृती पैदा करना है, इससे होने वाले लाभ याने छोटे परिवार के सुख बडे परिवार से होने वाले नुकसान आदि के बारे में जानकारी देना है इसके साथ जरूरी है कि माता व बच्चों में होने वाले रोग व मृत्यु जो कि जन्म से संबंधित है उसके बारे में बताना । बार-बार बच्चे पैदा करने से माता के स्वास्थ्य में होने वाली गिरावट व कमजोर बच्चा पैदा करना । माताओं में सबसे ज्यादा मृत्यु डिलेवरी के दौरान होती है जो एक बहुत गम्भीर समस्या है ।

परिवार नियोजन का केवल मतलब यह नहीं कि बच्चों को पैदा होने से रोकना है अपितु उन माता-पिता के जिनकी शादी को 5 से ज्यादा साल हो गये हैं व उनके बच्चा नहीं हो रहा है तो उनकी जांच कर उनका इलाज करना । शादी के बाद पहले बच्चे में देरी व उसके बाद दूसरे बच्चे के बीच कम से कम तीन साल का अन्तराल जरूरी है । इसके लिए अस्थाई साधन काम में लिए जाते हैं उसके बाद स्थाई साधनों से बच्चों को पैदा होने से रोका जा सकता है । स्थाई साधन का मतलब है पुरूष नसबन्दी व स्त्री नसबन्दी ।

अस्थाई साधन पुरूष के लिए :

1- निरोध

महिला हेतु :

1- मुंह से खाने वाली गर्भ निरोधक गोलियां

2- कॉपर-टी

3- डाइफ्राम

4- जेली व क्रिम

5- सुरक्षित काल

विभिन्न गर्भ निरोधी तरीकों की जानकारी देने और सामाजिक सांस्कृतिक अड़चनों के निवारण हेतु सभी प्रचार माध्यमों और व्यक्तिगत संपर्क आदि विधियों का कल्पनाशील ढंग से प्रयोग किया जाना चाहिए ।

परिवार नियोजन का उद्देश्य परिवारों को सुखी और समृद्ध बनाना तथा उनके माध्यम से एक समृद्ध राष्ट्र का निर्माण करना है इसलिए यह सिर्फ नसबन्दी अथवा आई.यू.डी. का ही कार्यक्रम नहीं है बल्कि इस कार्यक्रम के माध्यम से माताओं और बच्चों के स्वास्थ्य की देखरेख की सुविधाऐं भी प्रदान की जाती है । विभिन्न बीमारियों से बचाव के लिए उन्हें टीके लगाये जाते हैं और पोषण संबंधी कमियों के निवारण हेतु उनकी मदद की जाती है । विगत कुछ वर्षों में इन सेवाओं से लाभ उठाने वालों की संख्या में उल्लेखनीय वृद्धि हुई है, जो इस बात का प्रतीक है कि बच्चों के मां-बाप में समय पर टीका लगवाने की उपयोगिता के प्रति चेतना जागृत हो रही है ।

जिससे ऐसे राष्ट्र का निर्माण हो जिसमें बच्चे को अच्छा भोजन, अच्छी शिक्षा और अच्छा रोजगार मिले तथा उसे स्वस्थ तथा सम्मानजनक जीवन जीने की सभी सुविधायें सुलभ हो ।

POPULATION EDUCATION AND FAMILY WELFARE PROGRAMME

India launched a nation wide family planning programme in 1952, making it the first country in the world to do so.

The early beginnings of the programme were modest with the establishment of a few clinics and distribution of educational material, training and research.

WHO defined family planning as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country".

Family planning refers to practices that help individuals or couples to attain:

a) to avoid unwanted births

b) to bring about wanted births

c) to regulate the intervals between pregnancies

d) to control the time at which births occur in relation to the ages of the parent and

e) to determine the number of children in the family

GOALS & OBJECTIVES:

The country has adopted the long term demographic goal of reducing the net reproduction rate to one by the year 2,000, the implications of this goal were spelt out as follows:

i) The average size of the family would be reduced from 4.2 children to 2.3 children

ii) The birth rate per 1,000 population would be reduced to 21

iii) The death rate per 1,000 population would be reduced to 9

iv) The infant mortality rate would be reduced to 60 or less

v) The effective couple protection rate would be raised to at least 60%

"Couples with wives aged between 15-44 years who will be needing family planning services are eligible couples".

Success of the population control programme depends upon effective linkages of family welfare programme with other socio-economic development programme of poverty alleviation, literacy, child survival, women's status & employment, maternal and child health, family planning and nutrition etc.

To promote family planning programme Intra & Inter Sectral co-ordination amongst various developmental departments will be strengthened and enhanced.

The present health & family planning infrastructure will be properly consolidated, suitably augmented and optionally utilised through organisational and management improvement.

Increasing mean age at marriage for women through intensified publicity campaign highlighting the specific benefits of delayed marriage for the health of the mother and the children, appropriate amendments in the law relating to the minimum age at marriage and its better inforcement, generating a social reform movement through voluntary action to combat the force of custom and tradition.

Significant impact on fertility can be brought about when the status of women is raised and they become equal partners in decision-making. The perception of women about themselves and the way society perceives them will have to be changed by a mass movement. A programme for women's mobilisation and upliftment will constitute a major thrust of the programme to bring to surface the latent demand for family planning services.

Increase in female literacy leads to increase in marriage age, decline in birth rate and infant mortality rate. Female literacy in India is only 25% compared to male literacy of 47%. A massive push to the programme of female literacy is necessary. The health workers & women volunteers will also be utilised for propagating the message of female literacy.

Child survival:

A correlation between infant mortality and the desire to have large number of children is well accepted. A massive effort has to be made to enhance infant and child survival and improve their physical & mental development. Immunization of expectant mothers & infants, nutrition intervention through distributing of iron and folic acid tablets, administration of Vitamin 'A' to the children, popularisation of iodised salt as prophyl axis against anaemia, blindness and goitre respectively.

Promotion of oral rehydration therapy and appropriate feeding practices to prevent a large number of infant and child deaths and growth interruption resulting from childhood diarrhoea. A massive educational programme will be helpful for ORS.

There is a two-way relationship between fertility and poverty.

The contraceptive methods may be broadly grouped into two classes: 1. Spacing methods & 2. Terminal methods.

1. Spacing methods:

   A) Barrier Methods

      a) Physical methods
      b) Chemical methods
      c) Combined methods

   B) Intra-uterine Devices

   C) Hormonal methods

   D) Post-conceptional methods

2. Terminal methods:

   A) Male sterilization
   B) Female sterilization

The problem of family planning is therefore essentially the problem of social change. Contraceptive technology is no short cut to the problem, what is more important is to stimulate social changes affecting fertility such as raising the age of marriage, increasing the status of women, education and employment opportunities, old age security, compulsory education of children, accelerating economic changes designed to increase the percapita income. It is now axiomatic that economic development the best contraceptive. The solution to the problem is one of the mass education and communication so that people may understand the benefits of a small family.

APPENDIX - VII

LECTURE NOTES ON IMMUNIZATION

प्रतिरक्षण

हम सभी प्राय: विभिन्न प्रकार के छूत के रोगों का शिकार होते रहते हैं जो अनेक बार गम्भीर बीमारियों का रूप भी धारण कर सकते हैं । कुछ बीमारियों का कारण असुरक्षित जल-आपूर्ति, आवास संबंधी स्वच्छ स्थितियों की कमी व दूषित पर्यावरण होता है, तो कुछ का कारण भीतरी रोग-निरोधक क्षमता कम होना । छोटे शिशुओं में और कमजोर बच्चों में यह रोग-निरोधक क्षमता कम होने से वे रोगों का मुकाबला आसानी से नहीं कर सकते । इस नाजुक उम्र में उनकी भीतरी शक्ति कम होने से बाहरी दूषित वातावरण का प्रभाव उन पर अपेक्षाकृत जल्दी व अधिक होता है, परन्तु सुरक्षात्मक कदम उठा कर हम न केवल इन नन्हें मुन्नों की रक्षा करेंगे, अपितु आने वाली पीढ़ी को स्वस्थ, सक्षम बनाने में भी सहायक होंगे । बीमारियों पर नियन्त्रण पाने के लिये बच्चे को जन्म से ही रोग-निरोधक टीके लगाने की जरूरत होती है । इसलिये प्रत्येक माता-पिता को इन प्रतिरक्षात्मक टीकों की उचित जानकारी होनी चाहिये । यह टीके, बच्चे को अक्सर हो जाने वाली छ: जान लेवा बीमारियों से बचाने के लिये लगाये जाते हैं, यह बीमारियाँ हैं :-

टिटनेस । धनुवात ।, पोलियो, डिप्थीरिया । गलघोटू । कुकुर खाँसी या काली खाँसी, खसरा और तपेदिक ।

बाल रोगों से बचाव के टीकों की विस्तृत जानकारी नीचे दी गई तालिका से स्पष्ट होती है :

	बालक की उम्र		टीका
1-	बालक - $1\frac{1}{2}$ माह	-	डी.पी.टी. का प्रथम टीका
		-	पोलियो की प्रथम खुराक

	-	बी.सी.जी. का टीका
$2\frac{1}{2}$ माह	-	डी.पी.टी. का द्वितीय टीका
	-	पोलियो की द्वितीय खुराक
$3\frac{1}{2}$ माह	-	डी.पी.टी. का तृतीय टीका
	-	पोलियो की तृतीय खुराक
9-15 माह	-	खसरा का एक टीका
18-24 माह	-	डी.पी.टी. का प्रथम वापसी टीका
	-	पोलीयो की प्रथम वापसी खुराक । बूस्टर ।
5 वर्ष	-	डी.टी. का प्रथम टीका
	-	। टाईफाईड का दूसरा टीका । माह बाद लगवायें ।
10 वर्ष	-	टिटनेस टॉक्साईड का टीका
16 वर्ष	-	टिटनेस टॉक्साईड का टीका

2- गर्भवती महीला :

16-24 सप्ताह	-	टिटनेस टॉक्साईड का प्रथम टीका
24-36 सप्ताह	-	टिटनेस टॉक्साईड का द्वितीय टीका

<u>ट्रिपल एँटीजन का टीका</u> : ।डी.पी.टी.।

यह टीका गलघोटू, काली खाँसी, और टिटनेस से बचाता है । ट्रिपल एंटीजन का टीका बच्चों को तीन बार दिया जाता है । पहला टीका डेढ माह पर लगाया जाता है । दूसरा टीका ढाई माह पर लगाया जाता है तथा तीसरा टीका साढे तीन माह पर लगाया जाता है । यह तीनों टीके एक-एक महीने के अन्तराल पर

लगाये जाते हैं । यह टीका दूसरी बार डेढ साल की आयु में तथा उससे अगला टीका पांच वर्ष की आयु में दिया जाना चाहिये ।

पोलीयो निरोधक टीका :

यह टीका अपंग कर देने वाली घातक बीमारी से बचाता है । यह दवा टीके के रूप में नहीं, मुंह से दी जाने वाली खुराक के रूप में है । पहली तीन खुराकें एक-एक महीने के अन्तर पर देनी चाहिये । पोलीयो की खुराकों के बीच में कम से कम एक मास का अन्तर होना चाहिये । इसके बाद डेढ व पांच साल की उमर में देनी चाहिये ।

तपेदिक -निरोधक टीका : ।बी.सी.जी.।

यह टीका तपेदिक ।टी.बी.। की बीमारी से बचाता है । यह टीका जन्म के बाद जितनी जल्दी हो सके, लगवा लेना चाहिये । यह टीका 3 महीने से 9 महीने के बीच में लगाना चाहिये ।

खसरे का टीका :

खसरे का टीका 9 माह से 15 माह तक लगाया जा सकता है । यदि खसरे का टीका किसी कारण वश नहीं लग पाया हो तो वह पांच साल की उम्र तक भी लगा सकते हैं ।

टिटनेस टाक्साईड का टीका :

गर्भवती महिलाओं को टिटनेस का इंजेक्शन लगाने से न केवल मां की, बल्कि आने वाले बच्चे की भी रक्षा होती है । गर्भवती

महिला को टिटनेस टॉक्साईड की दो खुराकें दी जाती है । दोनों खुराकों में 1 या दो महीने का अन्तर होना चाहिये । यह टीका पहली बार 16 सप्ताह से 24 सप्ताह के बीच तथा दूसरा टीका 24 सप्ताह से 36 सप्ताह के गर्भकाल पर लगता है ।

बच्चों एवं गर्भवती महिलाओं को टीके लगाने की सुविधा सरकारी अस्पतालों, मातृ एवं शिशु कल्याण केन्द्रों, प्राथमिक स्वास्थ्य केन्द्रों और उपकेन्द्रों में टीके मुफ्त लगाये जाते हैं । बच्चों को अपाहिज करने वाली और जानलेवा बीमारियों से बचाने के लिये टीके लगवाना जरूरी है । जिससे कि बच्चों को बीमार होने से बचाया जा सकता है ।

IMMUNIZATION

Vaccination is one of the most cost effective health interventions known to man. It is an integral part of maternal and child health and is a sheet anchor of primary health care.

During the last three decades since attainment of independence, considerable progress has been achieved in the promotion of the health status of our people. The mortality rate per thousand of population has declined from 27.4 to around 12 and life expectancy at birth has increased from 32.7 years to over 55 years. Still the mortality rates for women and children are still distressingly high. One in every ten new born babies does not live to celebrate his first birth day.

To achieve rapid improvement in the child survival rate, Government of India have decided to intensify the programmes of Immunization against preventable childhood diseases.

Immunization, prophylactic Treatment and oral Rehydration Therapy are the most simple and cost effective package of all health services. This is an "opportunistic marvel", which if delivered successfully, could enhance child survival and prevent avoidable, disability.

Effective, safe and relatively cheap vaccines are available for control of at least six childhood diseases: Diptheria, Pertusis, Tetanus, Poliomylitis, Tuberculosis and Messels. In India, of the 3 million infants who die annually, about a third of them (1 million) die of the six immunizable diseases, viz. Neonatal tetanus, Measles, Tuberculosis, Whooping cough, Polio and Diphtheria. This means for every minute, 2 children die of immunizable diseases and another two children are disabled.

According to today's high economic and industrial development achievement in India, which includes appreciable advancement in space technology, there is no need for 500 children being paralyzed daily by Polio; 200,000 children dying annually with Measles and nearly equal number being malnourished by Measles, a quarter of million of children dying of Neonatal tetanus annually, 4 lakh children under the age of 5 years dying of Tuberculosis every year and 1½ lakhs children dying a year of Whooping cough.

However, intensified information, education, and social communication and organization plus use of additional unconventional channels, like ICDS, Urban basic services and area development project infrastructure can help in achieving 100% immunization of children by 1990.

Immunization Schedule:

1. Children

0 to 1 year	----------	BCG
1½ month	----------	Polio/DPT (Triple antigen) - First dose
2½ month	----------	Polio/DPT (") II dose
3½ month	----------	Polio/DPT (") III dose
9 to 15 months	----------	Measles Single dose
18 to 24 months	----------	Polio/DPT Booster dose
5 - 6 years	----------	DT/Typhoid Single dose (Two doses, if not vaccinated by DPT previously)

2. Pregnant Mothers

At the first registration, first dose is given, second dose is given after interval of one month.

16 to 36 weeks of pregnancy — Tetanus Toxoid,
Two doses with an
interval of one month

The essential components of an immunization programme include four basic aspects of immunization services.

i) Vaccines - their safety, effectiveness & stability

ii) Cold chain - The transportation, storage and handling of heat sensitive vaccines from manufacturers to health workers in the field.

iii) Vaccination equipment and sterilization for correct administration of immunization.

iv) Programme Management - Schedules, records, training, resources, and allocation.

B.C.G.:

The bacillus of Calmette & Guerin known as B.C.G., a live, attenuated vaccine that has been in use since the 1920s. BCG is a freeze dried from vaccine and sensitive to sunlight and warm temperatures. It protects against Tuberculosis. It gives interadermally with B.C.G. syringe. After opening the vial, it should be used within 4 to 6 hours.

D.P.T.:

D.P.T. is the vaccine given to the children below one year. It is also called as Triple Vaccine as it protects against three diseases Diphtheria, Pertusis

(Whooping cough) and Tetanus. It is given interamuscularly in a dose of 0.5 ml. This vaccine is given at an interval of one month from 1½ month for three times. After vaccination child gets fever for which paracetamol is given to the mother of the child for giving to the child in three divided doses.

POLIO:

Polio vaccines used in India, is a live attenuated vaccine given orally. Oral polio is sensitive to excessive heat & light. It should be stored frozen at -20°C or kept refrigerated at 4°C to 8°C. It is given orally in three doses at a interval of minimum one month starting from the age of 1½ month of the child. It is given in 2 drops to each child.

MEASLES:

Live attenuated measles virus vaccine is a safe, highly effective vaccine, but it requires careful handling and storage to prevent damage due to excessive heat or light exposure. Measles is one of the leading causes of death among children under one year of age in developing countries. Measles vaccine is given in between 9 months and 18 months intramuscularly or deep subcutaneously.

TETANUS:

Tetanus toxoid is safe and relatively stable. Two doses of tetanus toxoid is given to pregnant woman during pregnancy which protect both mother during child birth and the baby.

The successful implementation of immunization and other child survival programmes, however requires planning, management and existence of adequate infrastructure, child survival package shall be offered within the frame work of primary health care services and will form its leading edge.

APPENDIX - VIII

SRI AVINASHILINGAM HOME SCIENCE COLLEGE FOR WOMEN
COIMBATORE 641 043

<u>Topic</u>: 'Study the effectiveness of selected traditional Aids of Rajasthan for educating Anganwadi Workers (ICDS)'.

: INTERVIEW SCHEDULE :

Respondent No. ______________

Date : ____________________

<u>General Information</u>:

1 Name of the Interviewee :

2 Age: Below 20, 21 to 30, 30 to 40, 40 and above :

3 Education :

4 Native Locality :

5 Marital Status :

Married : ( )

Unmarried : ( )

6 No. of children and their age :

7 Type of Family:

Nuclear : ( )

Joint : ( )

APPENDIX - IX

KNOWLEDGE TEST ON MILESTONES OF DEVELOPMENT

1 The child can react towards light between the age of:

a) 1 - 3 months

b) 4 - 6 months

c) 6 - 8 months

2 Lack of response towards light at the age of 4 months might be due to

a) Lack of interest

b) Blindness/Partial blindness

c) Immaturity

3 The child starts reacting towards the sound of a bell between the age of

a) 2 - 3 months

b) 5 - 7 months

c) 7 - 9 months

4 Lack of response to the sound a bell at the age of 5 months might be due to

a) Inability to listen

b) Immaturity

c) Lack of Interest

5 The child can sit with support between the ages of

a) 6 - 8 months

b) 10 - 12 months

c) 12 - 14 months

6 The child can stand with support between the ages of

a) 10 - 12 months

b) 15 - 18 months

c) 18 - 24 months

7 The child can walk independently between the ages of

a) 10 - 12 months

b) 15 - 18 months

c) 18 - 24 months

8 If a child does not walk at the right age of 14 months, it may be due to

a) Immaturity

b) Disability

c) He has not been taught to walk

9 The child can recognize his mother between the ages of

a) 3 - 5 months

b) 7 - 9 months

c) 9 - 12 months

10 If a child at the age of 8 months doesn't show any interest in people and objects around him, it might be that:

a) he is uninterested

b) his mental development is not normal

c) he is weak

11 The knowledge of development of milestones is necessary

a) to assess child's developmental status
b) to detect disability, if any, at an early age
c) because it is being taught in the class

12 Development can be delayed because of

a) Individual differences
b) Illness or disease
c) Disability

APPENDIX - X

KNOWLEDGE TEST ON PROTEIN CALORIE MALNUTRITION

1 Give three functions of food

a)

b)

c)

2 Name five protein rich food stuffs

a)

b)

c)

d)

e)

3 The food requirements of a pregnant women are more than a normal women. Give two reasons:

a)

b)

4 Why should mother give the first breast milk (colostrum) to the child after birth?

5 State two reasons for breast milk being essential for infants.

a)

b)

6 Upto what age should a child be breast fed?

7 List four supplementry foods to be given to the child along with breast milk.

a)

b)

c)

d)

8 When should supplementry feeding be started?

a) After 2 months

b) After 3 months

c) After 4 months

d) After birth

9 If the supplementry diet is not given to the child, what are the consequences?

a) Malnutrition

b) Fever

c) Skin Disease

d) Cold and Cough

10 What are the diseases that occur because of malnutrition?

a) Typhoid fever

b) Cholera

c) Kwashiorkar and Marasmus

d) Tetanus

11 How would you identify a Kwashiorkar Child?

a)

b)

c)

12 What kind of diet is suitable to overcome Kwashiorkar?

a) Protein rich diet

b) Vitamin rich diet

c) Mineral rich diet

d) Iron rich diet

13 During what age does Marasmus normally occur?

a) Before 1 year

b) After 1 year

c) After 2 years

d) After 3 years

14 How would you identify a Marasmus Child?

a)

b)

c)

15 What kind of diet is suitable to overcome Marasmus?

a) Vitamin rich diet

b) Mineral rich diet

c) Calcium rich diet

d) Energy rich diet

APPENDIX - XI

KNOWLEDGE TEST ON POPULATION EDUCATION & FAMILY WELFARE

Population Education and Family Planning:

1 Name any two major national problems of our country.

a)

b)

2 Give two reasons for India's rapidly increasing population.

a)

b)

3 State five consequences of over population in India.

a)

b)

c)

d)

e)

4 What is the recommended size of the family?

5 How does our Government check population growth?

6 Give three suggestions to promote family planning efforts.

a)

b)

c)

7 What is the reason of infant mortality. Is this greater in male or female?

8 The child bearing (reproductive) age of a woman is

a) Whole life

b) Between the menarch and menapause (i.e. between 15 to 49 years)

c) Only when she gets married

d) Even, if she is unmarried

9 State three consequences of closely repeated pregnancies in women

a)

b)

c)

10 Family Planning means:

a) NO children

b) Making the male or female incapable of providing children

c) To prevent children being born at will

d) Spacing

11 State correct spacing between the children.

12 Name any two methods of planning

a)

b)

c)

13 State any two slogans advocated for family planning.

a)

b)

APPENDIX - XII

KNOWLEDGE TEST ON IMMUNIZATION

1 Immunization

a) Kills the child

b) Prevents disease in children

c) Reduces morbidity rate in children

d) Reduces mortality rate in children

2 Name six communicable diseases which can be checked by immunizing children

a)

b)

c)

d)

e)

f)

3 What is DPT Immunization?

a) Diphtheria, whooping cough and tetanus

b) Diphtheria

c) Measles

d) Tetanus

4 State the age at which DPT is to be given

a) Soon after birth

b) After 1½ months

c) After 3 months

d) After 9 months

5 Polio vaccine is given at the age of

a) After birth

b) After 1½ month

c) After 3 months

d) After 9 months

6 How many doses of polio vaccine are given to a child?

a) 2 doses
b) 3 doses
c) 4 doses
d) 5 doses

7 B.C.G. Vaccine is given

Why When

8 At what age measle vaccine is given?

a) 6 months
b) 7 months
c) 8 months
d) 9 months

9 What age is Tetanus Toxoid Vaccine given?

a) 7 years
b) 10 years
c) 12 years
d) 18 years

10 Which vaccine is given during pregnancy?

11 In which month is Tetanus Toxoid Vaccine given to a pregnant woman?

a)

b)

12 Facilities for Immunizing children as well as pregnant mothers are available at: