CHAPTER 3

METHODOLOGY

This chapter deals with the objectives, location of the study, selection of TV programmes, selection of sample, preparation of tools, data collection, and analysis of data.

3.1 Objectives of the study

3.1.1 General objectives

To study the impact of TV in terms of knowledge among rural people in the fields of health and hygiene, nutrition and family planning programmes.

To analyse the general content of the selected health and hygiene, nutrition and family planning programmes.

3.1.2 Specific objectives

To find out the number of times, the rural people watch the TV programmes provided by Pij TV in a week and the reasons for viewing and not viewing the TV programmes.

To analyse the general content of selected health and hygiene nutrition and family planning programmes.

To study how much knowledge is gained in the fields of health, and hygiene, nutrition and family planning by the rural people.

To study the retention of gained knowledge by the rural people after a lapse of 15 days of the telecast.

To determine whether socio-economic status and age of the respondents have any association with the gain in knowledge.

To determine whether socio-economic status and age of the respondents have any association with the retention in knowledge.

To study the reactions of rural people towards the above mentioned programmes.

3.2 Location of the study

The study was conducted in the Kheda district of Gujarat State. Kheda is one of the most progressive districts of Gujarat State. Pij is a small village in Kheda district, Gujarat State. Pij TV transmitter was the first in our country to be located in a rural area to serve a cluster of villages with instructional TV broadcast.

According to Agarwal (1981) Kheda was the only rural television station in India today devoted to development and education. Kheda television was thought to be

a "lab" close to the scientists for innovation and experimentation in SITE (Agarwal, 1978). Pij transmission centre was closed down in the month of November, 1985. According to the 'Times of India', 23rd March, 1986, in the three day colloquium on "Indian television today and tomorrow" organized by the NAMEDIA foundation in New Delhi, Mrs. Sarabhai, wife of the late Vikram Sarabhai, criticised the decision to close the Pij transmitter.

3.2.1 Kheda Television Configuration

One kilowatt television transmitter was installed in Pij village in the year 1975 to serve an area of 3000 square kilometers of Kheda district. Pij transmitter received signals from microwave receive terminal located in Ahmedabad about 45 kilometers away. Kheda television was equally available to all those who want to view it in a community viewing situation.

3.3 Research design of the study

A field experiment was conducted in the present study. A field experiment having pre- and post observations in experimental and control groups was used in the study. A field experiment is a research study in a realistic situation in which one or more independent variables are manipulated by the experimenter under as carefully controlled conditions as the situation will permit.

According to Kerlinger (1978) field experiments have values that especially recommend them to social psychologists, sociologists and educators because they are admirably suited to many of the social and educational problems of interest to social psychology, sociology and education.

Experimental design :

R	Yb	x	Ya	(Experimental)
	Yb	-x	Ya	(Control)
Mr	Yb	x	Ya	(Experimental)
	Yb	-x	Ya	(Control)

The R placed before the paradigm indicates that subjects have been randomly assigned to the experimental groups (top line) and the control groups (bottom line) 'M' denotes matched. Subjects are pretested on a measure of Y; the dependent variable. The experimental manipulation x is performed after which the groups are again measured on Y. The difference between the two groups is tested statistically.

3.3.1 Selection of experimental villages

The present study was conducted in the eight selected villages of the Kheda district. Before entering into the field work, the functionaries already working in

the Kheda district were contacted. To find out the communication facilities the distance of the villages from the State Transport bus stand and the bus timings were found out from the State Transport authorities. According to the list received from the Rural Broadcasting and Television office, Nadiad, there are 612 TV sets in 449 villages of the Kheda district as of 31.8.1982.

To select the experimental villages the investigator visited several villages in Nadiad Taluka and Anand Taluka. Akhdol, Joll, Vadtal, Piplag and Pij were visited in Nadiad Taluka and Bedva, Mogari, Uttarsanda and Vidyanagar were visited from the Anand Taluka. In all the villages except Joll, there were two sets of TV, one Panchayat TV and the other belongs to Amul Dairy.

Criteria for selecting the experimental villages :

1. Installation of TV
2. Co-operation of the village people
3. Communication facilities
4. Agriculture as the main occupation

The villages which fulfilled the above criteria, like Akhdol and Piplag were selected from Nadiad Taluka and Mogari and Bedva from the Anand Taluka.

In Akhdol, Panchayat TV and TV installed by Amul Dairy were switched on daily. In Piplag also

according to the Sarpanch both the TV sets were switched on daily. The Sarpanch and dairy staff extended their cooperation in the above mentioned villages. People also expressed their willingness to watch the programme and take part in the experiment. Bus facilities are there to both of these villages.

In Bedva and Mogari, the dairy secretaries, Sarpanch and Tribondas Foundation Staff extended their full cooperation in carrying out the present study. The other villages could not be selected because these villages were near the urban areas, had only one TV set and in these villages, TV sets were not switched on daily.

3.3.2 Selection of control villages

A list of non TV villages from Nadiad and Anand Taluka were collected from the Rural Broadcasting and Television Office, Nadiad. According to the list, there are 32 villages in Nadiad Taluka and 14 villages in Anand Taluka which did not have the TV facilities as on 31.8.1982.

The criteria for the selection of the control villages were :

1. Non TV villages
2. Availability of transport facilities
3. Agriculture as the main occupation

Since Khorvad and Navapura fulfilled the above criteria both the villages were selected from Anand Taluka and Javol and Palayia from Nadiad Taluka (Appendix G.11).

List of villages

	Anand Taluka
	Khorvad
	Navapura
Control	Nadiad Taluka
	Javol
	Palayia
	Anand Taluka
	Bedva
	Mogari
Experimental	Nadiad Taluka
	Akhdol
	Piplag

3.4 Selection of sample from the experimental and control villages

The investigator visited the villages several times to establish rapport with the villagers. House to house visit was made. Objectives of the visit were explained to the villagers. Among those who are willing to watch the TV programme, 30 men and 30 women were

selected by purposive sampling procedure to study the impact of one programme. Purposive selection is based on the principle of selecting individuals for the sample according to a criteria. Eighty men and eighty women were selected finally from the experimental villages. The following people were selected:

1. The people who were staying near to Panchayat or Amul Dairy were selected.
2. The people who view the TV programme atleast once in a week were selected.
3. Those who were willing to participate in the study were included in the study.
4. Those who have completed 15 years and who were above 15 years were selected

Selection of sample from the control villages

The investigator visited the villages several times to establish rapport with the villagers. House to house visit was made. Objectives of the visit were explained to the villagers. The Sarpanch or School Teachers also accompanied the investigator. Respondents who were co-operative and who had completed 15 years and above were selected as sample from the control villages. Eighty women and eighty men were selected from the control villages.

Matching the experimental group with the control group

The chi square median test was used to compare the pretelecast knowledge scores of the experimental group with the control group. The following formula was used to calculate the chi square median (Garrett p 265).

$$\eta^2 = \frac{N \left(AD-BC -N/2 \right)^2}{(A+B)\ (C+D)\ (A+C)\ (B+D)}$$

Table 1A Chi square median value of the knowledge score of the four selected TV programmes

TV programmes	Women	Men
Green leafy vegetables	.5735 NS	.0000 NS
Polio	.0000 NS	.1333 NS
Vaccination	.1010 NS	.0000 NS
Laparoscopy	.1042 NS	.0000 NS

NS = Non-significant.

Since the chi square values were not significant it was noted that there was no significant differences between the experimental group and the control group.

3.5 Selection of Television programmes

According to Mass Media, 1979-80, the programmes for special audience include Farm Telecasts, Health and Hygiene, Nutrition, Programmes for children, Programmes for families, Drama, Music, News and Current affairs. The investigator collected the list of the names and the details of the health programmes on tape available in the Space Application Centre, Ahmedabad. The list gives details of the name of the programme, producer's name, duration of the programme, tape number and date of production of the programmes. The criteria for the selection of the programmes were as follows :

1. Number of times the programme were telecast
2. Duration of the programme, about 15 minutes
3. Need of the rural people
4. Year of production of the programme.

The investigator previewed the following programmes:

1. Khaie Pie Saja Rahie (खाइये पीये साजा रहिये)
2. Chuppa Dushman (चुपा दुश्मन)
3. Malaria (मलेरिया)
4. Ek Swapna Ek Satya (एक स्वपन एक सत्य)
5. Polio (पोलियो)
6. Laparoscopy (लेप्रोस्कोपी)

3.5.1 Contents of programmes selected for evaluation

Tripple Vaccine (Chuppa Dushman) :

Tripple vaccine is given against whooping cough, diptheria and tetanus. Tripple vaccine is given after the child is three months old. Vaccine facility is available at Primary Health Centre.

Children above five years get another vaccine which protects against tetanus and diphtheria. Tetanus vaccine is given in three doses by injections.

There is a gap of six weeks between first three doses. Between second and third dose there is a gap of six weeks to six months. Tripple vaccine is given only to normal children.

Green Leafy vegetables :

One must include green leafy vegetables in the daily diet. There is much iron in green leafy vegetables.

Green leafy vegetables make bones stronger, improves eyesight, gives strength to the body and resist diseases. It is good for the skin and remove paleness. Green leafy vegetables are cheap.

Polio :

Polio is caused by virus. This disease can make a child physically handicapped for the whole life. About

80 per cent of the victims are children under three years of age. Due to unhygienic habits, the virus can enter a new body through water or food. After the virus have entered the liver and intestines either through the blood or nerves, they reach nerve centres. When the nerve centres are affected, muscles of feet and other parts of the body are affected. Polio vaccine is given orally from the age of three months. Polio vaccine is given in five doses.

Laparoscopy :

Laparoscopy machine puts a ring around the tube which carries ovum to the uterus and closes it. In Laparoscopy operation, there is no need of making the woman unconscious. To undergo Laparoscopy operation, there is no need to get admitted earlier in the hospital, just a day before or on the same day is sufficient. There is no stitches or cuts on the body. Laparoscopy operation is done after six weeks or more after delivery. An injection on the spot of the operation is done to make it numb. After effects which should cause concern are dressing comes off, bleeding, fever, difficulty in eating, jaws get locked, etc.

3.6 Telecasting the programme by Video

Since the programmes available in the area of interest of the investigator were in various parts and then

the difficulty of showing only one part by the Ahmedabad studio, the investigator was forced to show the programmes in the selected villages by Video. The programmes were transferred to the video casettes in the Space Application Centre, Ahmedabad to enable them to be shown by V H R before showing the programmes in the village. Video with TV were hired from Nadiad and Anand towns of Gujarat State.

3.7 Construction of tools for data collection

The following various tools were constructed for collection of data:

1. Questionnaire on general description of the village.
2. Socio-economic status scale (developed by Pareek Udai and Trivedi, 1964).
3. Knowledge test
4. Reaction schedule
5. Content analysis schedule
6. Schedule on reasons for watching the TV programme and the reasons for not viewing.

3.7.1 Development of knowledge test

For the measurement of knowledge of the respondents, about the four selected practices, a standardised knowledge test was developed. A standardised test as defined by Cronbach (1960) "is one in which the procedure,

apparatus and scoring have been fixed so that precisely the same test can be given at different times and places".

Steps in developing knowledge test :

Questions were framed on the basis of the scripts got from Space Application Centre, Ahmedabad and pre-viewing the programmes. Since the scripts were in Gujarati, the scripts were translated into English by a lecturer of the English Department of M.S. University of Baroda.

Pre-testing of knowledge tests :

Questionnaire, testing the knowledge of rural people was pre-tested with five men and five women from the Chikotara village of the Anand Taluka. It is essential that every new instrument be pre-tested before the field operation. Such pre-testing has three purposes:

1. to develop the procedures for applying the research instrument so that, for example, the scale or schedule can be used effectively with respect to the time it takes to administer,
2. to test the wording of questions so that they are suited to the understanding of the audience, and

3. to ensure, as far as is practical, that the specific questions or observations are really getting at the variable for which a measure is needed. It is important to carry out the pretest of measures and procedures upon a population as similar as possible to the people who will be studied.

Reliability of knowledge test :

Realiability is the proportion of the "true" variance to the total obtained variance of the data yielded by a measuring instrument substracted from 1.00, the index 1.00 indicating perfect reliability.

The principle behind the improvement of reliability is one previously called the maxmincon principle in a slightly different form. "Maximise the variance of the individual differences and minimise the error variance".

To test the reliability of knowledge items, test and retest method was used. As the name implies, the scale is applied twice to the same population and the results compared. A scale may be said to be reliable when it gives the same measurement under similar conditions.

Reliability was tested with the ten respondents of the Chikotara village. The respondents included five

men and five women. Reliability was calculated using the following formula :

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \times \Sigma y^2}}$$

Reliability of the knowledge tests :

Test on vaccination	0.67
Test on green leafy vegetables	0.61
Laparoscopy	0.65
Polio	0.59
Knowledge test in total	0.79

Finally as no change was needed in the knowledge test, it was retained as it was.

Validity of knowledge test :

According to Kerlinger, the commonest definition of validity is epitomized by the question - Are we measuring what we think we are measuring ? A scale can be said to be valid when it correctly measures what is expected to measure. To assess the validity of knowledge test method of logical validation and jury opinion (Good and Hatt, 1952, p 237) were employed.

3.7.2 Schedule on reactions of Rural people towards the specific TV programmes

Reaction schedule consisted of the following items:

1. Extent of liking the programme
2. Opinion about the language of the telecast
3. Disturbances in the reception of the picture
4. Difficulties in the reception of the sound.

Reaction, schedule was validated by two experts from the Faculty of Home Science, M.S. University, Baroda.

3.7.3 Instrument on content analysis

After reviewing all the relevant literature to which the investigator had assess and various discussions with the experts, items on content analysis were constructed. Content analysis is a systematic technique for observing and analysing expressed communication behaviour. The questionnaire on Message System Analysis developed by Mody, Sarupria (1976) were used in addition to the following questions :

1. Topics given priority in the programme
2. Content errors
3. Ambiguous content areas
4. Importance of content to rural people
5. Appropriate amount of content
6. Level of the programme
7. Programme achieve its intended purpose or not

8. Difficulty of the programme
9. Developing the main points
10. Characters featured
11. Frequency of one setting against another setting
12. Setting predominantly urban or rural
13. Kind of language used
14. Fastness of the commentary
15. Format used

Validity of the content analysis questionnaire :

Validity of the content analysis questionnaire was determined by logical analysis and by jury opinion. The jury consisted of two experts from Space Application Centre, Ahmedabad and two experts from the Faculty of Home Science, M.S. University, Baroda.

3.7.4 Use of Socio-economic status scale

Socio-economic status of the head of the family was measured by using a socio-economic status scale developed for rural areas by Pareek Udai and Trivedi (1964). On the basis of score obtained they were categorised into five groups namely, lower (up to 13), lower middle (14-22), middle (23-32), upper middle (33-42) and upper (43 and above). A copy of socio-economic status is given in Appendix A.

3.8 Collection of data from experimental villages

Data were collected by interview technique.

Before starting the interview, rapport was established with the respondent and the purpose of interview was explained. When the respondent was found to be mentally prepared, the interview was conducted.

The data on knowledge gain and retention gain was collected at three stages. Data were collected before telecasting the programme, immediately after the telecast on the next three days and after 15 days of the telecast.

Details of TV broadcast :

Village	Programme	Place of showing	Date	Time
Bedva	Vaccination	Dairy Building	22.2.'84	6.30-7.30 PM
Mogari	Laparoscopy	Panchayat Building	1.3.'84	6.30-7.30 PM
Piplag	Polio	Dairy Building	22.3.'84	6.30-7.30 PM
Akhdol	Green Leafy Vegetables	Panchayat Building	28.3.'84	6.30-7.30 PM

3.8.1 Collection of data from the control villages

Knowledge test and socio-economic status scale were administered in the control villages before administering in the experimental villages for pre-telecast knowledge. Post telecast knowledge scores were found out after three days of showing the TV programmes in the experimental villages. Knowledge was again measured after 15 days gap.

whether any significant difference existed between two groups.

Chi square tests were carried out to find out the association between the socio-economic status and knowledge gain of the experimental groups.

Chi square tests were carried out to find out the association between the socio-economic status and retention gain of the experimental groups.

Chi square tests were carried out to find out the association between the age and knowledge gain of the experimental groups.

Chi square tests were carried out to find out the association between the age and retention gain of the experimental groups. Tests of significance of difference between the pre and post telecast knowledge scores of experimental groups and control groups.

Tests of significance of difference between the knowledge gain of the experimental and control groups.

Tests of significance of difference between the post and retention scores of experimental control groups.

Tests of significance of difference between the retention scores of the experimental and control groups.