CHAPTER 4

Analysis and Interpretation of Data

1 Introduction:

In this chapter, the socio-economic characteristics of the respondents will be presented in the first part which will be followed by the analysis and interpretation of the data with regard to the impact of the Telecast programme in the areas of Agriculture and Animal husbandry, Health and Nutrition, Family Welfare, Political Knowledge, overall modernization and other possible sources of change.

As per the objectives mentioned earlier, the analysis in respect of viewers includes not only a description of the audience of the programme, but also deals with factors responsible for the frequency of exposure to Television programme.

In all the survey phases the respondents were classified as rare, occasional and frequent viewers (Mode of classification already referred in Chapter 1).

Socio-economic characteristics of the Respondents:

The sample for the study was collected from 9 experimental and 6 control villages in Chingleput
district. There were 446 respondents in the pre-survey, 383 in the mid-survey and 369 in the post-survey. The profiles of the respondents are presented below. (Refer Table 4.1).

In the Table 4.1, Panel A clearly indicates that the percentage of male respondents tends to show the increased trend while the percentage of female respondents tends to move in the negative direction.

Panel 2 of the same Table indicates that 54.86 per cent were in the 15-24 age-group in the pre-survey. But gradually the number of respondents of this age group dwindled in the subsequent surveys. But on the other hand, the respondents in the age group of above 35 years showed an increased trend. This might be partly due to the fact that the younger people would have been ready to move to other places for work, but the middle aged respondents were not interested in moving to other areas.

Panel 3, of Table 4.1 indicates that 58.24 per cent were married in the pre-survey periods, and this percentage gradually increased in the subsequent phases.

Panel 4 shows that about 90.42% belonged to the Scheduled Caste population and the remaining
percentage were non-Scheduled Caste population. This shows that the television programmes caught the attention of Scheduled Caste population more, when compared to other groups.

Panel 5 indicates that most of the respondents were illiterates (84.86) and about 15.14 per cent were labelled as literates. But these so-called literates were the school drop-outs from first or second class.

Panel 6 shows the occupational details of the respondents. About 63.67 per cent were agricultural labourers, 7.24 per cent were agricultural farmers, and the remaining 9.09 per cent comprised those who were categorised as other workers.

Panel 7 indicates that 48.42 per cent of the respondents had their monthly income varying from Rs.101 to Rs.150 and about 30.96% belonged to above 150 income groups.

To summarise this, it can be stated that the programme initially caught the attention of high percentage of males in the 15-24 age group who were mostly agricultural labourers by occupation earning a monthly income of Rs.101/- and above and were of the Scheduled Caste groups.
Association between the Socio-economic Characteristics and the frequency of Television viewing:

As mentioned earlier, the respondents were classified as rare, occasional and frequent viewers. But the frequency of TV viewing depends on the Socio-economic Characteristics of the respondents. To find out the relationship between the socio-economic characteristics of the respondents and the frequency of Television viewing, chi square analysis was done in the 'Mid' and 'Post' survey phases. The results of those are presented below: (Refer Table 4.2)

From the Table, it can be inferred that there exists a significant relationship between all the socio-economic characteristics, such as sex, age, marital status, caste, educational level, occupation and income, and their frequency of Television viewing both at the mid-survey and post-survey phases at 0.01 level. From this result, the Research Hypotheses from 1.6.2.1 to 1.6.2.7 were accepted at 0.01 level.

Exposure to Mass-Media and the frequency of Television viewing:

Studies have shown that the exposure to Mass-Media like radio, cinema and listening to newspaper reading in
the villages are associated with TV viewing behaviour. To find out their level of exposure to mass media and its association with the frequency of Television viewing, Chi square analysis was done and the results are presented below: (Refer Table 4.3)

In the Table 4.3, Panel A (radio listening) clearly indicates that among the villagers 67.94% of the respondents were frequent radio listeners and about 24.38 were occasional radio listeners. Panel B (cinema viewing) shows that 60.44% of the respondents were occasional cinema viewers, 19.62% were rare cinema viewers, and 18.26% were frequent cinema viewers.

Apart from these two mass-media, newspaper is considered as one of the main mass-media. But in the present study, majority of the respondents were illiterates, but they usually listened to the newspaper reading by some literate members in the village. So this listening to newspaper reading is considered as one of the media exposure in an indirect manner.

Panel 3 (Listening to Newspaper Reading) clearly shows that about 42.33 per cent were rare listeners, and 48.42 per cent were occasional listeners.
Association between the Mass-media exposure of the respondents and the frequency of TV viewing:

For studying the association between the Mass-media exposure of the respondents and the frequency of TV viewing, Chi square analysis was done to test the associations. (Refer Table 4.4).

From the Table, it can be inferred that there exists a significant relationship between the Mass-media exposure of the respondents and the frequency of TV viewing at 0.01 level in the 'Mid' as well as the 'Post' survey phases. Hence, the research hypotheses from 1.6.2.8 to 1.6.2.10 were accepted at 0.01 level.

Changes in the areas of Agriculture and Animal Husbandry of the Respondents and the frequency of Television viewing:

For the presentation of analysis items related to agriculture and animal husbandry have been separately analyzed and presented. The analysis is presented in a sequential manner starting from awareness, knowledge, adoption and use. All awareness questions on agriculture and animal husbandry though analysed separately, are presented under one sub-heading. This has two advantages: (1) the operational definitions remain common, and (2) it gives an idea as to what has happened finally at adoption and use levels, when a new innovation is
disseminated among the Agricultural workers. G2 scores, of four intervening variables of total data are presented and discussed in the later part of the analysis to examine and how they influence the dependent variables. For this purposes the agriculture and animal husbandry items were merged together while analysing awareness, knowledge and adoption.

1 Innovations in Agriculture and Animal Husbandry

Agriculture: Awareness:

The concept of 'awareness' is operationally defined as the level of one's acquaintanceship with the new agricultural innovations. For all awareness items the Agricultural labourers were asked such questions as "Have you heard about ...". The responses were recorded in 'Yes' or 'No' form. (Refer Table 4.5). Table 4.5 gives the five individual scale items included in agriculture awareness. The first three items: high yielding varieties, pesticides, and chemical fertilizers were known to the majority of agricultural workers, indicating the fairly high percentage of awareness in pre-survey. On an average, more than 80 per cent of agricultural workers and 90% of those who were frequent Television viewers (E3) cultivators were aware of these three agricultural innovations chemical fertilizer, being the highest. But the awareness
of compost and modern agricultural implement was relatively low.

Awareness of sub total G2 gain score was positive among the control group (0.3) occasional (0.277) and frequent (0.157) Television viewing Agricultural workers. But there was a negative gain among the rare viewer cultivators which is difficult to explain. Relatively higher G2 gain score in control group compared to experimental groups indicated that factors other than Television might have been responsible for the gain score. The 'F' test (indicated by xx) is statistically significant, thereby indicating that the samples come from different populations. This may be interpreted as differential levels of Television viewing having differential levels of impact on the Agricultural workers as measured in this study. The 'F' values show no statistically significant differences between control, occasional, and frequent Television viewers. Agricultural development activities have been most extensive in Tamil Nadu. Majority of the cultivators were aware of the new agricultural innovations through other mass media and developmental agencies. The general gain, except among rare Television viewers may be attributed to change in media strategy.

? Animal Husbandry – Awareness:

In the pre-survey, awareness of animal inoculation
was above 80% among all respondents. Except for rare Television viewers others exceeded 90%. Table 4.6 on animal husbandry shows that G2 gain score of inoculation was consistently negative among all categories of respondents. A plausible explanation for negative gain might be the discontinuation or low emphasis given to animal inoculation. It is also possible that greater emphasis on popularizing improved variety of animal breeds might have side-tracked the inoculation aspect. It might be also due to ceiling effect.

Awareness, G2 gain score in improved animal breeds as indicated in Table 4.6 is an important reason for total animal husbandry awareness G2 positive gain. The table further indicates that there was a substantial gain in control group, rare, occasional and frequent Television viewers, thereby showing that other developmental agencies and mass media like radio, might have also contributed towards increasing the animal breed awareness level. (Refer Table 4.6). Animal Husbandry awareness has increased G2 sub total on animal husbandry awareness more among frequent (0.163) and occasional (0.150) Television viewers than control (0.112) and rare (- 072) viewers who gained negatively. The negative gain among the rare viewers is difficult to explain. The 'F' test (as marked by **) was statistically significant
indicating that the samples came from different population. This may be interpreted as differential levels of Television viewing having differential levels of Television impact on the cultivators, as measured in this study. The 'f' values show no statistically significant differences between the means of control and occasional and frequent Television viewers. This indicates the contribution of other media towards the G2 gain score of awareness of animal husbandry.

Agriculture: Knowledge:

The concept of knowledge was operationally defined as the level of one's understanding about the new innovations. It was essentially a recall question on the correct identification of a new innovation. For all knowledge items the question asked of the cultivator was 'can you name a few examples ...? The verbatim record of the name of the innovations and the accuracy of names were analysed. Table 4.5 (Panel B) on knowledge gives the four individual items included in agricultural knowledge. The knowledge level at pre-survey except of chemical fertilizers, was between 50-60% giving scope for enhancing the agricultural workers agricultural knowledge. Although there was a change in G2 gain scores, the total G2 gain score among control (0.565) was slightly higher than compared to frequent (0.536) Television viewers.
however, occasional (0.657) viewers G2 gain score was higher than both and G2 gain score among rare (-0.078) television is negative. The 'F' test (indicated by @@) was significant indicating that the samples belong to different population. Substantively, this means that differential exposure to television had different levels of impact on the cultivators as measured in this study. The 'f' values show that there were no statistically significant differences between the means of control group frequent and occasionally viewers, though rare viewers have negative gain. From this it may be interpreted that, apart from television other mass media and developmental agencies must have contributed to gain in knowledge.

+ Animal Husbandry : Knowledge:

Table 4.6 (Panel B) on animal husbandry knowledge indicates significant gains in knowledge of improved varieties of animal breeds due to television viewing. The 'F' value (indicated by @@) is significant which shows that the gain scores were not from the same population. Substantively this means that differential exposure to television had different levels of impact on the agricultural workers, as measured in the study. Significant 'f' value (indicated by C) are observed between control group and frequent television viewers. This means that the gain
in Animal Husbandry knowledge among frequent viewers more than the control group. A fairly large number of programmes on animal breeds were shown which might have been responsible for the gain in knowledge. The pre-survey indicates that in none of the four categories of respondents did knowledge of animal breeds exceed by 32.

5 **Agriculture: Adoption:**

The concept of adoption is operatively defined as the actual use of an innovation by the cultivator at least once. The question which was asked was "have you ever used ....?" Table 4.5 (Panel C) on adoption C2 Sub-scale total on adoption indicates that adoption increased more among the occasional (0.324) and frequent (0.309) Television viewer compared to rare (-0.144) Television viewers and control (0.172) group. When the awareness and knowledge levels of the cultivators were fairly high, as evident from the earlier tables, changes at behavioural level seemed possible even within a short span of one year.

6 **Animal Husbandry: Adoption:**

Table 4.6 (Panel C) on animal husbandry adoption shows that except among rare Television viewers, the inoculation adoption was above 60% in pre-survey. Except among occasional Television viewers the adoption level
decreased in post survey. The lowest adoption record for any single item was for that on animal breeds (rare Television viewers 0.7) in pre-survey. Only slight changes were observed in post survey, that too more among control group (.032) and rare (0.036) Television viewers whose scores were actually negative. Table 4.10 on animal husbandry adoption sub-total indicates a small positive G2 gain scores among rare, occasional and frequent Television viewers. However, there was negative G2 gain among control group. None of the 'i' values were found to be statistically significant showing that Television viewing did not contribute to the adoption of animal husbandry innovations.

7 Agriculture: Use:

The concept of use is operationally defined as the continued practices of the new innovations at the time of interview. The question asked was Are you still using...? This item though related to adoption differs from it in terms of its continuance. It was felt that the scores would reflect the number of cultivators who actually continued to use the adopted innovations as differentiated from those cultivators who adopted the innovations but did not continue to use them as a result of Television. There was increase in the use of the innovations among occasional (0.323) and frequent (0.34)
Television viewers when compared to control (0.253) group and rare (0.036) viewers. It seems that television might have acted as a reinforcing agent for continuance of the agricultural innovations. Further it is interesting to note that gains were very small between pre-and post but they were positive in every item among control, occasional, and frequent viewers. Secondly continual use was substantially lower when compared to adoption.

None of the 't' and 'F' values were found statistically significant which showed that Television viewing did not help in increasing the use of new agricultural innovations and that the samples came from the same population. However, the positive results and higher G2 gain scores among frequent and occasional viewers were indicative of the positive role of Television viewing in the use of agricultural innovations.

It is important to point out that almost on every item, frequent viewer cultivators showed higher awareness, knowledge, adoption, and use when compared to rare viewers and to some extent, occasional Television viewer and control group. One may argue, that frequent viewers having initially high understanding of modern agricultural innovations were able to gain more through Television. However, one should not lose sight of the possibility
that control group comprised of potential "frequent", "occasional" and "rare" viewers and, therefore, the gain indicated among frequent and occasional viewers should be attributed to Television exposure. Analysis so far, has provided qualified support to the hypothesis, and research hypothesis 1.6.2.11 were accepted at 0.05 level.

7 Changes in the areas of Health and Nutrition of the Respondents and the frequency of Television viewing:

Table 4.7 (4.7 a for males and 4.7 b for females presents relevant details on innovations in health, for the data that were collected in 'pre' and 'post' surveys and the changes that took place between these two surveys (Refer Table 4.7 a and 4.7 b).

Awareness of health practices:

The table 4.7 gives the individual scale items for the scale awareness with regard to smallpox vaccination and cholera inoculation, awareness was very high even before viewing the telecast programme. This can be seen from the reading the line 'Pre'.

With regard to BOG table 4.7 (Panel A) shows that about a third of the males and a fifth of the females were aware of it before the viewing of the programme. At the end of the one year study period among the frequent:
Television viewers (E3) about three fourths of the males and 56 per cent of the females were aware of it. In general the higher the reported Television viewing frequency, the higher was the change, thus supporting the hypothesis specified in the first chapter. This suggests that exposure to Television for a longer duration resulted in a larger magnitude of change.

The sub total for the scale awareness is given at the bottom of the first panel. The significant 'F' values for C2 both for males and females show that the change scores were not from the same population. Substantively this means that differential exposure to Television had different levels of impact on the people as measured in this study. The 'f' values show that among males both occasional Television viewers (E2) and frequent Television viewers (E3) were statistically significantly different from the control group. This means that gain in awareness in the area of preventive health practices, among those who reported to have watched Television occasionally and frequently, was more than those who did not have access to Television. The 't' values for females show that each of the experimental groups was significantly different from the other. This means that different levels of exposure to Television had significantly different impact on females. In general the magnitude of change among females was greater than
males for each of the experimental groups. It is possible that the section of the population (females) who did not have access to such information earlier, when exposed to Television which provided such information, were able to absorb more than the section of the population (males) who had access to some information earlier.

4.7.2 The knowledge of Health Innovations:

Lack of drinking water in rural areas had often been identified as one of the major causes for spread of diseases. Often wells in villages from which drinking water is drawn do not have parapet walls and so dirty water and rain water flow into the wells. During summer, many a number of wells dry up, drinking water is drawn from ponds which are also used by cattle. To ensure clean drinking water in the villages Government has launched various programmes. Yet, due to ignorance on the part of the people, such programmes are often not properly utilized. So they have not produced the desired results. A few programmes that were telecast dealt with this problem. In addition, a few other programmes (e.g. How to keep the surroundings of the well clean", "Control of Mosquitoes", "Ideal Village", etc) were also relevant to this problem.

The first item of panel 2 of Table 4.7 shows that a high proportion of the population knew before view
the programme that water should be treated to make it safe for drinking. The change (or gain) scores, G2 show that all the experimental groups and the control groups changed in the positive direction. The group that started at the lowest level (E1 or rare Television viewers) changed most. The change was more a function of "ceiling effect" rather than exposure to Television. In general G2 scores were larger than G1 or G3.

The number of ways in which water could be treated to make it safe for drinking was measured on an 8 point scale. In the pre-survey the mean number of ways was 1.4 with a standard deviation of 1.2. For females, the mean was 1.0 and the standard deviation 1.1. This shows that although many knew that water should be treated, very few knew how to do it. Table 4.7 shows that among females, the higher the level of exposure to Television, the higher was the change, thus supporting the hypothesis. Among males both occasional (E2) and frequent (E3) viewers were substantially different from control group.

One of the reasons for the high rate of maternal mortality in under-developed countries is the non-availability of medical facilities in rural areas. Even where such facilities are available due to ignorance, people do not avail of them. During the programme study period, on prenatal checks two programmes were telecast. Through such programmes, Television tried
to increase the knowledge of rural people about the
for prenatal medical check up. Table 4.7 shows that
more males (about 75%) than females (about 50%) knew
about the need for prenatal checks before viewing the
programme. Table 4.13 shows that males and females
gained in knowledge about the need for prenatal medical
checkup during the programme. Among females in general
the higher the frequency of reported Television viewing
the higher was the change. Although males in the three
Television experimental groups gained, it was not too
different from that of the control group.

The significant 'F' values for the sub total show
that both among males and females there was differential change i.e. the change scores did not come from
the same population. In other words, differential exposure to Television had differential impact on the
people in the area of knowledge of innovations in heal
The 't' values for males shows that only the occasional
Television viewers (E2) were statistically different
from control. Maximum change was registered for this
group. Among females 't' values show that higher fre-
quency of Television viewing resulted in higher magni-
tude of change thus supporting the hypothesis.

It can also be seen that the magnitude of change
measured as G3 (i.e. the change between Mid and post
surveys) was the lowest among the three summary measur
The positive values show that although change in the positive direction occurred between mid and post surveys, it was minimal. But the changes between pre- and post surveys were substantial.

4.7.3 Adoption of Health Innovations:

Panel 3 of Table 4.7 gives relevant data on adoption of health innovations that were taken up for analysis. The entire panel shows modest gains during the programme periods. Perhaps one year (Study period) is not long enough to adopt innovations. More important adoption of innovations that were taken up for measurement (except the first) depended on the availability of those innovations. So perhaps, availability was also a limiting factor which resulted in modern gains.

With regard to adoption of the practice of making water safe for drinking, about 50 per cent of the respondents reported to have been practicing it before viewing the programme (and more than three-fourths had knowledge about it). Both among males and females, the control group registered as much change as the three experimental groups. So the gain that is revealed in the table cannot be attributed to exposure to Television medium.

With regard to BCG vaccinations table above shows that the Television experimental groups showed slight
more change than control, but they were not substantially different.

The table shows that with regard to the practice seeking modern medical aid, a smaller proportion reported that they practiced it in the later survey than in the earlier survey. This was so in the control group also and almost all the clusters exhibited this relationship.

The last item of the subscale deals with the practice of seeking modern aid for delivery of babies. Here also the change was minimal. Two limiting factors of this item need to be pointed out. First, change on the item is relevant only if the family, experienced the birth of a baby during the reference period. Such families were few in numbers. Second, adoption of this practice depended on the availability of health personnel in the village and also on the ability of the people to afford the services. Perhaps because of these two limiting factors, the changes were minimal.

The sub total of the scale shows that for the measures G2 all the experimental groups registered positive gains. The 'F' values show that there was statistically significant differences among the groups. Among male the control group gained more than E1 or rare Television viewers and the gain of E3 or frequent Television viewers was almost double than of control. The 't' values also
show that the differences between control group and
E3 or frequent Television viewers, between E1 or Rare
Television viewers, and E3 or frequent Television
viewers and also between E2 or occasional Television
viewers and E3 or frequent viewers were significantly
different from zero. From this it was concluded that
the change in adoption of health innovations was the
highest among males who reported to be frequent Tele-
vision viewers.

Among females, the 't' values show that the experi-
mental groups E2 and E3 or occasional and frequent
Television viewers registered more significant changes
than E1 or rare Television viewers. The changes were
higher among those who reported more frequent Televi-
sion viewing, thus supporting the general hypothesis.

4.7.4 Total measure of change in Health Innovations:

The last but one line of Table 4.7 gives the total
measure of change which summarises the entire table.
The statistically significant 'F' values for males, and
females show that both for males and females the changes
were different among the three experimental and control
groups. An examination of the magnitude of scores shows
that both for males and females the changes were posi-
tively associated with differential exposure to Tele-
vision i.e. higher the reported level of Television
viewing the greater were the changes.
The 't' values show that among males the experimental group E2 or occasional Television viewers and E3 or frequent Television viewers exhibited higher levels of measured change than control. Further, the frequent Television viewers registered a statistically significant positive change than occasional Television viewers. The same pattern can be seen for females also.

It can also be inferred that people registered more changes between pre and mid programme surveys (G1) than between mid and post programme surveys (G3). From this, it may be inferred that in the initial period of viewing, more people changed in the positive direction, and in the subsequent period, fewer people changed in the positive direction. At the same time those who changed initially did not slip back, may be because Television was constantly reinforcing their knowledge. If one may be permitted to speculate, it can be stated that longer exposure to Television medium results in more positive change or more people change. So a longer duration of educational Television for community viewing may result in good for a longer section of the population.

If summary statements are to be made, and that without many needed qualifications, it can be stated that in the areas of health innovations the hypothesis, i.e. the higher level of exposure to Television the higher will be the change is supported by data. Hence
the Research hypothesis 1.6.2.12 is accepted at 0.05 level.

4.7.5 Table 4.8 displays the results of the summary measure, C2. It can be seen that before the start of the programme about 50 per cent of the respondents were aware that lack of certain food stuffs in diet can cause malnutrition. At the time of post survey about 75 per cent were aware of it. Among males only the group E2 or occasional viewers gained substantively more than control. Among females all the experimental groups, and the control group have gained. A similar trend can be seen for the summary measures C1 and C3. (Refer Table 4.8 a and b).

The second item dealt with the need for weaning food items for children. About 50 per cent of males and females were aware of this before the telecast programme. The gain during the programme study period was substantial in the experimental groups when compared with control groups. The gain in general, was associated with frequency of Television viewing, the exception being group E3 or frequent viewers, thus providing qualified support to the hypothesis, hence Research hypothesis 1.6.2.12 accepted at 0.05 levels.

The last item of the scale related to extra food varieties needed by pregnant and lactating women. Even before viewing the programme about 75% of the respondents were aware of this need. Partly because of the
'Ceiling effect' not much change was possible. The changes in the Television experimental groups were similar to that of control group, and so they cannot be attributed, to exposure to Television.

The last line of the table 4.8 gives the total score for the entire scale. The statistically significant 'F' values show that change scores did not come from the same population, i.e. the experimental treatment of differential exposure to community Television had different impact on the people. The 't' values show that among males the group E2 (occasional Television viewers) exhibited more statistically significant change than control, and it was more than that of frequent Television viewers on E3. Among females, none of the experimental groups exhibited more changes than control group. Among the experimental groups, both occasional and frequent viewers registered more change than rare viewers and the differences were statistically significant.

From the analysis it is found that in the area of health innovations in general awareness and knowledge increased during the programme period. The increase in adoption was less when compared to other two areas. The total change scores, which summarizes all the items that were selected for measurement, show that the changes
were positively related to exposure to Television, that is the higher the reported level of Television viewing the higher was the change.

When specific experimental groups were examined, among males and females both occasional and frequent viewers exhibited significant positive change when compared to respondents in the control group. Further the frequent viewers showed more significant change than occasional viewers. When compared to control group rare viewers did not show any change. This suggested that rarely viewing developing oriented Television programmes did not effect change. On the other hand, regular exposure to Television resulted in significant positive gains. The magnitude of gain exhibited by female's was more than that of males and by illiterates more than that of literates. This shows that for those sections of population that did not have access to sources of information on modern health practices earlier, the community Television helped in narrowing the knowledge gap.

With regard to innovations in nutrition, the changes were more modest when compared to innovations in health. In this area, the occasional viewers reported more significant change than control group.

It can be stated that differential exposure to
Television resulted in different levels of change. The changes were more pronounced in the area of health, and also among females and illiterates.

4.8. Changes in the area of Family Welfare of the respondents and the frequency of Television viewing

In this section the changes that were perceived in family welfare due to differential exposure of respondents to Television are analysed. An attempt is also made to examine the relationship between some selected background factors which act as intervening variables and the changes that were induced.

4.8.1 Programmes on Family Welfare:

Television programmes on family welfare were not exclusive but dealt with entire range of experience of family as a healthy social unit. Family welfare through planned parenthood was emphasised by bringing the social, health, educational, occupational and cultural aspects of problems (Krishnamurthy 1976) Television was thought of not as an intimate medium of communication for family welfare in rural setting but an indirect approach was adopted to convey family welfare messages to the viewers. The formats of these programmes were generally of social drama, graphic cartoon, folk song, and dance. The assumption underlying these programmes was that the viewers
would be persuaded by these programmes and would rationally decide to adopt small family norms. The programmes on family welfare were of two types. (1) those raised public awareness about population explosion, and (11) programmes emphasising small family norms.

1.8.2 Small Family Size:

Most of the programmes telecast on family welfare emphasised the advantages of a small family. This section attempts to evaluate whether there was any change in the desired family size because of the differential levels of participation in Television viewing. Table 4.9 shows the distribution of respondents in pre, mid and post surveys with differential exposure to Television.

In this study, those respondents who had desired three or less children were considered small family and the findings have been summarised in table 4.9 (Refer Table 4.9). The table indicates that 57.7 per cent males and 45.2 per cent females, who were frequent Television viewers (53) desired small family (three or less children) at the pre survey, as compared to 45.3 per cent and 38.3 per cent in the control group. By the time post survey was conducted, more people reported favouring small family both in the three experimental and the control groups.
The G2 scores among three groups of male Television viewers with regard to small family as compared to the control group were not statistically significant. However, females showed significant change in this respect which could be attributed to the differential exposure. About 8.8 per cent and 10.5 per cent of the respondents were among the occasionally (E2) and frequent (E3) female Television viewers over the control group, desired three or less children. The 'f' test indicates that changes in both the occasional (E2) and frequent (E3) Television viewers, in comparison with that of control, were significant. The G1 scores show that there were gains in the proportion of female respondents in the group of those desiring small family among frequent Television viewers (E3). However, the gain over the control group was statistically not significant. The G3 scores show that those females who are occasional (E2) and frequent (E3) Television viewers favoured a small family compared to the rare Television viewers (E1) and those in the control group. The 'F' values of G3 for females indicates that the means were not from the same population. The 'f' test indicates that these changes were significant. Hence the Research hypothesis 1.6.2.13 is accepted at 0.05 level.
4.9 Changes in the area of political socialization of the respondents and their frequency of Television viewing:

4.9.1 Theoretical framework:

In our fast moving world a large number of people who till recently thought that the limit of the world was their village, now find themselves as citizens of a nation which, they further realize, is part of the world community. These boundaries were widened mainly because of ever expanding communication process. Communication process is the life blood of modern democratic nation. The communication process makes it possible for the people to share a common fund of knowledge and rationalize mass politics.

An important aspect of life which this particular telecast programme was expected to influence was political socialization in terms of political information, empathy, national integration, and the efficacy of administrative units. This section analyses the differential impact of Television viewing in these areas, and also specific change in the awareness of problems facing the country and citizens responsibilities. The scale items of political socialization were canvassed only at pre, mid and post surveys whereas the items on citizens responsibilities and problems facing the country were in all the three surveys.
In the present analysis, the frequency of Television viewing is the independent variable and political socialization and other related aspects are the dependent variables. Sex, age, level of literacy, occupation, and size of village population are intervening variables influencing the impact of independent variables.

4.9.2 Political Information:

Researches in communication have often revealed that the change in attitude and behaviour of people comes much later than awareness. The media are credited mostly with increasing the awareness, and the behavioral changes are often due to inter-personal communication (Katz and Lazarsfeld 1955) Even learning is selective, i.e. one learns what he likes to learn and ignores consciously or unconsciously what does not interest him.

To measure the gain in political Information the respondents were probed deeply. The gain in information was that the respondents were aware of names of the MLA, Chief Minister, Prime Minister and President and also the citizens' responsibilities.

Table 4.10 indicates that (Refer Table 4.10) all aspects of political information, the gain was maximum in knowing the name of the Prime Minister, both among males and females. The frequent Television viewers
gained 15 to 16 per cent over control, irrespective of their sex. The name of the Prime Minister which was known to 17 to 44 per cent males and 4.4 to 13 per cent females rose to 26.1 to 75.6 per cent in males and 9.3 to 38.5 per cent in females in different experimental groups in the post survey. The considerable gain in control, particularly in the knowledge of the name of the Prime Minister and the citizens responsibilities should perhaps be attributed to other sources. Gain in the knowledge of citizens responsibilities should be increased considerably in all experimental groups and suggested the effect of other media and sources.

Coming to the overall gain in political information, the 'F' values (indicated by ** and @) show that the means were from different population thereby indicating differential impact of television viewing in different experimental groups, both in males and females. The frequent Television viewers showed statistically significant gains over control in political information, irrespective of their sex. The less gain among rare viewers and occasional viewers compared to control, gives one a feeling that those who preferred not to watch Television or watch occasionally even when Television was in their village, must have been a special class of people. Hence the Research hypothesis 1.6.2.14
is accepted at 0.05 level.

4.10 Overall Modernity:

The telecast programme influenced the individual overall modernity in the positive direction. The hypothesis that those viewing television will gain in overall modernity according to the frequency of Television viewing, is not rejected so far as occasional and frequent viewers are concerned.

4.10.1 Overall Modernity Instrument:

In order to measure individual modernity, Inkles and Smith (1974) constructed an overall modernity (OM) scale and tested in six developing countries, including India, and found the scale cross nationality effective. They also developed a short form of OM Scale which has a high degree of correlation with the long form and measures the individuals on the same dimension as the long form. The short form of the scale - OM: 12 SHORT FORM - was included as part of the survey schedule after pre-testing. In the light of pre-testing results, certain changes were made in the language of the scale items without affecting their contents.

This scale measures overall modernity in two spheres: (1) attitude and (2) behaviour and information. The area of attitude includes high concern for public issues and desire to do something, following
new methods of cultivation attitude towards desirability of scientific studies, limiting family size interest in the kind of news and understanding the ways of people in other countries. The responses were rated as 'appropriate' and 'inappropriate' and accordingly scored one and zero. (Refer Table 4.11) While table 4.11 indicates that the G2 gain of rare Television viewers is smaller than Control group, occasional viewers gained more than control and rare viewers and frequent viewers gained overall control and experimental groups (rare viewers and occasional viewers). The significant 'F' (indicated by ** and @) values indicate that the Means were from different population and there was differential impact of Television viewing on all experimental and control groups, both in males and females. The 't' values (indicated by b, c, d, h and i) show that the difference between control and occasional viewers (E2) and the difference between control and frequent viewers (E3) of both sexes, are statistically significant.

The male and female frequent viewers also gained significantly (indicated by f and i) over the occasional viewers of both sexes. On the whole, the female frequent viewers gained a little more (compared to 1.799 G2 score of males, the females G2 score was 1.979). The G2 scores of male and female occasional viewers were alike. The somewhat higher gain of female frequent viewers compared
male frequent viewers could have been due to low initial score of the females.

4.10.2 Overall Modernity by selected Intervening Variables:

The illiterate male and female frequent viewers gained more than literate frequent viewers of both sexes and there was a similar trend in occasional viewers too. While the size of the respondents village did not have any appreciable effect upon the gain of frequent male viewers, in the case of female frequent viewers the gain was greater in medium size villages than in small and large ones.

The frequent viewers in different age groups did not show any definite trend, except that both males and females in the middle age group (25-35) gained less than young (15-24) and old (Above 35) frequent viewers.

The unemployed female frequent viewers and the frequent viewers among female labourers gained more than other categories of occupation. This does not permit a generalization due to low frequency of females in other occupations. Among the frequent male viewers, cultivators and non-agricultural labourers showed more gain than other categories of occupations.

From the OM: 'Short form' scale it is observed that even at pre-survey some of the viewers scored very high. These items were new methods of cultivation
(correctly respond to by about 62 per cent to 79 per cent males and 44 per cent to 55 per cent females in different experimental and control groups). Desirability of studies (63 per cent to 76 per cent males and 65 per cent to 72 per cent females) desirability of limiting the family sizes (80 per cent to 90 per cent males and 76% to 80% females) and the problems facing the country (67% to 79% males and 57% to 67% females). Hence the Research hypothesis 1.6.2.15 is accepted at 0.05 level.

4.11 Other possible sources of change

The research question that guided the analysis was: were there any sources other than (or in addition to) differential exposure to which can partially account for the changes that were observed? First, it may be recalled that there was 4 experimental treatments, namely control with no Television (C) rare Television viewer (E1) occasional Television viewer (E2) and frequent Television viewer (E3). Although an ordering of these four treatment was assumed and expressed as a general hypothesis, the earlier analysis showed that the ordering did not hold for many variables, so the four experimental treatments cannot be conceptualised as four levels of the same variable. They should be appropriately conceptualized as four separate categorical
variables only. Second the research question is a research for factors other than the differentials exposure to Television as the cause for change. Hence the analysis should make use of a technique that can handle unordered categorical variables and one or more variables that are in an interval scale in a multivariable scheme.

The analysis makes use of a dummy variable or binary variable technique (Draper and Smith 1966; Moser and Kalton 1973). A binary variable is one which takes on one of the two values, 0 or 1. In this technique each category is designated as one variable. An individual is given a score of '1' if he/she was in an experimental treatment and all others are given a score of '0' for that variable. The technique also requires that one of the categories of a set is omitted from analysis and all computed values one with reference to this omitted category. As one of the major interests to examine whether the males and females in other three categories showed more change than control, that category was used as the omitted or reference category. The following scheme gives the scores assigned to the respondents in four experimental treatments for all from variables.

The scheme shows that the respondents in El group were given a score of '1' for the variable number
2 (or $x_2$) and the respondents in all other experimental groups were given a score of "0" for that variable. Similarly, respondents in E2 groups were given a score of "1" for variable number 3 (or $x_3$) and all others were given a score of "0" for that variable. Likewise respondents in E2 groups were given a score of "1" for variable number 4 (or $x_4$).

<table>
<thead>
<tr>
<th>Types of Experimental Treatments</th>
<th>Dummy variable number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>one (x1)</td>
</tr>
<tr>
<td>control (C)</td>
<td>1</td>
</tr>
<tr>
<td>pre viewer (E1)</td>
<td>0</td>
</tr>
<tr>
<td>occasional viewer (E2)</td>
<td>0</td>
</tr>
<tr>
<td>frequent viewer (E3)</td>
<td>0</td>
</tr>
</tbody>
</table>

'Dummy variable No. 1 representing control group is omitted.

2 Interpretation:

In order to keep the analysis simple and straightforward the total G2 scores (that is, change between pre and post surveys) for the three instructional areas where substantial changes were recorded were undertaken. Table 11.1 gives data for overall modernity.

The co-efficients that were computed were adjusted means and they are presented as deviations from the mean of control group. For example, when the three categorical
variables (dummy or binary variables) were entered in regression equation and estimate the following model.

\[ Y = a + Bx_2 + Bx_3 + Bx_4 \]

where \( x_2, x_3, \) and \( x_4 \) are the three dummy variables, \( a \) and \( B \) are population parameters; and the \( B \) are the deviations from the omitted category. When only the dummy variables are in equation (as in this case) the co-efficients are simply mean deviations. (Refer Table 4.12 a/b).

In Table 4.12 the last but one line shows that for males the mean total change score (G2) for control group (C) was 1.307, for frequent viewers (E3) it was 1.799. In Table 4.12 panel A, equation 1 shows that the regression coefficient of frequent viewer (E3) was 0.492, which is actually the difference between the means for C and E3 from Table 6.1 (1.799 - 1.307 = 0.492). This equation does not add any new information but is presented to indicate the point of departure. When other interval variables, in addition to categorical variables, are introduced in the equation, the regression co-efficients for the three Dummy variables are adjusted mean deviations - adjusted for the effect of interval variables. For example, equation No.2 has age groups and marital status (two interval variables) in addition to the three dummy variables. The regression
co-efficients for the three dummy variables are mean deviations adjusted for the effects of age and marital status. The co-efficient for the interval variable is the effect of that variable when all other variables (in this case the differential exposure to Television) are held constant.

The standardized regression co-efficients also can be interpreted as above. In addition as the co-efficients are in standard form or standardized form for standard deviation, the co-efficients in any one equation can be compared with each other directly. This facilitates determining the most important or the most efficient variable for predicting that dependent variable.

Sources of Changes in overall modernity:

Table 4.12 provides the details for the scale items overall modernity. Equation 1 shows that the co-efficients for all the three Television experimental groups were significantly different from control. The coefficient for B1 (rare Television viewer) was negative and for the other two they were positive. Equation 2 had two additional demographic variables namely, age and marital status. For males, the co-efficients of these two new variables were not significantly different from Zero, but the coefficients for the
three experimental groups were of the same magnitude as in Equation 1 and also statistically significant. This shows that the observed changes in overall modernity in the three Television experimental groups, when compared to control groups, were not due to demographic characteristics of the respondents.

In equation 3, three socio-economic status variables added to the three dummy variables for the three Television experimental groups. The co-efficients for the three experimental groups did not change and were statistically significant. As the three co-efficients were not reduced to zero by the addition of other variables, it can be stated that the effects of being in the experimental groups were not spurious or due to other variables. The co-efficient for level of literacy was negative. This shows that when compared to illiterates in control, the illiterates in E2 (occasional viewer) and E3 (frequent viewers) gained more or changed in positive direction. The coefficient for type of house was positive and significant. The standardized regression co-efficients (Panel B) show that the coefficient for level of literacy was larger (in the negative direction) than the co-efficients for type of house. This indicates that the effect of level of literacy was larger than the efficient effect of house type in producing changes in overall modernity.
In equation 4 in addition to three dummy variables both demographic and socio-economic status variables were added. When the coefficients of three experimental groups were compared, with the same coefficients in equation 1, they are not different but of the same magnitude. This shows that the changes that were revealed in the three experimental groups were not due to other variables in the equation. In addition to differential exposure to Television, illiterates gained more.

Similarly among female, also, the changes observed in the three experimental groups were significantly different from Zero from that of the control and they were due to other variables taken up for analysis (compare equation 5 and 8). In addition to differential exposure to Television younger females who were literate gained more.

Innovations in Health:

Table 4.13 examines other possible sources of change in the area of innovations in health, equation 1 shows that for males, the coefficients for occasional Television viewer (E2) and frequent Television viewer (E3) were statistically significantly different from zero from that of control when age and marital status were added in equation 2 of the coefficients for these two new variables were not statistically significant.
Further, the coefficients for the three Television experimental groups were not reduced. This shows that the changes in the area of health innovations were not due to demographic characteristics of the respondents but due to differential exposure to Television. (Refer Table 4.13 a/b).

Equation 3 has three socio-economic status variables in addition to the three variables for the experimental groups. The co-efficients for equation and consumer goods were negative and significant. Further the coefficients for occasional viewer (E2) and frequent viewer (E3) were not reduced in magnitude and were insignificant. This shows that in addition to differential exposure to Television the changes were influenced by socio-economic status in the negative direction.

Equation 4 simply repeats the relationship of the two earlier equations.

Among females, that the measured changes were due to differential exposure to Television.

Political Socialization:

Table 4.14 examines the possible sources of change in the area of political socialization of people in the study area. Equation 1 shows that the change among E1 or rare viewer was significantly less than that of control, there was no change among E2 or occasional
viewer and significantly more change among E3 or frequent viewer. The same relationship was true for females also as displayed in equation 5. (Refer Table 4.14 a/b).

When the equations 1 and 4 are compared for males and equations 5 and 8 for females (Panel B) it can be seen that the coefficients for the three Television experimental groups were not reduced at all. This shows that the measured change were due to differential exposure to Television.