JEEVADHARA (FOUNTAIN OF LIFE)

REPORT ON THE EVALUATION OF RAD-
BROADCAST ON PROTECTED WATER SU
AND ENVIRONMENTAL SANITATION

SOCIO ECONOMIC UNITS, KERA
KERALA WATER AUTHORITY
GRATED WATER SUPPLY & SANITATION PROGRAMME

RESEARCH REPORT NO.5

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I. INTRODUCTION AND GENESIS OF THE PROGRAMME

Eventhough Kerala remains in the forefront in the matter of health status by any comparable and measurable standards, a high morbidity, low mortality syndrome is very unique in the State. This is mainly due to polluted water, poor environmental conditions and unhygienic practices. The provision of safe water, by itself, is unlikely to make any substantial impact on the health situation unless environmental actions aimed at eradicating the unsafe practices of excreta disposal are initiated. According to the present estimates approximately 35% of the rural population have access to safe water and 22% have proper sanitation facilities. There exists, virtually no proper system for the effective disposal of waste water, even though a few municipalities and panchayats have undertaken building of low-cost latrines.

Health care is not only a matter of provision of resources, it is also what individuals and families can do for themselves. In this context education and communication for health becomes particularly important. The truth is that individuals and families make most of the important decisions affecting their health. If the millions of such daily decisions are to be made wisely, people need to be equipped with the knowledge and skills necessary to exercise individual and community responsibility.

There is a common misconception among the people of Kerala that due to the high percentage of literacy and political consciousnous there is no need to enlighten the community on the use of water and related matters. But the prevailing practices in Kerala suggest that public health education should focus on subjects such as civic responsibilities in respect of value of water, water consumption and treatment. Availability of drinking water of sufficient quality and quantity does not guarantee its proper use. In this situation development of knowledge about proper handling and storage of water and protection of water sources become important.

It was towards this specific end that the Jeevadhara Programme was conceived by the All India Radio and the Socio Economic Units, Kerala. As is obvious, human behaviour is far too complex to be changed by communication alone; but it is expected that facts or ideas that are heard, understood and spread through the programme pave the way for desired changes in behaviour and informal community participation.

All India Radio Proramme have more than 95% reach in Kerala. Broadcasting is the most powerful medium of mass communication and its importance as a medium of information and education is particularly great in Kerala state. Even with the recent expansion of TV network, audio broadcasting continues to have an important role in fulfilling communication needs.

The radio broadcast series on Protected Water Supply and Environmental Sanitation, - "Jeevadhara" (Fountain of Life) was planned by the All India Radio with help from Kerala Water Authority, Socio-Economic Units, Kerala, State Committee on Science and Technology, Directorate of Health Services, Pollution Control Board, Kerala Sastra Sahitya Parishad (KSSP), Kerala Association for Normal Formal Education and Development (KANFED) etc. Thirty two weekly lessons were broadcast. These were prepared by various experts. Kerala Water Authority engineers have been very active in preparing the script and providing apt answers for the questions of the listeners. The programmes which were broadcast in the rural programme hour of AIR, Trivandrum on all Fridays from 6.50 to 7.20 p.m were relayed by the all radio stations in Kerala. Features, discussions, quiz programmes etc. form different parts of this series. The programme was started on 14 November, 1988 with the message of Mr. Baby John, Honourable Minister for Irrigation and Water Supply and lasted until 2 June, 1989. Kerala Water Authority and Canara Bank provided Rs.20,000 (Rs.5000 and 15,000 respectively) as prize money for the best listeners. The criteria for judging the best listener was the nature of listener's sustained interest in the programme and the number of his/her correct answers to the queries which were posed at the end of each and every broadcast. A written examination was carried out for 40 selected people and based on that test people were selected for the prizes.

II. OBJECTIVES, METHODOLOGY AND PLAN OF ANALYSIS

Objectives

The weekly "Jeevadhara" radio broadcast relayed by All India Radio covered issues ranging from the sources of water, water cycle and monsoon, water-borne diseases, water pollution, treatment and distribution of water, environmental sanitation, garbage and sewage and water decade. The general objective of the programme was to create awareness among the people about the importance of protected water supply and environmental sanitation. The programme had two approaches in changing health related behaviour.

1. Change some of the undesirable health practices prevalent among the people;

2. Educate people and make them understand and gain some control over factors that affect community health.

The idea behind the evaluation of the programme was to assess the impact of the series of broadcasts on the listening population as well as to determine the suitability of this medium in information sharing and education of people in habits connected with drinking water and sanitation. The primary objective was to assess the utility of the programme by studying how far the messages of the programme have been understood or identified by the listeners.

Secondly, an evaluation was desirable in determining the ways and means of improving the message. An examination of the opinions of the listeners regarding the content, quality, timing and presentation of the programme was used for this. Such an exercise may help in future communication tasks.

Methodology

Before broadcasting, registration of listeners was announced through AIR and approximately 1500 individual listeners registered. A booklet containing the details of the programme was sent out to all of them. A pre-programme survey was sent to each of these listeners. At the end of each broadcast, two questions were asked to the listeners and they were requested to write the answers for these questions and their opinions and doubts about the programme. The responses of the listeners were analysed in detail in order to find out how far the messages of the programme were understood by them.

Mailed questionnaires were sent out to the registered listeners to assess their background and knowledge, attitude and practice aspects related to water and sanitation. Only 1035 listeners responded. The questionnaire consisted of four major sections. The first section dealt with the socio-economic profile of the respondents. Sections 2 and 3 contain questions probing the extent/nature of knowledge, attitudes, and practices concerning water and sanitation related habits. Section 4 consisted of questions attempting to measure the appropriateness and appeal of the quality, timing and presentation of the radio broadcast. The questionnaire was expected to yield a profile of the potential disseminators of information, evidence of the nature/extent of knowledge on, water and sanitation related habits, delineate the extent to which correct/ wrong practices are adopted, probe the differences, if any between knowledge and perceived practices and attempt to measure the appropriateness of radio as an integral medium of broadcast for the health education.

The plan of analysis

(a). Establish the pre-programme status on knowledge as well as practices; what is possibile is not an assessment of induced changes, but a stock-taking of the prevalent knowledge/attitudes.

(b). Design a cross sectional comparison, attempting to measure variation in knowledge/practice among the different categories of the listening population. Considering that the sample is heterogeneous with varied socio-economic-demographic profile, this will help to identify the target group towards whom the programme ought to be aimed at.

(c). Draw up clearly the socio-economic demographic profile of the typical receiver of the messages. This will throw light on the potential role of the receiver to further disseminate the message(s).

(d). Examine the respondent's view on the content, quality, timing and pesentation of the programme and their suggestions for improving the programme.

(e). The analysis of the listener's response towards each and every programme broadcasted in order to measure the impact of the programme by examining how far the messages of the programmes were identified by the listeners.

Limitations of the Study

The study has not in any way attempted to measure the extent to which the broadcasts have reached a wider audience or whether the registered listeners in fact form a special group. Secondly, this study is not an in-depth one, assessing impact by measuring change in health status.

More specifically, the problem with the study was that in using the registered listeners of AIR as our sample, we ran the risk of incorporating biases in the sample. The bias may be covered by the fact that we were using a cross section of the population which already has interest in the subject. Also, the motivation of the listeners to register with the AIR (presumably monetary) was unknown to us. More pertinently, the results of the exploratory survey will have to be carefully interpreted and understood, given the fact that the correct responses may well be the result of reference to the written material that we have sent out to them or may be the result of group discussions. So there is the need to recognise the complexity of precise attribution. In the light of this bias a questionnaire respondent, may not so much be a "typical" receiver of the message, but rather a member of the sub-group of voluntary participants. His usefulness was in his role of a potential opinion leader or disseminator of information.

Ideally the mailed survey on knowledge and practice of listeners should have preceeded the radio broadcast in November 1988. But due to some unavoidable circumstances, the questionnaires were sent out after some of the programmes were broadcast. Another limitation of the study was that although an evaluation of the pre-test and post-test comparison of the programme was intended at the initial stages of the study, due to unforeseen reasons these were not carried out. The postponing of the post-programme evaluation leads to the invaluable loss of many of the findings that can be brought out by a study like this. Originally, the study was intended to identify the attitudinal changes that can be brought out by the programme and pinpoint the resistances and constraints in the way of change.

The cancellation of the post-programme evaluation made this objective impossible.

The housewife does not cut as a dismal picture as was probably expected at the stage while the programme was conceived. It has been impressive that she is not only ahead of all other categories of respondents in the matter of practices in water and sanitation related activities, but is also on par with them on other knowledge levels too. The representation of female listeners in the sample however, was low.

III. SURVEY REPORT

In this chapter, an attempt has been made to assess the knowledge, attitude and practice of listeners regarding water and sanitation related habits in relation with their socio-economic characteristics. This is mainly based on the survey which was carried out during 1989.

Socio-economic and demographic characteristics:

As evident from our analysis, majority of the respondents were male (71%) and female constituted only 29% of the sample. Approximately 70% of the respondents belonged to 15-29 age group. One fifth of the respondents categorised themselves in the 30-44 age group and 7% of them were above 45 years. The educational background of the respondents revealed that an overwhelmingly large number (83.7%) respondents were 'educated', having attained an educational status of SSLC and above. While students constituted the single largest group of respondents (39%) unemployed and pensioners were the second major group (21%). Employees in the Government/quasi-government organisations or banks were the third major category (13%). Housewives formed a meagre 8% of the sample. The rest of the respondents were farmers, labourers (both agricultural and factory), petty traders and businessmen.

A further classification of the gender grouping according to their age, education and occupational status revealed that 63% of the males and 59% of the females attained atleast SSLC level. In the occupational category also there is again uniformity among male and female respondents. Students were the largest group in both the gender classification (36.3% among females and 41% among males). The second important category among women was housewives while the unemployed was correspondingly significant among males.

The demographic profile of the respondents showed that more than 90% of them belonged to rural areas. This was the same among the gender groups.

The activity profile of the respondents in the course of their work indicated that 48% of them involved in meeting people "Another 34% engaged in visiting people in their house". Those directly involved with formal/informal coaching and panchayat activities were only 15%.

Thus a typical male/female respondent would be young (15-29 age group) residing in rural areas, reasonably educated (SSLC and above) and may be a student or unemployed.

Now let us deal with the pattern of scores of the respondents by assessing their knowledge and practice on water and sanitation related activities. As indicated by our scoring plan, a total score of 17 would reveal that a respondent has "correct" knowledge on all the connected issues regarding water and sanitation. To recaptulate, sections B and C in the questionnaire contained questions probing the respondents knowledge on water and sanitation related activities as well as their practice on the same issues. The maximum score is 13 for the "knowledge" section and 4 for the "practice" section. (On the whole 1035 respondents have a total score of 12740 (for both sections together). In the knowledge section they have together scored 10598 and in the practice section the total score of 1035 respondents was 2142. From their responses the respondents seem better equipped with knowledge/awareness about water related ideas, than they were equipped/prepared to put this knowledge into practice. That is, while, the maximum possible knowledge score for 1035 respondent is $1035 \times 13 = 13455$. The actual total score of the groups was 10598. This is 79% of the highest possible score.

The maximum possible score into practice/behaviour questions is 1035 x 4 = 4140. The actual score for this group was 2142. This is 52 %. of the highest possible score in the practice section. It is clear that there exists a considerable gap (a 27% point difference) between knowledge and prevalent practice.

We could now examine the average score for knowledge and practices in relation with the socio-economic characteristics of the respondents (Table No.1.).

Table.1: AVERAGE SCORES FOR KNOWLEDGE AND PRACTICE

Characteristics	Knowledge	Practice	Total
Male	10	2	12
Female	10	2	12
15-29	10	2	12
30-44	10	2	12
45	10	2	12
Information Education	9	2	11
Below SSLC	10	2	12
SSLC	10	2	12
Degree & Above	10	2	12
Technical Education	10	2	12
Govt/Q.Govt/Bank employee	10	2	12
Agricultural labourer	10	2	12
Factory worker	8	2	10
Farmer	10	1	11
Business/petty trade	10	2	12
Student	10	2	12
Housewife	10	3	13
Unemployed/pensioned	10	2	12
Others	10	2	12

The table revealed that there exist no difference in the average score across the gender categories, the age classification or the educational categories. Through close examination, it was revealed that in the work status classification 'farmers'and factory workers' have shown a knowledge score less than the average score of 12 (11 and 10 respectively). Further, farmers have a score of 10 in the knowledge section and 1 in the practice section against the maximum possible scores of 13 and 4 for knowledge and practice respectively. While the knowledge-practice gap of farmers is 52 percentage points, the gap in the factory worker category is 12 percentage points. In other words, while both the farmers and factory workers seem to be in a disadvantaged position than any other occupational category, the gap between practice and knowledge was sharper in the case of former than the later. Conversely, the housewives have attained the largest "practice" score of 3 against the maximum 4. When her knowledge level was on par with the rest of the categories, this category was identified as the ideal practitioner of the correct practices in water, sanitation and related activities. An analysis of listener's responses about various aspects of water and sanitation topics to given in the following pages.

Opinion on the need for boiling/filtering of water

Regarding the need for boiling/filtering water before use, nearly 95% of the respondents expressed that it has to be practiced strictly. Across the gender/age/education/working class groups no significant variation

was observed. However, a slight deviation was noticed in the occupational category of agricultural labourers against the general rate of 95%. Only 87.5% agricultural labourers thought that boiling/filtering of water is imperative for good health.

Opinion about the different ways of water pollution

The analysis revealed that nearly 70% of the respondents were fully aware of the causes of water pollution. Some people have only partial awareness on this problem. A close examination of the listener's opinion about the various ways of water pollution pointed out that a quite large percentage (89%) know that washing clothes near by the wells leads to water contamination and pollution. More than 75% people were aware of the fact that open air defecation leads to environmental pollution and degradation and hence to water contamination. Not much variation was observed in the knowledge of people about water pollution among the age, sex and educational categories. However, half of the respondents have adequate knowledge about the different ways of water pollution. While 72.7% of the factory workers know that open defecation causes water pollution, only 63.6% of them thought that washing clothes near by the wells also leads to water pollution.(See Table 2) In the case of businessmen and petty traders an opposite trend was noticed in this respect. Even though an almost similar trend was noticed in the full awareness rate. Only very few people have no idea about the different ways of water pollution.

Knowledge about water-borne diseases

In order to understand the knowledge level of the respondents about water-borne diseases, a choice was given to them for selecting the diseases caused by water pollution. As evident from Table No.3, 86.6% people know that typhoid is a water-borne disease. More than 70% of the respondents were aware of the fact that poliomyeitis originates from improper handling of water which was used for routine activities. However, only 67.% of people have adequate awareness about the origin of these two dreadful water-borne diseases. Relatively more female respondents (83.5%) know that polio is a water-borne disease than males (68.6%). Among people who have only informal education half of the listeners had an adequate idea about these two water-borne diseases. In this category more than 1/5th of the respondents have no idea about the origin of polio and typhoid. Among the factory workers only 27.3% people were fully aware of the water-borne diseases.(See Table 3)

Knowledge about prevention of water-borne diseases

The analysis revealed that there was very clear awareness among the respondents about the correct methods of prevention of water-borne diseases . More than 95% of the respondents seemed to know that the correct mode of defecation and periodic chlorination of the well will ensure that water-borne diseases are prevented to a greater extent. Not much variation was noticed among the people of varying socio-economic characteristics.

Knowledge about various vector-borne diseases

Most of the respondents identified correctly the various vector-borne diseases. As conforming to the over all picture, even at the disaggregated level, there seemed to have more awareness about Filaria than Malaria.

Knowledge about the ways of eradicating Mosquitoes

Nearly 77% of the respondents recognised that treatment of stagnant water is an important method of keeping away with mosquitoes. However, only less than half of the respondents know that storage vessels need emptying out and cleaning to prevent the breeading of mosquitoes. Only 42% people have adequate knowledge about these two methods for eradicating mosquitoes. Among all the categories, treatment of

stagnant water figured more prominently than periodic emptying of storage vessels as a method of doing away with mosquitoes.

Opinion on reasons for disposal of waste water garbage

More than 80% of the respondents expressed the opinion that protected water supply is ensured by the proper disposal of waste water and garbage. Males seemed to have more knowledge (84%) about the compelling reasons for the disposal of waste water and garbage than females (80%). Younger people (15-29 age group) showed better awareness than others. As expected, people with better educational status have better information about the proper disposal of waste water and garbage than the less educated. Students were the better informed category than any others and the least informed were the factory workers.

Opinion on the required distance between well and latrine

Nearly 85% of the respondents know that the required distance between a well and latrine is 15 metres. More women than men, less educated people, farmers, agricultural and factory workers and housewives seem to believe that there is no special merit in maintaining a minimum distance between a well and latrine.

Practice of boiling/filtering water before use

From the survey, it was revealed that more than 62% of the respondents claimed to have boiled/filtered water before use. Nearly 1/4th of them boiled water only if it had to be given to sick people. Some people (12%) did not boil or filter water before use. While a higher percentage of women than men claimed to boil water regularly, a similar pattern was obtained in the 30-44 age group and all the occupational categories other than farmers, agricultural labourers and factory workers (See Table No.4). In this respect, it would be interesting to check and ascertain the largest group which does not boil/filter water before use.

Our enquiry on these lines indicated that majority of the respondents (nearly 85%,) depended for well water for daily affairs. Majority of the respondents claimed that they boiled/filtered water before use. One of the most important observations was that 26.7% of people who collected water from rivers never boiled/ filtered water before use. Nearly 15% of the people who collected water from ponds and tanks also abstain from boiling and filtering of water. It is necessary to target attention to this group to educate them about the necessity of boiling/filtering of water before drinking. Among the well water users also nearly 25% people boiled water occasionally and 12% people never boiled or filtered water. There is the urgent need to educate the well water users also the necessity of boiling or filtering water before use especially when the well in use is not deep enough and which has no surrounding walls. A contradiction noticed in the practice aspect was that while 68% of the respondents who owned own tap boiled/filtered water before use regularly only half the people who utilised common taps (public taps) resorted to this practice. Variation in living conditions may be the reason behind this.(See Table No. 5)

Practice regarding washing clothes or vessels

The data revealed that nearly half of the respondents were using ponds or streams for washing clothes and cleaning vessels. However, 1/3rd (34.2%) of the respondents admitted that they did the same by the well. Only 13% of people seemed to have facilities to wash clothes near a tap/pipe. Contrary to either categories 74.7% of the housewives revealed that they washed the clothes and cleaned the vessels near the well. An education-wise distribution of the sample showed that while 66.7% of people who have only informal education adopted the practice of washing clothes and cleaning vessels near by the wells only 23.7% people who have attained an educational status of SSLC practiced this. An age-wise classification of the respondents indicated that the practice of washing clothes or cleaning vessels near by the well was greater among the aged

people than younger ones. So also this practice was greater among males than females . We also tried to correlate the number of people who wash clothes and clean vessels near the well and the number of people who were using well water for drinking and cooking purposes. The results of the survey also revealed that an alarming 48% respondents wash clothes near by the well as well as used the same for drinking.(See Table No. 6)

Practice regarding chlorination of well

Slightly more than half of the respondents (54.1%) claimed that they resorted to chlorination of well regularly as a measure to check water-borne diseases. More females adopted this practice than males. Paradoxically a decreasing trend was noticed among the better educated categories who practiced chlorination of well regularly. Among farmers (40.5%) factory workers (50%) and agricultural labourers this practice was rather low like the farmer observations on attitudes and practices. Nearly 75% of the housewives practiced chlorination of wells. This highlighted the fact that women have better understanding about the importance of chlorination of wells.(See Table No. 7)

Practice regarding mode of defecation

The majority (77%) of the respondents claimed that they used latrines for defecation. Open grounds figured as the next alternative for nearly 20% of people. As expected, better educated and those who have better occupational status largely used latrines for defecation while an opposite trend was noticed among less educated and low income people (See Table No.8).

Compatibility between practice of washing clothes near the well and knowledge on methods of water pollution.

Among the total respondents 40.8% people who have the correct knowledge about water pollution adopted the correct practices in order to avoid it. More female respondents (47.5%), more young people (15-29 age group) (42.4%) and better educated masses (those who an educational status SSLC and above) who acquired correct knowledge in this respect adopted the correct practice. Housewives rank top (53%) among the people who have adequate knowledge about the methods of water pollution and because of that abstain from washing clothes near by the well. Largely, agricultural labourers and those who were engaged in business/petty trade washed the laundry near the well despite knowing that it may contaminate the water source and become a probable cause of spreading water-borne diseases. A considerable number of males (40.8%) and people who have an educational background below SSLC (44.4%) adopted the same practice of washing clothes near by the well even though they know that it would lead to water pollution.

Compatibility between practice of chlorinating the well and knowledge on methods of water pollution.

On the whole 41.2% of the respondents who were aware of the methods of water pollution chlorinated their well regularly. However, nearly 25% of the people who know about water pollution does not chlorinate the well. Nearly 40% of the less educated (those who have only informal education) people did not protect their well even though they were aware of the different ways of pollution of water sources. More than 40% of the factory workers and business/petty trade people also do the same. But 31.2% of respondents adopted this practice despite the fact that they have little knowledge about the methods of water pollution. Most of the agricultural labourers and farmers (more than 40%) belonged to this category. In this respect also more than half (55.8%) of the housewives who gained correct knowledge tried to put it into practice.

Compatibility between practice of chlorinating well and knowledge on water-borne diseases.

Regarding the compatibility between the knowledge of various water-borne diseases and the practice of chlorination of wells only 36.4% of people have adequate knowledge and adopted correct practices. One of the important findings is that 30.7% respondents, despite knowing about the occurances of water-borne diseases did not take effective step such as chlorinating the well to prevent infection through water. In other words, a good percentage of people neglected/ignored the practice of chlorination of wells as an important method of preventing or reducing water pollution and thereby curtailing water-borne diseases. Educational status and age does not influence this paradoxical behaviour. However, more males than females (32.4% and 26.7% respectively) and more agricultural labourers practiced wrongly though they have adequate knowledge about the origin of water borne diseases. More than 1/5th (23%) of the respondents do not chlorinate the well because of lack of knowledge about water-borne diseases (See Table No.9).

Compatibility between practice of defecation and knowledge prevention of water-borne diseases.

The analysis revealed that 73.5% respondents who were aware of the preventive aspects of water-borne diseases adopted the correct mode of defecation . But in this respect also 21.7% people practiced unsanitary methods of defecation even though they were fully aware of the development and prevention of water-borne diseases. This was greater among the less educated people (30%) and agricultural labourers (37.5%). Only half of the agricultural labourers who know preventive measures against water-borne diseases adopted the correct practice. Only a few people practiced wrong methods of defecation because of inadequate awareness about prevention of water-borne diseases. (See Table No. 10) There is the urgent need to focus attention on the people who were aware of the drawbacks of open defecation, but practiced the same in order to curtail the occurance of water-borne diseases in our country.

Compatibility between practices of boiling/filtering water and knowledge on water-borne diseases.

With regard to the compatibility between the practice of boiling/filtering water and knowledge on water-borne diseases, our investigations suggested that only 36.4% people who have better knowledge about the origin and development of these diseases adopted the correct practice of boiling/filtering of drinking water. However, 60.2% of the housewives adopted this practice. The practice of boiling drinking water was very low among factory workers (13.6%) and agricultural workers (17.6%). More than 60% of the factory workers do this because of their wrong knowledge in this respect . The findings also revealed that more than 30% of the respondents who were fully aware of the occurances of water-borne diseases does not boil/filter water before use. But nearly 10% of the respondents adopted this practice even though they does not have much knowledge about water-borne diseases.

In short the findings on the knowledge, attitude and practice of people on the different aspects of water and sanitation related activities revealed many interesting aspects. On the whole women respondents especially housewives were the more ideal practitioners in water and sanitation related activities. The knowledge practice gap was relatively greater among factory workers and agricultural labourers. Our observations again suggested that generally many people who have adequate knowledge about the dangers of certain practices in public health adopted the same neglecting its importance. This is a very unfortunate situation. Proper attention should be given to these categories of people inorder to reduce this tendency. We can very well hope that our health education campaign might have changed many of these attitudes by successfully motivating people to adopt the correct practices in water and sanitation field.

Table 2: OPINION ABOUT THE DIFFERENT WAYS OF WATER POLLUTION

OPINION CHARACTERISTICS		Washing cloths near the well	Open Defecation	Both	Faulty Opinions	Total
SEX	Male	652(89.1)	558(76.2)	504(68.9)	14(1.9)	732
	Female	269(88.8)	231(76 2)	211(69.6)	8(2.6)	303
	Total	921(89.0)	789(76.2)	715(69.1)	22(2 1)	1035
AGE	15 - 29	663(89.5)	555(74.9)	506(68.3)	18(2.4)	741
	30 - 44	193(89.4)	176(81.5)	158(73.2)	2(0.9)	216
	45 +	64(83.1)	57(74.0)	50(64.9)	2(0.6)	77
	Unstated	-	-	-	-	1
	Total	920(89.0)	788(76 2)	714(69.1)	22(2.1)	1034
EDUCATION	Informal Education	25(83.3)	23(76.7)	20(66.7)	2(6.7)	30
	Below SSLC	120(89.0)	103(76 3)	93(68.9)	2(1 5)	135
	SSLC	565(88.7)	481(75 5)	436(68.5)	15(2.4)	637
	Degree & Above	173(90.1)	146(76.0)	133(69.3)	3(1.6)	192
	Technical Education	34(91.9)	32(86.5)	29(78.4)	0	37
	Unstated	-				4
	Total	917(88.9)	785(76.1)	711(69.0)	22(2.1)	1031
OCCUPATION	Govt/Q. Govt/Bank Employee	119(89.5)	108(81 2)	98(73.7)	5(3.8)	133
	Agricultural labourers	32(80.0)	31(77.5)	25(62 5)	1(2 5)	40
	Factory worker	14(63.6)	16(72.7)	11(50.0)	2(9.1)	22
	Farmer	36(85.7)	37(88 1)	34(81.0)	1(2.4)	42
	Business/petty trade	16(84.2)	10(52.6)	10(52 6)	0	19
	Student	379(93.1)	302(74 2)	286(70.3)	8(2.0)	407
	Housewife	72(86.8)	63(75.9)	55(66.3)	2(2.4)	83
	Unemployed/pensioned	189(87.5)	168(77.8)	145(67.1)	3(1 4)	216
	Others	64(87.7)	54(74 0)	51(69 9)	0	73
	Total	921(89.0)	789(76.2)	715(69.1)	22(2 1)	1035

(Note: Respondents have indicated more than one response and hence the total may not always tally)

Table 3 : KNOWLEDGE ABOUT DISEASES CAUSED BY WATER POLLUTION

DISEASES CHARACTERSTICS		POLIO	TYPHOID	BOTH	NEITHER	Total
SEX	Male	502(68 6)	643(87.8)	469(64 1)	56(7 7)	732
	Female	253(83.5)	254(83.8)	223(73 6)	20(6.6)	303
	Total	755(73.0)	897(86.6)	692(66 9)	76(7 3)	1035
AGE	15-29	541(73 0)	645(87.0)	496(66.9)	52(7 9)	741
	30-44	154(71.3)	186(86 1)	142(65.7)	18(8 3)	216
	45+	59(76 6)	65(84.4)	53(68.8)	6(7 8)	77
	Unstated	-	-	-	-	1
	Total	754(72 9)	896(86.7)	691(66 8)	76(7 4)	1035
EDUCATION	Informal Education	22(73 3)	16	15(50)	7(23 3)	30
	Below SSLC	102(75.6)	114(84 4)	92(68 2)	11(8 2)	135
	SSLC	479(78.2)	564(88.5)	441(69.2)	35(9 5)	637
	Degree & Above	123(64 1)	165(86.0)	116(60 4)	20(10.4)	192
	Technical Education	26(70.3)	34(91 9)	26(70.3)	3(8 1)	37
	Unstated	-	-	-	-	4
	Total	752(72.9)	893(86.6)	690(66.9)	76(7 4)	1035
OCCUPATION	Govt/Q.Govt/Bank	98(73.7)	120(90 2)	88(66 2)	6(4 5)	133
	Agricultaral labourers	27(67.5)	29(72 5)	23(57 5)	7(17 5)	40
	Factory worker	10(45 5)	11(50)	6(27.3)	7(31.8)	22
	Farmer	29(69.1)	36(85.7)	26(61.9)	3(7 1)	42
	Business/petty trade	9(47.4)	15(79)	7(36.8)	2(10.5)	19
	Student	314(77 2)	363(89.2)	293(72 0)	25(6 1)	407
	Housewife	70(84.3)	73(88.0)	65(78.3)	5(6.0)	83
	Unemployed/pensioned	149(69 0)	194(98 8)	140(64.8)	15(6 9)	216
	Others	49(67 1)	56(76 7)	44(60.3)	6(8.2)	73
	Total	755(73 0)	897(86 7)	692(66.9)	76(7 3)	1035

(Note: Respondents have indicated more than one response and hence the total may not always tally)

Table 4 : **PRACTICE OF BOILING/FILTERING WATER BEFORE USE**

Characteristics	Practice	Regularly	For patients only	Do not boil	Unstated	Total
SEX	Male	418(57.1)	203(27.7)	101(13.8)	10(1.4)	732(100.0)
	Female	226(74 6)	50(16 5)	25(8.3)	2(0.6)	303(100.0)
	Total	644(62.2)	263(24 4)	126(12.2)	12(1.2)	1035(100 0)
AGE	15-29	444(59 9)	195(26.3)	94(12.7)	8(1.1)	741(100.0)
	30-44	154(71 3)	40(18 5)	21(9.7)	1(0.5)	216(100.0)
	45+	45(58.4)	18(23.4)	11(14 3)	3(3.9)	77(100.0)
	Total	643(62 2)	253(24.4)	126(12 2)	12(1 2)	1034(100 0)
EDUCATION	Informal Education	20(66.7)	6(20)	4(13.3)	0	30(100.0)
	Below SSLC	87(64 4)	29(21.5)	16(11.9)	3(2 2)	135(100.0)
	SSLC	395(62.0)	169(26 5)	68(10 7)	5(0 8)	637(100.0)
	Degree & Above	119(62 0)	38(19.8)	31(16.1)	4(2.1)	192(100 0)
	Technical Education	19(51 4)	11(29.7)	7(18.9)	0	37(100.0)
	Total	640(62 1)	253(24 5)	126(12 2)	12(1 2)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	92(69 2)	26(19 5)	13(9 8)	2(1 5)	133(100.0)
	Agricultural labourer	17(42 5)	11(27.5)	11(27.5)	1(2 5)	40(100.0)
	Factory worker	13(59 1)	3(13 6)	5(22.7)	1(4.6)	22(100.0)
	Farmer	23(54 8)	11(26 2)	8(19.0)	0	42(100.0)
	Business/petty trade	12(63 1)	6(31.6)	1(5 3)	0	19(100.0)
	Student	241(59 3)	112(27 5)	49(12.0)	5(1.2)	407(100.0)
	Housewife	68(81 9)	8(9.6)	6(7 3)	1(1 2)	83(100.0)
	Unemployed/pensioned	129(59 7)	60(27 8)	25(11 6)	2(0.9)	216(100 0)
	Others	49(69 1)	16(21.9)	8(11.0)	0	73(100.0)
	Total	644(62 2)	253(24 4)	126(12.2)	12(1.2)	1035(100.0)

Table 5: SOURCE OF WATER AND PRACTICE OF BOILING/FILLTERING WATER

Soures of water	Practice of boiling or filtering of water			
	Regularly	Occasionally	Never	Total
Well	456(63.1)	176(24.3)	91(12.6)	723(100.0)
Neighbour's well	87(62.6)	37(26.6)	15(10.8)	139(100.0)
Pond/Tank	18(66.7)	5(18.5)	4(14.8)	27(100.0)
River	9(60.0)	2(13.3)	4(26.7)	15(100.0)
Borewell	3(60.0)	2(40.0)	0	5(100.0)
Own tap	51(68.0)	18(24.0)	6(8.0)	75(100.0)
Common tap	19(51.4)	12(32.4)	6(16.2)	37(100.0)
TOTAL	643(63.0)	252(24.7)	126(12.3)	1021(100.0)

Table 6: PRACTICE REGARDING WASHING CLOTHES/CLEANING VESSELS

Characteristics	Washing clothes celaning vessels	Near the well	By the pond/ stream	Near the tap	Unstated	Total
SEX	Male	268(36.6)	337(46.0)	92(12.6)	35(4.8)	732(100.0)
	Female	86(28.4)	162(53.5)	42(13.8)	13(4.3)	303(100.0)
	Total	354(34.2)	499(48.2)	134(13.0)	48(4.6)	1035(100.0)
AGE	15-29	242(32.7)	369(49.8)	98(13.2)	32(4.3)	741(100.0)
	30-44	67(31.0)	112(51.8)	25(11.6)	12(5.6)	216(100.0)
	45+	45(58.4)	18(23.4)	11(14.3)	3(3.9)	77(100.0)
	Total	354(34.2)	499(48.3)	134(13.0)	47(4.5)	1034(100.0)
EDUCATION	Informal Education	20(66.7)	6(20.0)	4(13.3)	0	30(100.0)
	Below SSLC	87(64.4)	29(21.5)	16(11.9)	3(2.2)	135(100.0)
	SSLC	151(23.7)	373(58.6)	76(11.9)	37(5.8)	637(100.0)
	Degree & Above	77(40.1)	80(41.7)	31(16.1)	4(2.1)	192(100.0)
	Technical Education	19(51.4)	11(29.7)	7(18.9)	0	37(100.0)
	Total	354(34.3)	499(48.4)	134(13.0)	44(4.3)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	42(31.6)	76(57.1)	13(9.8)	2(1.5)	133(100.0)
	Agricultural labourer	17(42.5)	11(27.5)	11(27.5)	1(2.5)	40(100.0)
	Factory worker	13(59.2)	3(13.6)	5(22.7)	1(4.5)	22(100.0)
	Farmer	23(54.8)	11(26.2)	8(19.0)	0	42(100.0)
	Business/petty trade	12(63.1)	6(31.6)	1(5.3)	0	19(100.0)
	Student	112(27.5)	212(52.1)	49(12.0)	34(8.4)	407(100.0)
	Housewife	62(74.7)	14(16.9)	6(7.2)	1(1.2)	83(100.0)
	Unemployed/pensioned	29(13.4)	151(69.9)	33(15.3)	3(1.4)	216(100.0)
	Others	44(60.3)	15(20.5)	8(11.0)	6(8.2)	73(100.0)
	Total	354(34.2)	499(48.2)	134(13.0)	48(4.6)	1035(100.0)

Table 7: PRACTICE REGARDING CHLORINATION OF WELL

Characteristics	Chlorination of well	Yes	No	Unstated	Total
SEX	Male	367(50.1)	332(45.4)	33(4 5)	732(100.0)
	Female	193(63.7)	101(33.3)	9(3.0)	303(100.0)
	Total	560(54 1)	433(41.8)	42(4.1)	1035(100.0)
AGE	15-29	397(53.6)	321(43.3)	23(3.1)	741(100.0)
	30-44	122(56.5)	81(37 5)	13(6.0)	216(100.0)
	45+	40(51.9)	31(40.3)	6(7 8)	77(100.0)
	Total	559(54.1)	433(41.8)	42(4 1)	1034(100.0)
EDUCATION	Informal Education	18(60.0)	11(36.7)	1(3.3)	30(100.0)
	Below SSLC	84(62.2)	46(34 1)	5(3.7)	135(100.0)
	SSLC	341(53.6)	269(42.2)	27(4 2)	637(100.0)
	Degree & Above	97(50 5)	87(45.3)	8(4 2)	192(100 0)
	Technical Education	17(45 9)	20(54.1)	0	37(100.0)
	Total	557(54.0)	433(42.0)	41(4 0)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	72(54 1)	56(42.1)	5(3 8)	133(100.0)
	Agricultural labourer	14(35.0)	25(62.5)	1(2.5)	40(100.0)
	Factory worker	11(50.0)	8(36.4)	3(13.6)	22(100.0)
	Farmer	17(40.5)	23(54.7)	2(4.8)	42(100.0)
	Business/petty trade	12(63.2)	7(36.8)	0	19(100.0)
	Student	215(52.8)	179(44.0)	13(3 2)	407(100.0)
	Housewife	62(74.7)	19(22.9)	2(2.4)	83(100.0)
	Unemployed/pensioned	111(51.4)	98(45 4)	7(3.2)	216(100 0)
	Others	46(63.0)	18(24 7)	9(12.3)	73(100.0)
	Total	560(54 1)	433(41.8)	42(3.1)	1035(100.0)

Table 8: PRACTICE REGARDING DEFECATION

		Open Ground	By the river side	By the pond	Latrine	Unstated	Total
SEX	Male	142(19.4)	19(2.6)	3(0 4)	558(76 2)	10(1.4)	732(100.0)
	Female	58(19.1)	5(1 7)	2(0.7)	235(77.6)	3(1 0)	303(100.0)
	Total	200(19 3)	24(2.3)	5(0.5)	793(76.6)	13(1.3)	1035(100.0)
AGE	15-29	144(19.4)	13(1.8)	1(0 1)	574(77 5)	9(1 2)	741(100.0)
	30-44	47(21.8)	7(3.2)	1(0 5)	159(73 6)	2(0 9)	216(100.0)
	45+	9(11.7)	4(5.2)	3(3.9)	59(76.6)	2(2.6)	77(100.0)
	Total	200(19.3)	24(2.3)	5(0.5)	792(76 6)	13(1 3)	1034(100.0)
EDUCATION	Informal Education	10(33.3)	2(6.7)	0	18(60.0)	0	30(100 0)
	Below SSLC	25(18.5)	4(3.0)	0	104(77 1)	2(1.5)	135(100.0)
	SSLC	140(22.0)	11(1 7)	2(0.3)	476(74.7)	8(1.3)	637(100.0)
	Degree & Above	18(9.4)	6(3.1)	2(1.0)	163(84.9)	3(1 6)	192(100.0)
	Technical Education	5(13.5)	1(2.7)	1(2.7)	30(81.1)	0	37(100.0)
	Total	198(19.2)	24(2 3)	5(0.5)	791(76 7)	13(1.3)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank employee	18(13.5)	3(2.3)	1(0.8)	110(82.6)	1(0.8)	133(100.0)
	Agricultural labourer	11(27.5)	6(15.0)	1(2.5)	21(52.5)	1(2.5)	40(100.0)
	Factory worker	7(31.8)	0	0	14(63.7)	1(4.5)	22(100.0)
	Farmer	9(21.4)	1(2.4)	0	32(76.2)	0	42(100.0)
	Business/petty trade	4(21.0)	1(5.3)	0	14(73.7)	0	19(100.0)
	Student	74(18 2)	8(2.0)	1(0.2)	318(78.1)	6(1.5)	407(100.0)
	Housewife	15(18.1)	4(4.8)	0	64(77 1)	0	83(100.0)
	Unemployed/pensioned	52(24.1)	1(0.5)	2(0.9)	157(72.6)	4(1.9)	216(100.0)
	Others	10(13.7)	0	0	63(86.3)	0	73(100.0)
	Total	200(19.3)	24(2.3)	5(0.5)	793(76.6)	13(1 3)	1035(100.0)

Table 9: COMPATIBILITY BETWEEN PRACTICE OF CHLORINATING WELL AND KNOWLEDGE ON WATER - BORNE DISEASES

Characteristics	Knowledge vs practic	correct knowledge vs correct practice	correct knowledge vs wrong practice	wrong knowledge vs correct practice	worng knowledge vs Wrong practice	Total
SEX	Male	233(32.0)	236(32.4)	88(12.1)	171(23.5)	728(100.0)
	Female	142(46.9)	81(26.7)	14(4.6)	66(21.8)	303(100.0)
	Total	375(36 4)	317(30.8)	102(9.9)	237(22 9)	1031(100.0)
AGE	15-29	268(36.3)	229(31.1)	68(9.2)	173(23.4)	738(100.0)
	30-44	76(35.2)	66(30.6)	29(13.4)	45(20.8)	216(100.0)
	45+	31(40 3)	22(28.6)	5(6.5)	19(24 6)	77(100.0)
	Total	375(36.4)	317(30.7)	102(9.9)	237(23.0)	1031(100.0)
EDUCATION	Informal Education	8(26.7)	7(23.3)	0	15(50.0)	30(100.0)
	Below SSLC	58(43.0)	34(25.1)	11(8.2)	32(23.7)	135(100.0)
	SSLC	235(36.9)	208(32.7)	62(9.7)	132(20.7)	637(100 0)
	Degree & Above	60(31 3)	56(29.2)	27(14.1)	49(25.4)	192(100.0)
	Technical Education	14(37.8)	12(32.5)	2(5.4)	9(24 3)	37(100.0)
	Total	375(36.4)	317(30.7)	102(9 9)	237(23.0)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	45(33 8)	43(32.4)	16(12.0)	29(21.8)	133(100.0)
	Agricultural labourer	7(17.5)	16(40.0)	3(7 5)	14(35 0)	40(100.0)
	Factory worker	3(13.6)	3(13.6)	2(9.1)	14(63.7)	22(100.0)
	Farmer	12(28.6)	14(33.3)	3(7.1)	13(31.0)	42(100.0)
	Business/petty trade	4(21.1)	3(15.7)	4(21.1)	8(42.1)	19(100.0)
	Student	153(37 6)	142(34.9)	34(8.4)	78(19.1)	407(100.0)
	Housewife	50(60 2)	15(18 1)	4(4.8)	14(16.9)	83(100.0)
	Unemployed/pensioned	70(32.4)	68(31.5)	25(11 6)	53(24.5)	216(100.0)
	Others	31(44.9)	13(18.8)	11(15.9)	14(20.4)	69(100.0)
	Total	375(36.4)	317(30.7)	102(9 9)	237(23.0)	1031(100.0)

Table 10: COMPATIBILITY BETWEEN PRACTICE OF DEFECATION AND KNOWLEDGE ON PREVENTION OF WATER-BORNE DISEASES

Characteristics	Knowledge vs practices	correct knowledge vs correct practice	correct knowledge vs wrong practice	wrong knowledge vs correct practice	wrong knowledge vs wrong practice	Total
SEX	Male	534(73.4)	165(22.7)	5(0.7)	24(3.3)	728(100.0)
	Female	224(73.9)	59(19.5)	3(1.0)	17(5.6)	303(100.0)
	Total	758(73.5)	224(21.7)	8(0.8)	41(4 0)	1031(100.0)
AGE	15-29	550(74.6)	159(21.5)	4(0.5)	25(3.4)	738(100.0)
	30-44	154(71.3)	52(24 1)	3(1.4)	7(3.2)	216(100.0)
	45+	54(70.1)	13(16.9)	1(1.3)	9(11.7)	77(100.0)
	Total	758(73.5)	224(21.7)	8(0.8)	41(4.0)	1031(100.0)
EDUCATION	Informal Education	17(56 7)	9(30 0)	0	4(13.3)	30(100.0)
	Below SSLC	98(72.6)	25(18.5)	3(2.2)	9(6 7)	135(100.0)
	SSLC	456(71.6)	156(24.5)	3(0.5)	22(3 4)	637(100.0)
	Degree & Above	157(81.8)	27(14.1)	2(1 0)	6(3.1)	192(100.0)
	Technical Education	30(81.1)	7(18.9)	0	0	37(100.0)
	Total	758(73.5)	224(21.7)	8(0.8)	41(4 0)	1031(100.0)
OCCUPATION	Govt./Q Govt./Bank employee	105(78.9)	21(15.8)	1(0.8)	6(4 5)	133(100.0)
	Agricultaral labourer	20(50.0)	15(37.5)	1(2.5)	4(10.0)	40(100.0)
	Factoryworker	14(63.6)	5(22.7)	0	3(13.7)	22(100.0)
	Farmer	31(73.8)	10(23.8)	0	1(2.4)	42(100.0)
	Business/petty trade	14(73.7)	5(26.3)	0	0	19(100.00
	Student	304(74.7)	86(21.1)	1(0.3)	16(3.9)	407(100 0)
	Housewife	62(74.7)	16(19.3)	2(2.4)	3(3.6)	83(100 0)
	Unemployed/pensioned	150(69 4)	58(26.9)	1(0 5)	7(3.2)	216(100.0)
	Others	58(84 0)	8(11 6)	2(2.9)	1(1 5)	69(100 00
	Total	758(73.5)	224(21.7)	8(0.8)	41(4.0)	1031(100.0)

IV. SUMMARY OF FINDINGS

1) A typical respondent, to the mailed questionnaire used to find out the pre-programme awareness of people in water and sanitation activities, was a male in the age group of 15-29, inhabiting in rural areas, reasonably educated, ie, atleast SSLC & above and a student or unemployed person.

2). The respondents were better equipped with knowledge/awareness about the ideal water related habits, than they were equipped/prepared to put that knowledge into practice. There exist no difference in the average knowledge/practice levels among people of various socio-economic backgrounds. However, in the working class classification, 'farmers' and 'factory workers' have shown a lower total score than the other categories. The gap between practice and knowledge was found to be stronger in the case of farmers than factory workers. While the housewives knowledge level was on par with the rest of the categories, she was found to be a more ideal practitioner of the correct practices in water and sanitation related activities.

3). Majority of the respondents (94.6%) have recognised that boiling/filtering of water is a necessary precaution against water-borne diseases.

4). Nearly 70% of the respondents were fully aware of the methods of water poliution and contamination.

5). More than 67% of the respondents were fully aware about the different water-borne diseases. Relatively more female respondents (83.5%) know that polio is a water borne disease than 68.6% of males.

6). There seemed to be very clear awareness (96%) among people about the correct methods for preventing water-borne diseases.

7). Majority of the listeners have identified correctly the various vector borne diseases.

8). Disposal of stagnant water figured as a more crucial method for eradication of mosquitoes (77%) than periodic emptying of storage vessels (48%).

9). The young and educated were more aware of the fact that effective disposal of waste water and garbage ensured protected water.

10). Slightly more than 60% people claimed that they boiled/filtered water before use. However, nearly 25% of the respondents boiled water only if it had to be given to patients.

11). Slightly more than 1/10th (13%) of the sample had access to tap water facilities.

12). More than half of the respondents (54%) resorted to chlorination of wells as a precautionary step against water-borne diseases.

13). Surprisingly, in comparison with all Kerala figures, a good majority (77%) of the respondents claimed to have latrine facilities for defecation. Such a high prevalance rate was however, not available for lower educational groups, agricultural labourers and factory workers.

14). Many people who know that washing clothes near by the well leads to contamination of water and is a probable cause of origin of water-borne diseases adopted the same practice neglecting its draw backs.

15). One-fourth of the sample despite knowing that chlorination of water sources is an effective preventive measure against water pollution, never adopted such practices.

16). Knowledge about water-borne diseases did not encourage more than 30% of the sample to adopt chlorination of well as a hygienic measure to check water-borne diseases.

17). More than 1/5th (21.7%) respondents, who despite knowing that open defecation will cause diseases, practiced the same, probably because of lack of alternatives.

V. OPINIONS AND SUGGESTIONS ON JEEVADHARA

In this section an attempt has been made to examine how the listeners perceived the Jeevadhara broadcast in general. Listener's responses towards the content/timing/quality and presentation of the radio broadcast were analysed. Due attention was given to the valuable opinions and suggestions of the listeners towards this programme.

Sources of Radio Listening

Through the survey it has been revealed that nearly 85% of the respondents owned their own radio sets. Nearly 1/10th (9.%) of the respondents depended on their neighbours radio for listening the Jeevadhara broadcast (See Table No.11). The pattern did not alter significantly across the disaggregated categories. However, across the working class classification, there did not seem to be as many factory workers owning their own radio sets, as other classifed groups. Regarding the number of broadcasts listened, roughly 42% had listened to 6-10 of the programmes, while 36% of them had listened to 11 and more of the broadcasts.

Language of broadcast

More than 90% of the listeners stated that the language of the broadcast was easy to comprehend. Not much variation was noticed among the various categories of people in this respect. In other words, the respondents in general appreciated the simplicity of the language of the programme (See Table No.12).

Timing of broadcast

Regarding the timing of the broadcast, 53.5% of the listeners agreed that the timing of the broadcast was convenient. Female listeners (68.3%) found the timing of the broadcast very convenient. However, only 47.4% of the male listeners expressed that the timing of the broadcast was convenient. (SeeTable No.13) The timing of the programme was relatively more convenient for the middle aged and aged people than the younger ones. Less educated people appreciated the timing of the programme than highly educated respondents. Similarly among the working class category not much uniformity was observed about the timing of the programme. While the farmers in general found the timing of the programme inconvenient, majority of the housewives have favourable attitude towards the timing of the broadcast. Thus a varying response was noticed among people of differing socio-economic status.

Form of broadcast

Documentaries/plays were the form of broadcast which appealed most by the respondents. Nearly 60% of the respondents favoured this form of broadcast. Female listeners appreciated this form of broadcast greatly than males (64.5%) and 58.% respectively). But an opposite trend was noticed among males and females in preferring discussions. In the age-wise classification, it was found that more younger people preferred documentaries/plays largely than other categories. Even though more than half of the highly educated people (degree & above) also thought that documentaries were better than any other form of broadcast (compared with other categories, their percentage was low). Among the working class classification less than half of the farmers preferred documentaries. More than 25% of the farmers favoured question-answer form of broadcast where as 21.4% of them preferred discussions (See Table No.14). Quiz programmes figured as the least preferred form of broadcast among all categories and this was particularly true among agricultural labourers.

Contents of broadcast

Regarding the contents of information in the broadcasts more than 80% of the respondents thought that every programme contained with sufficient information. Not much variation was found among different categories of poeple in this respect (See Table No.15). However, nearly 25% of the people who were above 45 years old complained that the content of the Jeevadhara broadcast was insufficient or incomprehensible.

Opinion of listeners

There was an overwhelming 95% of respondents expressed that the programme was useful on the practical aspects (See Table No.16). The pattern amongst the categories was almost similar.

Frequency of discussion

Regarding the frequency of discussing the topics of the broadcast with others, 48% of the respondents revealed that they regularly discussed the issues. While 40% of the respondents discussed the topics of the broadcast occasionally with their neighbours or friends; 11% of the respondents never discussed the topics after listening the programmes. A detailed analysis showed that (See Table No.17), majority of women (mainly housewives) than men discussed the issues of the broadcast more regularly with other people. Younger people (15-29 age group) and better educated people seemed to have less interest in discussing the issues with others.

Summary of Findings

1) A good majority (85%) of the respondents owned their own radio sets.

2) Most of the respondents (90%) found the language of the programme easy to comprehend.

3) Only slightly more than half of the listeners found the timing of the broadcast convenient.

4) Forty eight per cent (48%) of the respondents discussed the contents of the programme regularly with their neighbours and friends.

5) Documentaries/plays were the most appealed form of broadcast to the respondents (60%).

6) More than 80% of the respondents were of the opinion that every programme in the Jeevadhara series contained sufficient information on various issues connected with water and sanitation.

7) Nearly 95% of the respondents regarded the Jeevadhara broadcast as very useful and informative while considering the practical implications of it.

Suggestions of Listeners.

An examination of the suggestions of listeners to improve the jeevadhara broadcast revealed that many people expressed the type of action that has to be taken for this purpose. Out of the total respondents 229 people suggested to change the time of broadcast for enabling more people to listen the broadcast. This was expressed by a greater proportion of men (88.8%) than women (12.2%). The jeevadhara programmes were broadcasted at 6.50 p.m. and usually men does not reach home after their work by this time. More young

(74.7%) and reasonably educated (93%) respondents were also expressed this opinion. Many students also proposed to change the timing of broadcast. Probably this was due to the fact that the Jeevadhara broadcast time and the study time of students were the same. Many people were of the opinion that the ideal time for the broadcast was 7.30 p.m.

Another important suggestion of the listeners was to increase the time of jeevadhara series. Among the total respondents who have this opinion about 67.2% were males. More respondents (89.7%) who have an educational status SSLC and above also supported this suggestion.

Some respondents thought that use of other agencies of mass communication like TV, films, newspaper etc may increase the awareness of people in water and sanitation related activities.

Among the listeners 83.3% of younger age groups, 92.6% of educated and 90.7% of males expressed that more publicity should be given through radio and other media while launching similar health education programmes for motivating more people to listen this type of broadcast. The suggestion of the listners according to their sex, age, education and occupation has been classified and presented in the Table 18.

Table 11: SOURCE OF RADIO LISTENING

Characteristics	Source	Own Radio	Neighbour's Radio	Radio in the library	Radio in the park	Unstated	Total
SEX	Male	611(83.5)	66(9.0)	28(3.8)	18(2.5)	9(1.2)	732(100 0)
	Female	265(87.4)	32(10.5)	2(0.7)	2(0.7)	2(0.7)	303(100.0)
	Total	876(84.6)	98(9 5)	30(2.9)	20(1.9)	11(1.1)	1035(100 0)
AGE	15-29	631(85.2)	68(9 2)	24(3 2)	11(1.5)	7(0.9)	741(100.0)
	30-44	175(81.0)	25(11 6)	5(2.3)	9(4.2)	2(0.9)	216(100.0)
	45+	69(89.6)	5(6.5)	1(1.3)	0	2(2.6)	77(100.0)
	Total	875(84 6)	98(9.5)	30(2.9)	20(1.9)	11(1 1)	1034(100.0)
EDUCATION	Informal Education	27(90.0)	2(6 7)	1(3.3)	0	0	30(100.0)
	Below SSLC	106(78.4)	21(15.6)	2(1 5)	4(3.0)	2(1.5)	135(100.0)
	SSLC	536(84.1)	64(10.1)	19(3.0)	12(1.9)	6(0.9)	637(100.0)
	Degree & Above	173(90.1)	8(4 2)	6(3.1)	2(1.0)	3(1 6)	192(100.0)
	Technical Education	30(81.1)	3(8 1)	2(5.4)	2(5.4)	0	37(100.0)
	Total	872(84 6)	98(9.5)	30(2.9)	20(1.9)	11(1.1)	1031(100 0)
OCCUPATION	Govt./Q.Govt/Bank Employee	116(87.2)	8(6.0)	4(3.0)	3(2.3)	2(1 5)	133(100.0)
	Agricultural labourer	30(75.0)	5(12.5)	1(2.5)	3(7.5)	1(2.5)	40(100.0)
	Factory worker	18(81.8)	3(13.6)	0	0	1(4 6)	22(100.0)
	Farmer	39(92.8)	2(4.8)	1(2.4)	0	0	42(100.0)
	Business/petty trade	12(63.1)	6(31.6)	0	1(5.3)	0	19(100.0)
	Student	356(87.4)	30(7 4)	10(2 5)	6)1.5)	5(1.2)	407(100 0)
	Housewife	72(86.7)	10(12.1)	0	0(1.2)	0	83(100.0)
	Unemployed/pensioned	178(82 4)	24(11.1)	9(4.2)	3(1.4)	2(0.9)	216(100.0)
	Others	55(75.3)	10(13.7)	5(6 9)	3(4.1)	0	73(100.0)
	Total	876(84.6)	98(9.5)	30(2.9)	20(1.9)	11(1 1)	1035(100.0)

Table 12: LANGUAGE OF JEEVADHARA BROADCAST

Opinion / Characteristics		Yes	No	No opinion	Unstated	Total
SEX	Male	664(90 7)	23(3.2)	36(4.9)	9(1.2)	732(100.0)
	Female	278(91.7)	13(4.3)	10(3.3)	2(0.7)	303(100.0)
	Total	942(91 0)	36(3.5)	46(4.4)	11(1.1)	1035(100.0)
AGE	15-29	674(91.0)	24(3 2)	36(4.9)	7(0.9)	741(100.0)
	30-44	197(91 2)	11(5.1)	7(3.2)	1(0.5)	216(100.0)
	45+	70(90.9)	1(1.3)	3(3.9)	3(3.9)	77(100.0)
	Total	941(91.0)	36(3.5)	46(4.4)	11(1.1)	1034(100.0)
EDUCATION	Informal Education	28(93.3)	1(3.3)	1(3.3)	0	30(100 0)
	Below SSLC	121(89.6)	4(3.0)	8(5.9)	2(1.5)	135(100.0)
	SSLC	583(91.6)	20(3.1)	28(4 4)	6(0.9)	637(100.0)
	Degree & Above	171(89.1)	10(5.2)	9(4 7)	2(1.0)	192(100.0)
	Technical Education	35(94.6)	1(2.7)	0	1(2.7)	37(100.0)
	Total	938(90.9)	36(3.5)	46(4.5)	11(1.1)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank employee	125(94 0)	3(2 3)	4(3.0)	1(0.8)	133(100.0)
	Agricultural labourer	34(85.0)	2(5.0)	3(7.5)	1(2 5)	40(100.0)
	Factory worker	19(86.4)	2(9.1)	0	1(4.5)	22(100.0)
	Farmer	37(88 1)	4(9.5)	1(2.4)	0	42(100.0)
	Business/petty trade	17(89.4)	1(5.3)	1(5.3)	0	19(100.0)
	Student	377(92.6)	11(2.7)	17(4.2)	2(0.5)	407(100.0)
	Housewife	75(90.4)	5(6.0)	3(3.6)	0	33(100.0)
	Unemployed/pensioned	196(90.7)	6(2.8)	12(5.6)	2(0.9)	216(100.0)
	Others	62(84.9)	2(2 7)	5(6.9)	4(5.5)	73(100.0)
	Total	942(91.0)	36(3.5)	46(4.4)	11(1.1)	1035(100.0)

Table 13: CONVENIENCE OF TIMING OF THE BROADCAST

Timing Characteristics		Convenient	Inconvenient	No opinion	Unstated	Total
SEX	Male	347(47 4)	340(46.5)	20(2.7)	25(3 4)	732(100.0)
	Female	207(68.3)	83(27 4)	7(2 3)	6(2 0)	303(100.0)
	Total	554(53.5)	423(40.9)	27(2.6)	31(3.0)	1035(100.0)
AGE	15-29	380(51.3)	321(43.3)	19(2.6)	21(2.8)	741(100.0)
	30-44`	127(58.8)	76(35.2)	6(2.8)	7(3.2)	216(100.0)
	45+	46(59 7)	26(33.8)	2(2 6)	3(3.9)	77(100.0)
	Total	553(53.5)	423(40.9)	27(2.6)	31(3.0)	1034(100.0)
EDUCATION	Informal Education	19(63 3)	11(36.7)	0	0	30(100 0)
	Below SSLC	86(63 7)	38(28 2)	5(3.7)	6(4.4)	135(100 0)
	SSLC	337(52.9)	266(41.8)	13(2.0)	21(3.3)	637(100.0)
	Degree & Above	90(46.9)	91(47 4)	7(3.6)	4(2.1)	192(100.0)
	Technical Education	19(51.4)	16(43 2)	2(5.4)	0	37(100.0)
	Total	551(53.5)	422(40 9)	27(2 6)	31(3.0)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank employee	70(52.6)	57(42 9)	4(3.0)	2(1.5)	133(100.0)
	Agricultural Labourer	24(60.0)	12(30.0)	1(2.5)	3(7 5)	40(100.0)
	Factoryworker	12(54.5)	8(36.4)	0	2(9.1)	22(100.0)
	Business/pettytrade	10(52 6)	8(42.1)	1(5.3)	0	19(100.0)
	Student	219(53.8)	167(41.0)	8(2 0)	13(3.2)	407(100.0)
	Housewife	57(68.7)	23(27 7)	1(1 2)	2(2.4)	83(100.0)
	Farmer	18(42 9)	20(47.6)	3(7.1)	1(2.4)	42(100.0)
	Unemployed/pensioned	112(51.8)	100(46.3)	4(1.9)	0	216(100.0)
	Others	32(43.8)	28(38.4)	5(6 8)	8(11.0)	73(100.0)
	Total	554(53.5)	423(40.9)	27(2.6)	31(3.0)	1035(100.0)

Table 14: FORM OF BOARDCAST THAT APPEALED THE MOST

Characteristics	Form of Broadcast	Documentary	Question answers	Discussion	Quiz	Unstated	Total
SEX	Male	424(57 9)	112(15.3)	130(17.8)	55(7 5)	11(1.5)	732(100.0)
	Female	195(64 4)	47(15.5)	27(8.9)	33(10.9)	1(0.3)	303(100.0)
	Total	619(59.7)	159(15.4)	157(15.2)	88(8.5)	12(1.2)	1035(100.0)
AGE	15-29	447(60.3)	112(15.1)	109(14 7)	65(8.8)	8(1 1)	741(100.0)
	30-44	126(58.3)	33(15 3)	37(17.1)	18(8.3)	2(1.0)	216(100.0)
	45+	45(58 4)	14(18.2)	11(14 3)	5(6 5)	2(2.6)	77(100.0)
	Total	618(59.7)	159(15.4)	157(15.2)	88(8.5)	12(1.2)	1034(100.0)
EDUCATION	Informal Education	17(56.7)	6(20.0)	4(13.3)	1(3.3)	2(6.7)	30(100.0)
	Below SSLC	89(65 9)	24(17.8)	16(11.9)	6(4.4)	0	135(100.0)
	SSLC	387(60.7)	98(15.4)	89(14.0)	61(9.6)	2(0.3)	637(100.0)
	Degree & Above	103(53.6)	27(14.1)	38(19.8)	16(8 3)	8(4.2)	192(100.0)
	Technical Education	20(54 1)	4(10.8)	9(24.3)	4(10.8)	0	37(100.0)
	Total	616(59.8)	159(15.4)	156(15.1)	88(8.5)	12(1 2)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank employee	91(68.4)	13(9.8)	16(12.0)	10(7.5)	3(2.3)	133(100.0)
	Agricultural labourer	25(62.5)	10(25.0)	4(10.0)	0	1(2.5)	40(100.0)
	Factory worker	13(59.0)	4(18.2)	3(13.6)	1(4 6)	1(4 6)	22(100.0)
	Farmer	19(45.3)	11(26.2)	9(24.1)	3(7.1)	0	42(100.0)
	Business/petty trade	12(63.2)	2(10 5)	2(10.5)	3(15.8)	0	19(100.0)
	Student	250(61 4)	53(13.0)	60(14.7)	43(10.6)	1(0.3)	407(100.0)
	Housewife	53(63.9)	15(18.1)	7(8.4)	8(9.6)	0	83(100.0)
	Unemployed/pensioned	118(54.6)	35(16.3)	42(19.4)	19(8.8)	2(0.9)	216(100.0)
	Others	38(52.0)	16(21 9)	14(19.2)	1(1.4)	4)5.5)	73(100 0)
	Total	619(59.7)	159(15.4)	157(15.2)	88(8.5)	12(1 2)	1035(100.0)

Table 15: SUFFICIENCY OF INFORMATION IN THE BROADCAST

Characteristics	Information	Sufficient	Insufficient	No opinion	Unstated	Total
SEX	Male	586(80.1)	87(11 9)	38(5.2)	21(2.8)	732(100.0)
	Female	251(82.8)	34(11.3)	11(3.6)	7(2.3)	303(100.0)
	Total	837(80.9)	121(11.7)	49(4.7)	28(2.7)	1035(100.0)
AGE	15-29	599(80.8)	82(11.1)	39(5.3)	21(2.8)	741(100.0)
	30-44	183(84 7)	24(11.1)	6(2.8)	3(1.4)	216(100.0)
	45+	54(70.1)	15(19.5)	4(5.2)	4(5 2)	77(100.0)
	Total	836(80.9)	121(11.7)	49(4.7)	28(2.7)	1034(100.)
EDUCATION	Informal Education	23(76.7)	5(16.7)	1(3.3)	1(3 3)	30(100.0)
	Below SSLC	120(88.9)	8(5 9)	5(3 7)	2(1 5)	135(100.0)
	SSLC	512(80.4)	78(12.2)	28(4.4)	19(3 0)	637(100 0)
	Degree & Above	146(76.0)	25(13.1)	15(7 8)	6(3.1)	192(100.0)
	Technical Education	33(89.2)	4(10.8)	0	0	37(100.0)
	Total	834(80.9)	120(11.6)	49(4.8)	28(2.7)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	110(82.7)	16(12 0)	2(1.5)	5(3.8)	133(100.0)
	Agricultural labourer	34(85.0)	2(5.0)	3(7 5)	1(2.5)	40(100.0)
	Factory worker	16(72.7)	3(13.6)	1(4 6)	2(9.1)	22(100.0)
	Farmer	31(73.8)	8(19.1)	3(7.1)	0	42(100.0)
	Business/petty trade	18(94 7)	0	1(5.3)	0	19(100.0)
	Student	329(80.8)	45(11.1)	23(5.7)	10(2.4)	407(100.0)
	Housewife	73(88.0)	6(7.2)	3(3.6)	1(1 2)	83(100.0)
	Unemployed/pensioned	174(80.6)	27(12.5)	11(5 1)	4(1.8)	216(100.0)
	Others	52(71 2)	14(19 2)	2(2.7)	5(6.9)	73(100.0)
	Total	837(80.9)	121(11.7)	49(4.7)	28(2 7)	1035(100.0)

Table 16: OPINION OF LISTENERS ABOUT THE USEFULNESS OF THE PROGRAMME ON THE PRACTICAL BASIS

Characteristics	Opinion	Useful	Not useful	Unstated	Total
SEX	Male	691(94 4)	31(4.2)	10(1.4)	732(100.0)
	Female	289(98.4)	11(3.6)	3(2.0)	303(100.0)
	Total	980(94.7)	42(4 1)	13(1.2)	1035(100.0)
AGE	15-29	706(95.3)	27(3.6)	8(1 1)	741(100.0)
	30-44	203(94 0)	11(5 1)	2(0.9)	216(100.0)
	45+	70(90.9)	4(5.2)	3(3.9)	77(100.0)
	Total	979(94.6)	42(4.1)	13(1.3)	1035(100.0)
EDUCATION	Informal Education	29(96 7)	1(3.3)	0	30(100.0)
	Below SSLC	130(96 3)	3(2.2)	2(1.5)	135(100 0)
	SSLC	603(94.7)	26(4.1)	8(1.2)	637(100.0)
	Degree & Above	179(93 2)	10(5.2)	3(1.6)	192(100.0)
	Technical Education	35(94 6)	2(5.4)	0	37(100.0)
	Total	976(94.7)	42(4.1)	13(1.2)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank Employee	128(96.2)	3(2.3)	2(1 5)	133(100.0)
	Agricultural labourer	37(92.5)	2(5.0)	1(2.5)	40(100.0)
	Factory worker	19(86.4)	1(4.6)	2(9.0)	22(100.0)
	Farmer	37(88.1)	5(11.9)	0	42(100.0)
	Business/petty trade	19(100.0)	0	0	19(100.0)
	Student	391(96.1)	11(2 7)	5(1.2)	407(100.0)
	Housewife	79(95 2)	4(4.8)	0	83(100.0)
	Unemployed/pensioned	201(93.0)	12(5.6)	3(1.4)	216(100.0)
	Others	69(94 5)	4(5 5)	0	73(100.0)
	Total	980(94.7)	42(4.1)	13(1.2)	1035(100.0)

Table 17: FREQUENCY OF DISCUSSION OF THE TOPICS OF THE BROADCAST

Characteristics	Frequency	Regularly	Occasionally	Never	Unstated	Total
SEX	Male	316(48.2)	315(43.0)	90(12.3)	11(1.5)	732(100.0)
	Female	176(58.1)	101(33.3)	23(7.6)	3(1.0)	303(100.0)
	Total	492(47.5)	416(40.2)	113(10.9)	14(1.4)	1035(100.0)
AGE	15-29	317(42.8)	324(48.7)	92(12.4)	8(1.1)	741(100.0)
	30-44	131(60.7)	67(31.0)	16(7.4)	2(0.9)	216(100.0)
	45+	44(57.1)	24(31.2)	5(6.5)	4(5.2)	77(100.0)
	Total	492(47.6)	415(40.1)	113(10.9)	14(1.4)	1034(100.0)
EDUCATION	Informal Education	17(56.7)	10(33.3)	3(10 0)	0	30(100.0)
	Below SSLC	72(53.3)	45(33.3)	15(11.1)	3(2.2)	135(100.0)
	SSLC	294(46 2)	260(40.8)	74(11.6)	9(1.4)	637(100.0)
	Degree & Above	89(46.4)	83(43.2)	18(9.4)	2(1.0)	192(100.0)
	Technical Education	20(54.1)	14(37.8)	3(8.1)	0	37(100.0)
	Total	492(47 7)	412(40 0)	113(10.9)	14(1.4)	1031(100.0)
OCCUPATION	Govt/Q.Govt/Bank employee	73(54.9)	46(34 .6)	13(9.7)	1(0.8)	133(100.0)
	Agricultural labourer	22(55.0)	12(30.0)	5(12.5)	1(2.5)	40(100.0)
	Factory worker	12(54.6)	7(31.8)	2(9.1)	1(4.5)	22(100.0)
	Farmer	17(40.5)	16(38.1)	7(16.7)	2(4.7)	42(100.0)
	Business/petty trade	12(63.2)	5(26.3)	2(10.5)	0	19(100.0)
	Student	166(40.8)	191(46.9)	48(11.8)	2(0 5)	407(100.0)
	Housewife	56(67.5)	22(26.5)	5(6.0)	0	83(100.0)
	Unemployed/pensioned	103(47.7)	89(41.2)	22(10.2)	2(0.9)	216(100.0)
	Others	31(42.5)	28(38.4)	9(12.3)	5(6.8)	73(100.00
	Total	492(47.6)	416(40.1)	113(10.9)	14(1.4)	1035(100.0)

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Table No. 18 SUGGESTIONS OF THE LISTENERS

Suggestions/Opinions	SEX		AGE			EDUCATION		OCCUPATION								TOTAL
	Male	Female	15 - 19	30 - 44	45+	Below SSLC	SSLC & above	Govt/Q.Govt/ Bank employee	Agricultural Labourer	Factory worker	Student	Business	Unemployed/ Pensioned	House Wife	Others	
Change the time of broadcast	201(87.8)	28(12 2)	171(74.7)	47(20 5)	11(4.8)	16(7.0)	213(93.0)	30(13.1)	18(7.9)	4(1.7)	88(38.4)	2(0 9)	61(26.6)	10(4.4)	16(7.0)	229(100.0)
Increase the time of Jeevadhara	98(67.1)	48(32.9)	114(78.1)	25(17.1)	7(4 8)	18(12 3)	128(87.7)	9(6.2)	8(5.5)	2(1.4)	77(52.7)	1(0 7)	31(21.2)	13(8.9)	5(3 4)	146(100.0)
Language of the Programme should be some more simple, interesting and appealing and avoid English words as far as possible	75(81.5)	17(18.5)	70(76.1)	12(13 0)	10(10.9)	9(9.8)	83.(90.2)	10(10 9)	8(8.7)	2(2.2)	42(45 6)	0	23(25.0)	5(5.4)	2(2 2)	92(100.0)
More time should be untilized for clearing the doubts of the listeners	48(75.0)	16(25.0)	45(70.3)	14(21.9)	5(7.8)	5(7 8)	59(92.2)	9(14.1)	2(3.1)	3(4.7)	32(50.0)	0	10(15.6)	6(9.4)	2(3.1)	64(100.0)
Listener's participation in the Jeevadhara Programme	34(82.9)	7(17 1)	31(75 6)	5(12 2)	5(12.2)	1(2 4)	40(97.6)	7(17.1)	1(2.4)	1(2.4)	18(43.9)	0	9(22.0)	1(2.4)	4(9.8)	41(100.0)
More publicity should be given to this programme	49(90.7)	5(9.3)	45(83 3)	8(14.8)	1(1 9)	4(7.4)	50(92.6)	10(18.5)	2(3.7)	1(1 8)	20(37.0)	0	17(31 5)	3(5.6)	1(1.9)	54(100.0)
Retelecast of the same programmes	36(78.3)	10(21.7)	28(60 9)	15(32.6)	3(6 5)	6(13.0)	40(87.0)	13(28 3)	0	3(6.5)	12(26.1)	1(2.2)	9(19.5)	5(10 9)	3(6.5)	46(100.0)
Suggestions for further topics	72(80.0)	18(20.0)	57(63 3)	24(26 7)	9(10.0)	12(13.3)	78(86 7)	13(14 4)	9(10 0)	0	33(36 7)	1(1.1)	23(25 6)	4(4 4)	7(7.8)	90(100.0)
Opinion about the form of progress — More documentaries	90(72.0)	35(28.0)	95(76 0)	25(20.0)	5(4.0)	14(11.2)	111(88.8)	15(12 0)	10(8.0)	0	54(43.2)	2(1 6)	28(22.4)	8(6 4)	8(6.4)	125(100.0)
More discussions	23(65.7)	12(34.3)	29(82.9)	5(14.3)	1(2.8)	4(11.4)	31(88.6)	3(8.6)	2(5.7)	0	19(54.2)	0	5(14.3)	3(8.6)	3(8.6)	35(100.0)
More quiz programmes	24(60.0)	16(40.0)	28(70.0)	8(20.0)	4(10.0)	4(10 0)	36(90.0)	4(10.0)	5(12.5)	0	15(37.5)	0	9(22.5)	4(10.0)	3(7.5)	40(100.0)
Songs & poetries should also be included	17(70.8)	7(29.2)	15(62.5)	5(20 8)	4(16.7)	2(8.3)	22(91.7)	3(12.5)	0	1(4.2)	9(37.5)	0	6(25.0)	5(20.8)	0	24(100.0)
More questions answers	11(73.3)	4(26.7)	11(73.3)	0	4(26.7)	1(6.7)	14(93.3)	1(6.7)	3(20.0)	1(6.7)	5(33.3)	0	5(33.3)	0	0	15(100.0)
Others	4(66 7)	2(33.3)	3(50.0)	3(50.0)	0	0	6(100.0)	2(33.3)	1(16.7)	0	0	0	2(33.3)	1(16.7)	0	6(100.0)
Some more practical approach should be given to the programme	11(78.6)	3(21.4)	13(92.9)	0	1(7.1)	1(7.1)	13(92.0)	0	1(7.1)	0	9(64.4)	0	3(21.4)	1(7.1)	0	14 (100.0)
More programmes should be included in the Jeevadhara	15(53 6)	13(46.4)	16(57.1)	11(39.3)	1(3.6)	8(28.6)	20(71.4)	2(7 1)	2(7 1)	0	12(42.9)	2(7.1)	4(14.3)	5(17.9)	1(3 6)	28(100.0)

Make Jeevadhara a permanent programme through AIR	17(58.6)	12(41.4)	18(62.1)	11(37.9)	0	4(13.8)	25(86.2)	1(3.4)	2(6.9)	0	10(34.5)	0	11(38.0)	4(13.8)	1(3.4)	29(100.0)
Use other agencies of mass media like TV, Newspaper, Films etc. also	52(85.2)	9(14.8)	43(70.5)	12(19.7)	6(9.8)	5(8.2)	56(91.8)	13(21.3)	0	0	20(32.8)	2(3.3)	17(27.8)	2(3.3)	7(11.5)	61(100.0)
With the co-operation of voluntary agencies conduct action programmes in the rural areas	61(76.3)	19(23.7)	59(73.8)	19(23.7)	2(2.5)	12(15.0)	68(85.0)	5(6.2)	5(6.2)	2(2.5)	24(30.0)	4(5.0)	27(33.9)	5(6.2)	8(10 0)	80(100.0)
Pamphlets and other publications on water-borne diseases and environmental sanitation should be distributed among the public.	29(87.9)	4(12.1)	22(66.7)	5(15.1)	6(18.2)	8(24.2)	25(75.8)	7(21.2)	2(6.1)	0	11(33.3)	0	8(24.2)	0	5(15.2)	33(100 0)
Conduct discussions and seminars on Jeevandhara programme on panchayat and municipal levels	36(80 0)	9(20.0)	33(73.3)	10(22.3)	2(4.4)	6(13.3)	39(86.7)	4(8.9)	2(4.4)	1(2.2)	17(37.8)	0	12(26.7)	2(4.4)	7(15.6)	45(100.0)
Frequent utilisation of questionnaire for measuring the utility of the programme	3(60.0)	2(40.0)	4(80.0)	1(20 0)	0	1(20.0)	4(80.0)	0	0	0	3(60.0)	0	0	2(40.0)	0	5(100.0)
Jeevadhara Programme is very useful.	98(56.0)	77(44.0)	131(74.9)	38(21 7)	6(3.4)	35(20.0)	140(80.0)	16(9 1)	10(5.7)	0	84(48.0)	4(2.3)	27(15.5)	21(12.0)	13(7.4)	175(100.0)
Mode of living changed after listening Jeevadhara	10(47.6)	11(52.4)	16(76 2)	5(23.8)	0	5(23.8)	16(76 2)	1(4.7)	0	0	11(52.4)	0	5(23 8)	3(14.4)	1(4.7)	21(100.0)
Programmes are not useful	3(100.0)	0	3(100.0)	0	0	1(33.3)	2(66.7)	0	0	0	2(66.7)	0	0	0	1(33.3)	3(100 0)
Others	33(71 7)	13(28.3)	33(71 8)	7(15.2)	6(13 0)	15(32.6)	31(67.4)	7(15.2)	1(2 2)	2(4 4)	17(37 0)	1(2 2)	11(23.8)	6(13.0)	1(2.2)	46(100.0)
No opinion	31(60.8)	20(59.2)	39(76.6)	6(11.7)	6(11.7)	13(25.5)	38(74.5)	5(9.8)	4(7.8)	3(5.9)	24(47.1)	1(2.0)	6(11.7)	5(9.8)	3(5.9)	51(100.0)

VI. LISTENER'S RESPONSE
(Analysis of letters received at All India Radio)

On the whole 30 programmes were broadcasted through All India Radio, focussing on almost all aspects of water - its importance, source, treatment and distribution, water-borne and water related diseases, water pollution and environmental sanitation (which cover a vide ranging topics such as the relationship between man and environment, sewage treatment, sanitary latrines, rights and duties of a citizen in environmental protection). Excepting 4 programmes, 26 programmes were in the form of documentaries which was the most preferred and appreciated form of broadcast by the listeners. Three quiz programmes were also conducted by the concerned experts. At the end of every programme two questions were asked to the listeners for getting their feedback. A good number of the listeners reacted promptly. These answers were analysed in order to find out the effect of the programme among the listeners under the assumption that a correct response towards the queries may certainly widen the knowledge horizons of the listeners so that an identification of the message(s) was possible to them. Moreover, the knowledge gathered by the listeners after the broadcast of the programme was a positive indicator of the impact of the programme on them. Some of the repondents were able to give only partially correct answers and these too were measured. A partially correct answer indicated an incomplete answer which cover more than 50% of the correct answer. It revealed the partial awareness gained by the listeners through the programmes. Some of the listeners revealed their opinion about the programme and that too were tabulated. All the relevant doubts of the listeners were answered after every programme. The average number of doubts asked by the listeners after listening each and every programme were also analysed under the assumption that the doubts asked by the listeners indirectly measure their relative interest and their extent of listening because only to those who listen the programme carefully could raise their further doubts on that topic. For the purpose of this analysis, all the listeners were classified according to their sex.

Broadly, we can classify the programmes broadcasted through "Jeevadhara" into three categories. Those relating to:

(a) water, its importance, usage, protected water supply, treatment and distribution of water etc;.

(b) water-borne diseases - causes and prevention, and

(c) topics on environmental sanitation in relation to water related habits.

The analysis of the listners responses on the mentioned aspects are presented according to each of the programme.

A. TOPICS ON WATER

I. Drinking Water

The documentary on drinking water presented the peculiar characteristics of drinking water and ways of contamination of drinking water. An analysis of the listener's response towards this topic revealed that among the total respondents nearly 65% of them were males. Not much variation was noticed among male and female listeners in their response to the questions. Nearly 70% of the listeners were able to provide the correct answers for the questions. Slightly more than 25% of the respondents gave partially correct answers and incorrect answers were very few. Majority of the respondents considered this programme as very useful

and informative. Largely female listeners appreciated the programme than male listeners (96.6% and 81.4% respectively). Among the total respondents 76.7% of the listeners asked their further doubts on various aspects of drinking water. On an average 2.2% doubts were asked by the listeners on this topic. The above analysis shows that most of the listeners were able to identify the messages of the programme effectively.

2. Conservation and Protection of Water Sources.

Scarcity of water is a chronic problem in many places due to depletion of water sources. Conservation and protection of existing water source is an urgent necessity now-a-days. The purpose of the programme on "Conservation and protection of water sources" was to create awareness among people about the importance of protecting water sources and the need to avoid misuse and wastage of drinking water. Analysis of the listener's letters on this topic revealed that most of the listeners understood the messages of the programme correctly. 95% of the respondents considered that the programme was very informative and useful to them. A detailed analysis of the question-answers of the listeners showed that more male respondents (96.4%) identified the messages of the programme correctly than the females (94%) eventhough the difference was very slight. Like that more people provided the correct answers for the question relating to the necessity of protecting water sources than identifying the misuse and wastage of drinking water. The tendency was the same among the gender groups. A large number of (78.5%) people asked their doubts on this topic and the average number of doubts was 2.3 per person.

3. Treatment & distribution of Water

This broadcast series pointed out the impurities in our water sources, impact of water on our health and the various methods for the treatment of water. In total 329 letters were received from the listeners after the broadcast of this programme. In this nearly 60% of the respondents were males. Among the total listeners, about 95% answered the questions asked to them after the broadcast. Compared with other programmes, a considerably great number of people provided the correct answers for the questions. For the question on the necessity of purifying water more than 90% of the listeners answered correctly. However, for the enquiry about the most economic way for removing germs from water, a slight decrease was noticed. Even then, more than 85% of the listeners provided the correct answers. More female listeners (95%) than male listeners (93%) provided the absolutely correct answers for the necessity of purifying water while an opposite trend was found in identifying the correct answers for the most economic way for removing germs from the water (89% male and 83% female). In other words, in the theoritical aspects of water usage most of the females gained adequate knowledge while in the practical approach to the problem a slight gap was observed. This clearly brought out the importance of giving more emphasis on practical approach to the programmes. Among the people who revealed their opinion about the programme, all the female respondents considered this programme as very good and informative. Majority of the respondents (85.3% of males and 80.3% females) asked their pertinent doubts on the topic for further clarification. Thus it is very clear that the programme was very useful in extending the knowledge of the listeners on the treatment and distribution of water.

4. Tanks & Reservoirs (Wells & Ponds)

Most of our people, especially those living in rural areas, depend on wells, ponds and rivers for their day to day affairs. Since these are the most common sources of water in our rural areas, it was very important to make users aware of the need to keep them clean, safeguarding the water from contamination. Precautions for these and the importance of sanitary wells and other water reservoirs in promoting and preserving health should be impressed upon people in health education campaigns. However, the analysis of the listener's letters revealed that the programme does not yield as much results as expected. This may be due to the difficulty of understanding the topic. Majority of the listeners (63.2%) provided only partially correct answer for the question on protection of wells and ponds. However, incorrect answers were very few (2.4%). But for the question relating to testing of purity of water from wells and ponds, many people (36.3%) gave

incorrect answers. This may possibly be due to the gap between the content of the programme and questions asked to the listeners. While revealing their opinion about the programme 31.2% of the listners thought that the programme does not reach the expected standard. Large number of males than females pointed out this. However, it was hoped that while clarifying the doubts of listeners many of the limitations of the programme might have covered adequately.

5. Water Supply Schemes and the Consumers

This programme projected the misuse and wastage of drinking water and the responsibilities of water consumers for running a water supply scheme. A review of question - answers given by the listener's brought out the conclusion that through this programme majority of them noticed the huge amount of money spent by the concerned authorities for providing drinking water through water supply schemes. As intended by this education programme, most of the respondents gained adequate knowledge about the responsibilities of consumers in protecting water supply schemes as well as misuse, mishandling, etc.. Largely, female listeners (61%) identified the messages of the programme more accurately than male listeners (57%). A greater proportion of the listeners (92.4%) considered this broadcast as very interesting and informative. This was especially true in the case of women respondents. But 1/10th of the male listeners revealed their dissatisfaction about the standard of the programme. More than 78% of the respondents tried to express their further doubts on various aspects of water supply schemes. In this, many listeners asked about the place where they should complain about the misuse and wastage of piped water and malfunctioning, leakage or damage of public taps and so on. Some of the listeners were interested in knowing about the present practice of punishing people, while violating the existing norms regarding wastage and misuse of water through water supply schemes. Enough clarification was provided to these doubts. On the whole the programme was very informative and it may definitely enriched the knowledge of listeners and perhaps this may possibly change some of their earlier attitude/outlook towards the difficulties of running water supply schemes.

6. Water Decade

The programme on "Water Decade" narrated the purpose and action plans designed for satisfying the objectives of water decade in detail. The programme in general have a theoritical orientation and the responses of the listeners revealed a mixed picture about the awareness created by this programme (81.5% of males and 96% females) expressed that the programme was very informative and useful. Female listeners rank top in receiving adequate information about the purpose of water decade. On the whole the programme created some awareness among the people about the purpose and objectives of water decade. Forty eight per cent of male and 57% of female listeners provided the correct answers on the questions asked to them in connection with the broadcast.

7. Man and Ground Water

The programme on "Man and ground water" depicted the importance of ground water as the only source of water during drought seasons. The analysis of the listener's letters on this topic showed that even though most of the respondents considered the programme as very good and informative (98%) in answering the questions properly, many people experienced difficulty. Female listeners score high than their male counterparts. Half of the female listeners were able to provide the correct answers to the quaries (38% males and 51% females). However, in the case of male respondents more than half of them were able to provide only partially correct answers (60% males and 44% females). But the percentage of incorrect answers was very low in both cases.

8 . Water Pollution

Man made changes on the environment and the endless industrial pollution has damaged drinking water

sources. Water pollution is an important threat faced by the people. An attitudinal change among people in their existing behavioural practices and habits will facilitate a great extent to reduce this threat. Thus a programme on "water pollution" was presented in the Jeevadhara broadcast to educate people about the development of water pollution and the preventive measures that can be adopted for controlling this phenomena. The general attitude of people towards this programme was favourable. Though the difference was slight, more male listeners appreciated the programme than females. Among the total respondents, more than 3/4th of the listeners gained adequate information on ways of polluting water. A slight reduction was noticed in understanding the preventive measures for the control of water pollution. However, more than 70% of the respondents answered this question correctly (75.3% males and 73.5% females). The response of the listeners clearly leads to the conclusion that the programme widened the awareness of people on the different levels of water pollution.

9. Water Sources in Kerala

Among the listeners all the female listeners and more than 95% of the male listeners considered this programme was very good and informative. The review of question-answers showed that more than 90% of the respondents were aware of the important sources of water in Kerala. But for the question on the factors responsible for the availability of water only 3/4th of the listeners were able to provide the correct answers. In both cases, men gained more information than women. Nearly 75% of the listeners expressed their doubts on this topic. In a nutshell,the programme was useful to the listeners.

10. Humanlife and Water

The programme on "Human life and water" demonstrated the role of water in the functioning of human body. The documentary included the biological and scientific aspects of water for the functioning of human body. Many listners provided only partially correct answers to the questions after the broadcast. Not much variation was observed among men and women in this respect. Though the percentage of incorrect response was very low, more than 60% of the listeners provided only partially correct answers. But more than 95% of the respondents expressed very good opinion about the programme. Slightly more than half of the respondents revealed their doubts on the topic for clarification. The average number of doubts asked by the listeners, especially female listeners (1.6) was very low for this programme. The above analysis suggested the necessity of more programmes on these lines.

11. Rivers & Environment

The programme on "Rivers and Environment" elaborated the importance of forests in preserving and collecting rain water and its role in preventing soil erosion. Ninety eight percent of the listener's letters revealed that the programme was very good and informative. The analysis of the listener's letters covering the question-answers for this topic revealed that this programme created only partial awareness among the listeners (70% of males 66.3% females). Only few listeners provided the correct answers for this programme (18.3% males and 14% of females)

For the first two programmes, ie, on 'Water-the invaluable resource of nature' and "Water cycle and monsoon" no questions were asked to the listeners for answering. So an analysis of how far the messages of the programmes have been understood by the listeners of this programmes became a difficult task. The response rate was also low for these programmes. 68.3 of males and 31.7% of females expressed that the programme on water-the invaluable resource of nature was very informative and useful. Similarly 70% of males and 30.4% females expressed that programme on water cycle and monsoon was very informative and

useful.

The analysis clearly brought out the conclusion that more than half of the lessons on the topics relating to the various aspects of water have been very effective in creating adequate awareness among the listeners as intended by this programme. The rest of the programmes created partial awareness among the listening population. Due to this trend it will be possible to influence some desired attitudinal changes among the listeners concerning the above topics. In some of the lessons women listeners gained more knowledge than men. This was one of the most valuable results that an education campaign like this can brought out because women are the key persons involved in health and domestic activities.

B. TOPICS ON WATERBORNE AND WATER RELATED DISEASES

Five lessons were included in this sector, which elaborated the origin and development of water-borne and water related diseases and the preventive measures that can be adopted for reducing the threat of these diseases.

1. Water borne diseases

This programme illustrated the important water-borne diseases and the reasons for the development of these and touched the preventive measures. A review of the question - answers provided in the listener's letters pointed out that the programme was very effective in educating people about the dangerous nature of water-borne diseases and the measures that can be adopted for the prevention of these diseases. A considerable number of listeners were able to provide the correct answers to the queries after listening the programme. A close examination of the listener's response revealed that the listeners gained more awareness on the nature and occurance of water-borne diseases than the preventive aspects of these diseases. This was the same among male and female listeners. However, women respondents gained more information on various aspects of water-borne diseases than men. More than 80% of the listeners in general became aware of the threat of the water-borne diseases. While answering the question relating to the avoidance of water-borne diseases female listeners out numbered the male listeners (75% of males and 82% of females). Among the listeners who revealed their opinion about this programme (99.1%) of female listeners expressed greater satisfaction. However, 89% of male and 99% of female listeners expressed that the programme was very informative and useful. But 1/10th of the male listeners complained that the programme does not reach the expected standard. 76.7% of the respondents tried to clarify their doubts on water-borne diseases. Inspite of this, the listeners benefited by this programme to a great extent.

2. Gastroenteritis

The documentary on Gastro enteritis covered all aspects regarding the causes, symptoms and preventive measures and touched the details of oral rehydration therapy. An examination of the listener's response suggested that this programme yield very good results. More than 80% of the respondents gave correct answers to the questions. It has been noticed that for this programme also proportionately greater number of female listeners acquired adequate information about the various aspects of diarrhoeal diseases than men. This was true especially on the preventive aspects of this disease. One third of the listeners revealed their opinion about the programme. A majority of men and women invariably appreciated the programme (99% of men and 97.1% of females respectively). More than 80% of the listeners expressed their pertinent doubts on various aspects of this disease and almost all relevant doubts of listeners were clarified subsequently.

3. Poliomyelitis

Many of the respondents does not know that its origin is related to improper use of water. A clear picture of the origin, symptoms and prevention of this dreadful disease which often affect small children was provided through the broadcast. It was interesting to note that cent percent female listeners and more than 90% of the male listeners considered this programme very informative. After listening this programme a large number of listeners (95% in general) identified the symptoms of poliomyelitis without any difficulty. But all of these listeners does not locate the origin and development of this disease. Even then nearly 70% of the respondents acquired adequate knowledge on this aspect. Compared with other Jeevadhara lessons this programme evoked more doubts among the listeners. Average number of doubts was 3 per person. Male listeners have more doubts on this topic than female listeners.

4. Infective Hepatitis

In general listeners have very good opinion about this programme (97.3% of males 100% of females). A large number of listeners expressed their further doubts on this disease. Our analysis of the question-answers on this topic showed that women score high than men in providing the correct answers for the questions (69% of males and 75% of females). A close examination of this again revealed that people gained more knowledge on the symptoms of this disease than the preventive measures of this disease. This highlighted the necessity of more programmes on the preventive measures of infective Hepatitis.

5. Vector - borne diseases

The programme on "Vector-borne diseases" elaborated the diseases spread through various vectors. One of the important messages of this programme was that if we could control or erradicate the water-borne and vector-borne diseases, we could solve, the major public health problems. Poor and inefficient management of water sources indicate the occurance of vector-borne diseases. On the whole the response of listeners revealed that the programme was a satisfactory one. However, the question-answers does not yield as much satisfaction as intended. Approximately 32% listeners identified the messages of the programme correctly. In identifying the correct answers male listeners lag behind the female listeners for this programme (29% of males and 37% of females). Sixty five percent of the listener's expressed the partially correct answers.

In general the response of the listeners on the topics on water-borne and water-related diseases was satisfactory. As evident from our analysis all the programmes on this issues created among the listeners adequate awareness about the problem. Probably due to the effect of this programme greater chances of reduction in morbidity and mortality rates can be expected while one analyse the trend of the hidden behavioural practices of the beneficiaries of this programme.

C. TOPICS ON ENVIRONMENTAL SANITATION

All available data have proved beyond doubt that proper sanitary facilities is necessary for reducing many of the health problems faced by man. A large percentage of people in rural areas do not have access to safe water and excreta disposal facilities. The high incidence of water-borne diseases in rural areas results from unsatisfactory water sources and poor waste/excreta disposal systems. Only through proper use of water and sanitation systems such diseases can be eliminated. Recognising the importance of sanitation in the health status of the masses, in the Jeevadhara programme broad consideration was given to the sanitation related topics.

I. Man and Environment

The documentary on "Man and Environment" explained the relationship between man and environment and the importance of prevention of environmental pollution. On enquiry about the impact of this programme revealed that listeners gained only partial awareness on the topic (70.3 of males and 67% of females). For the question - answers slightly more than 1/5th of the listeners were able to give the correct answers (22% of males and 25% of females). While majority (93.3%) of the female listeners thought that the programme was very useful to them and 15.4% of male listeners complained that the programme does not reach the expected standard. On an average 2.6 doubts were asked by the listeners for further clarification.

2. Industrial Waste, Garbage & Sewage

Majority of the listeners (85%) considered the programme was useful and informative. But 1/5th of the female listeners does not think so. They expressed their dissatisfaction about the programme. The question-answers section showed that more than 60% of the respondents were in a position to provide only partially correct answers. This leads to the conclusion that like the previous programme this lesson also created partial awareness among the people. This again suggested the poor knowledge of our people about the importance of the disposal of garbage and sewage. This also stresses the necessity of more programmes on this topic for making our people adequately aware of the threat and challenges of this problem.

3. Sewage Treatment

The lesson on "Sewage Treatment" included the importance and necessity of sewage treatment and uses of sewage after adequate treatment. A review of the knowledge gained by the listeners on this topic showed that the listeners were not able to provide correct answers as majority of them gave only partially correct answers.(81% of males 72% of females listeners). 21.2% of female and 14% of male listeners mentioned the correct answers to both the questions. In other words, more programmes in this direction should be planned to create adequate awareness among the public.

4. Domestic Waste & Environment

Many of our people are ignorant about the dangers of improper handling of domestic waste to our health. The health hazards originated through our carelessness in the treatment of domestic wastes and its impact on environmental sanitation was the main theme of the documentary on "Domestic wastes and Environment". All the female respondents have favourable opinion about the quality of the programme. A quite large number (94%) of male listeners also thought that the programme was full of information. In the question-answers section more than 70% of the listeners were able to provide the correct answers and female listeners outnumbered the male listeners in this respect (70% of males and 75% of females). Thirty per cent of male and 23% female listener's expressed partially correct answers to the question. Since, more women aware of the dangerous of such events we can expect a positive changes in the attitude of listener's while they are handling the domestic wastes.

5. Latrines

A considerably low percentage of our people in rural areas have latrines and a large number of existing latrines are not sanitary. Giving importance to this phenomena the documentary on "Sanitary Latrines" was developed. But the listener's response towards this programme was not satisfactory. Most of the listeners (75%) gained only partial knowledge on this lesson. Only twenty percent of males and 26% of female listeners provided the correct answers to the questions on dangers of open air defecation and the need for latrines.

However, more people became aware of the dangers of open air defecation especially in public places throgh this programme.

6. Pollution of Public places

Compared with other people, Keralites have been giving greater importance to personal hygiene. But our public places are centres of pollution. Even the educated people practiced undesirable attitudes towards keeping our public places clean and hygienic. The programme on "pollution of public places"highlighting the dangers and hazards of it. The responses of listeners showed that more than 90% of the listeners appreciated the programme. But 77% of the listeners identified the messages of the programme rather partially correct and 21% were identified as correctly. Our enquiry revealed the importance of educating people about the necessity of prevention or atleast reduction of pollution in public places.

7. Environment - Rights & Role of a Citizen

Inorder to create awareness among people about the role and duties of citizens in environmental conditions, a programme was presented. The analysis pointed out that male listeners have more idea about the existing environmental laws than females, but their knowledge was not appealing since only 40% got adequate knowledge about it. The position of female listeners was not quite encouraging. More than half of them does not gained any idea about the existing environmental laws. However, more than 65% of the listeners revealed their partial awareness about the duties of a citizen in environmental protection. Average number of doubts was 3 per person. Male listeners expressed more doubts on this topic than females.

8. Role of Voluntary Agencies in the Propagation of Protected Water Supply and Environmental Sanitation

In propagating ideas on protected water supply and environmental sanitation, voluntary organisations have a very important role to play. But the programme presented on this aspect created only partial awareness among the listeners. Twenty eight per cent of the listeners expressed the correct answers on the questions, 66% of the them mentioned partially correct answers and 6% mentioned the incorrect answers.

The analysis clearly brought out that these programmes enabled to create only partial awareness among the listeners on the various aspects of environmental sanitation. This reveals the needs for developing suitable programmes for the benefit of the listeners.

In general, more than half of the programmes broadcasted through the Jeevadhara series enabled to create adequate awareness among the listeners. The rest of the programmes created atleast partial awareness among the listeners about the various aspects of protected water supply and environmental sanitation. On the whole this type of innovative educational campaigns will have positive results because a large number of the listeners identified the messages of the programme correctly. Secondly we can very well expect certain attitudinal and behavioural changes among the listeners in this respect. This again pointed out towards the role of radio in propagating ideas on health behaviour and its effectiveness in achieving the goal of "Health for all by the year 2000 AD". Our findings clearly revealed that exploitation of mass media has immense potentiality in the health education communication and information field. Programmes of health education should be a continuous process and frequent messages about the use of protected water,role of citizens in the water supply schemes, sanitary disposal of excreta and waste water, formation of good health habits and maintenance of good personal hygiene are the need of the time. The studies carried out in Africa and other countries also strongly support this view. Some of the findings of the relevant studies are given in the next section.

VII. REVIEW OF OTHER SIMILAR STUDIES

The use of radio like any other means of mass communication, to create environmental health awareness and knowledge requires some caution. The ultimate aim of a public health and sanitation education programme is the change of any behaviour that may limit the impact of improved health facilities. It is not easy to change locally specific behaviour patterns that are determined by many factors just by providing some scientific information on environmental health. Moreover, socio-psychological processes can affect the information transfer, so that the knowledge produced may not always be the knowledge intended. Acceptance and distortion can take place unconsciously and resistance or confusion can be created. The Jeevadhara programme was planned and organised keeping in mind all the possible side effects of mass media. As far as possible undesirable circumstances were avoided while introducing locally suited programmes according to the existing cultural patterns of the state. In order to attract the attention of listeners of all categories, the programmes were arranged in such a way that the entertainment aspect was given considerable importance and the instructive and education element was hidden behind the entertainment function. The programmes were arranged under the assumption that a mass approach to general information programmes can create a universal awareness of the existing programmes and motivate people to follow better hygienic practices. In our state, radio can be a useful channel to reach those communities that are not served by any drinking water supply and sanitation programmes, but that would like to improve their conditions by their own efforts. We know that the success of such programmes depends on the availability of necessary materials, equipment and expertise and the present programme was organised excluding almost all biases that can occur in an awareness creating programme like this. Considerable effort was made to include almost all departments related to public health, water supply and sanitation activities in this education campaign.

Mass communication media are very suitable for the diffusion of information on large scale, since it can reach many people in a short time at relatively low costs. It is hardly possible to exaggerate the role which radio can play in our society. Since lots of our people live in rural areas, radio is the most important and most effective medium for providing information and stimulating new attitudes wherever it has reached. Within its limitations, radio can play an important role in community water supply and sanitation programmes. Christine Van Wijk (1984) distinguished four major functions of mass media in water supply and sanitation programmes. They are: the creation of general awareness about link between water and sanitation on the one hand and health and development on the other; the distribution of general programme information; the provision of support and reinforcement for projects; and the diffusion of self help information for people who want to carry out their own improvements.

The studies carried out by the Deom (1976) Saunders and Warford 1976; White etal (1972) White and Sevlour (1974) have revealed the positive relationship between water, health and diseases. Yet water supply and sanitation programmes do not always have the health impact expected from them, not even when planned for this purpose (Feachem R.G etal (1978),Pisharoti (1978), WHO (1980). An important factor in the solution of these problems is in the inclusion of the element of mass education in water supply and sanitation projects. While studying the knowledge, attitude and practice of health related activities, Prof.Abraham (1988) also has pointed out the need for activating the health education in our state. He says, there is an urgent need to develop among the people, especially those living in our villages, the right habits and attitudes towards improved health. In a project report on a model for improving access to and utilisation of regional health facilities Quesada and associates (1975) have also highlighted the promotion of actual behavioural changes through appropriate health and community education strategy.

G.W.Steuart (1969) compared two simplified models of health education. The first is characterised by a one-way communication flow. Man is seen as a rational being with a high health motivation, easily reached as a passive receipient of mass media messages, lectures and demonstrations. The second model is based on values, a two-way communication. Man is seen as irrational, but with specific knowledge and needs,often with low priority to health needs, especially in preventive health. His selectivity and passiveness limit the influence of mass media and lectures on his behaviour. The objective of health education, however, is to effect

a change in behaviour. The acceptance of the second model requires more complex planning and evaluation in health education programmes. The choice of methods should be based on a quantitative and qualitative assessment of current health practices and underlying felt needs.

In a radio broadcast campaign study (Hall and Dodds 1974) which was carried out in small study groups guided by local leaders with the aid of study guides and manuals in Tanzania, 72% of the listeners were farmers. Pre-and post-knowledge test of 50 groups showed a significant knowledge gain of 11%. The effectiveness of this programme was very high. Hall and Dodds have also discussed a national Mass Campaign, "Man is Health" which was organised to reach about two million people in 1973. Apart from providing information on health and preventive health behaviour, and reading materials for literates, it encouraged group and individual preventive action. Among the action results reported were the removal of close vegetation and clearing round the house (28%), digging, repairing and rebuilding of latrines (20%) boiling or filtering of water (12%), cleaning areas around water sources (11%), digging rubbish pits (4%),digging wells (3%) and avoiding use of drinking containers and cigarettes (3%).

The account of the Tanzanian preventive health campaign, by Hall (1978) was an innovative health education plan for health actions and follow up through radios. The programme consisted of 12 weekly study programmes over the national radio twice a week to radio study groups at local level, convened by the trained group leaders. Topics covered wide range topics like malaria, water-borne diseases, dysentry, schistosomiasis and tuberculosis. Supporting materials consisted of study guides, a group leaders' manual, radio programmes and flip charts. The campaign was successful, in that it reached 2 million unschooled rural people, of whom 93% were farmers and 84% had not more than 4 years of schooling. The ratio of male and female participants was also favourable (51% and 49% respectively).

A comparison of the effectiveness of two health education programmes in a cholera campaign in Nigeria, one using an individual appproach and the other a community involvement approach, was carried out by W.Ogionwo (1973). Both communities were exposed to mass media information through radio broadcasts, film shows and posters. After the educational programme, a vaccination campaign against cholera and health measures demonstrations were organised and initial adoption rates were recorded. Two months later, a survey was carried out in two villages to measure the continued adoption of the practices. The initial adoption rates were higher for community involvement approach (75% and 60% respectively), but continued adoption showed even greater differences (73% as opposed to 45%). External factors were found to be positively related to exposure by mass media.

An experimental approach was designed by Spector and associates (1971) and conducted in three matched villages in rural Ecuador with three other villages serving as controls, to determine the relative effectiveness of various methods for the promotion of innovative practices like the construction of latrines and smokeless stoves, the preparation of marmalade and vaccination against small pox. Information was given through radio broadcasts, audio visual aids and a combination of the two. Transistor radios were distributed to all the households. The campaign consisted of two weeks of general information and seven weeks of motivation and specific instruction programmes. To measure the results, a survey was conducted on adoption, perceived influence of the media, reasons for participation and non-participation and socio-economic and psychological characteristics of adopters and non-adopters in all experimental households and in a random sample of one third of the control households. Significantly more marmalade was prepared and more stoves and latrines were built in experimental towns and more households were vaccinated. Radio broadcast persuaded more people to participate in stove construction, marmalade preparation and vaccination, but audio-visual methods were more effective in promoting latrine buildings. The authors contribute this to the existing labour division, women preparing more marmalade and building stoves and men building latrines as well as to the difference in exposure to mass media, with broadcasts reaching women at home and audio-visual displays more accessible to the outgoing males.

In a study on the "Influence of traditional status on the adoption of health practices" Throat (1969) studied a sample of 246 respondents, farmers with atleast 2.5 acres of land and below 50 years of age, from two villages in Maharashtra , on the adoption of agricultural and health innovations. The adoption of these

practices was related to variables of personal, social and economic background, socio-psychological aspects, and the use of communication media. It was found that education and caste were strongly associated with adoption. Level of living was also found to be significantly related to adoption, while size of holding was not an influencing factor. Political knowledge, cinema going, newspaper reading, radio listening etc were all positively related to adoption.

A study of 6 rural Ghanian communities on socio-cultural aspects of water usage and water supplies by Twumasi, Yangyuora, and Banuaka, (1977) revealed that the hygienic practices and habits did not differ between the traditional and modern water supply users irrespective of their socio-cultural factors and regional variations. However, the availability of water was the main determinant in the use of water in both the communities.

In their study on "Adoption of modern health and family planning practices in a rural community of India" Sandhu etal (1977) tried to identify the relationship between reported awareness, perceived need and adoption of some health practices. They found that health practices adoption was found to be highly asociated with awareness, perceived need, education and caste status. From their findings it can be concluded that personal contacts should be intensified, mass media, should be used more extensively in health programmes, extension work should be better utilised for accelerated health practice adoption and health education and individuals should be motivated to adopt better health behaviour.

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JEEVADHARA PROGRAMME

Schedule of the Broadcast

Date	Time	Format	Title	Basic Script written by
14.11.88 Monday	6:25 PM	Message	Message in connection with the commencement of the broadcast	Sri. Baby John Hon. Minister for Irrigation, Govt. of Kerala.
	6.30 PM	Discussion	On the broadcast series "Protected Water Supply and Environmental Sanitation"	1. Sri. K. Ramachandran Chairman, Kerala Water Authority 2. Dr. Elsie Philip Principal, Medical College, Trivandrum 3. Dr. M. P. Parameswaran Kerala Sasthra Sahitya Parishat. 4. Sri J. Venugopalan Nair Member Secretary, Kerala State Pollution Control Board.
18.11.88 Friday	6.50 PM	Documentary	Water-The Invaluable resource of Nature	Prof. N. Balakrishnan Nair Chairman, State Committee for Science Technology & Environment, Trivandrum.
25.11.88 Friday	6.50 PM	"	Water Cycle & Monsoon	Prof. M. Stephen University College, Trivandrum.
2.12.88 Friday	6.50 PM	"	Human Life and Water	Prof. G. K. Karanavar. Dept. of Zoology, University of Kerala.
9.12.88 Friday	6.50 PM	"	Man and Ground Water	Dr. P. K. Rajendran Nair Prof: Dept. of Geology, Kerala University.

Date	Time	Format	Title	Basic Script written by
16.12.88 Friday	6.50 PM	Documentary	Water Sources (with particular reference of Kerala)	Sri. V. C. Jacob Central Ground Water Board. Trivandrum
23.12.88 Friday	6.50 PM	"	Rivers & Environment	Sri Chunakkara Gopalakrishnan Scientific Officer, State Committee for Science, Techonology & Environment. Trivandrum
30.12.88 Friday	6.50 PM	"	Drinking Water	Sri. C. J. Mathews Managing Director, Kerala Water Authority.
6.1.89 Friday	6.50 PM	"	Tanks & Reservoirs	Sri. K. Thulasi Das Retd. Chief Engineer, Kerala Water Authority.
13.189 Friday	6.50 PM	"	Treatment and Distribution	Sri. S. Krishna Iyer Technical Member, Kerala Water Authority.
20.1.89 Friday	6.50 PM	"	Water Supply Schemes and the Consumer	Sri. K. Ramachandran Chairman, Kerala Water Authority.
27.1.89 Friday	6.50 PM	"	Conservation and Protection of Water Sources	Sri. R. Ramanujan Executive Engineer, Kerala Water Authority.
3.2.89 Friday	6.50 PM	"	Water Pollution	Sri. Paul Tachel Executive Engineer, Kerala Pollution Control Board.
10.2.89 Friday	6.50 PM	Quiz	Quiz Programme on Protected Water	Prof. N. Balakrishnan Nair Chairman, State Committee for Science, Technology Environment.
17.2.89 Friday	6.50 PM	Documentary	Water Borne Diseases	Dr. Elizabeth Vargheese Director & Professor of Community Medicine, Medical College, Trivandrum.

Date	Time	Format	Title	Basic Script written by
24.2.89 Friday	6.50 PM	Documentary	Gastro Enteritis	Dr. Roy Vargheese Professorof Infectious Diseases Medical College, Trivandrum.
3.3.89 Friday	6.50 PM	"	Polio	Dr. N. S. Suguna Bai Professor, Paediatrics S.A.T. Hospital, Trivandrum.
10.3.89 Friday	6.50 PM	"	Infective Hepatitis	Dr. K.T. Shenoy Dept. of Gastro Enterology, Medical College, Trivandrum
17.3.89 Friday	6.50 P.M.	Quiz	Quiz Programme on Health and Protected Water	Dr. C. R. Soman Professor, Medical College, Trivandrum.
24.3.89 Friday	6.50 PM	Documentary	Man and Environment	Sri. K. K. Krishna Kumar President, Kerala Sastra Sahitya Parishat.
31.3.89 Friday	6.50 PM	"	Industrial Wastes, Garbage, and Sewage.	T. D. Issac Assistant Executive Engineer, KeralaPollutionControlBoard.
7.4.89 Friday	6.50 PM	"	Sewage Treatment	Sri. Maluk Mohammed Chairman, Kerala State Pollution Control Board.
14.4.89 Friday	6.50 PM	"	Domestic Wastes and Environment	Dr. M. P. Parameswaran Kerala Sastra Sahitya Parishat.
21.4.89 Friday	6.50 PM	"	Latrines	Dr. T K. George Principal, Engineering College, Trivandrum.

Date	Time	Format	Title	Basic Script written by
28.4.89 Friday	6.50 PM	Documentary	Pollution of Public Places	Prof. C. P. Aravindakshan Chemistry Department Engineering College, Trivandrum.
5.5.89 Friday	6.50 PM	"	Vector - Borne Diseases	Prof. A. Joseph Retd. Professor of Entomology Regional Cancer Centre, Medical College, Trivandrum.
12.5.89 Friday	6.50 PM	"	Environment - Rights & Role of a Citizen	Prof. V. Vijayabalan Principal, Law College, Trivandrum.
19.5.88 Friday	6.50 PM	"	Role of Voluntary agencies in the propagation of Protected Water Supply and Environmental Sanitation.	Prof. V. K. Damodaran, Director, State Committee for Science Techonology and Environment
25.6.89 Friday	6.50 PM	"	Water Decade	Sri. K. Balachandra Kurup Executive Co-ordinator Socio-Economic Units, Kerala Water Authority.
2.6.89 Friday	6.50 PM	Quiz	Quiz Programme on Environmental Education	Prof. R.V.G. Menon Director, ANERT, Trivandrum.