

**COMPARATIVE STUDY OF THE FACTORS INFLUENCING THE FOOD  
EXPENDITURE BY THE RURAL FAMILIES IN COIMBATORE  
(TAMIL NADU) AND ALLEPPEY (KERALA) DISTRICTS**

**THESIS**

**By**

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## **I INTRODUCTION**

Food is the basic essential of Mankind prior to clothing and shelter. When Man was in the caves, the food items were few in number and could be got easily. But as Man advances the availability of food both in quantity and quality has undergone a change due to the scientific and technological strides made in the food front.

The Green Revolution coupled with the population increase has enhanced the quantum of available food and the demand for it. Family's major part of money is to be spent on food. Food is the largest item demanding the biggest share of income in the family living as pointed out by Hatcher and Andrews (1966)<sup>1</sup>. In developing countries with mounting population growth and soaring food prices, this trend is more.

Food expenditure, as Silver and Ryan (1943)<sup>2</sup> state, is affected by a number of factors such as the number and age of family members, local differences and fluctuations in food prices, the managerial ability of the home makers in buying, menu planning, food preparation and the use of left overs and the household productions.

An efficient purchase of food in right quantities at right places in right times will conserve the families income and enhance the disposable income for other expenditure.

In the context of fixed incomes, flying food prices, big families, the homemaker has to strike a good bargain in the purchase of food items in particular and that of others in general.

Food expenditure pattern may vary from family to family, from region to region on account of the differing food preferences and tastes of the family members, availability of food items in the locality, the prevalence of co-operative stores etc. The educational level of the homemaker and her experience in the art of homemaking may have a bearing on the food expenditure.

The present study of finding out the factors influencing the food expenditure by the selected rural families of two districts is undertaken with the following objectives. To find out:

1. the general expenditure pattern of families,
  2. item-wise food expenditure,
  3. source and frequency of purchase of food items,
  4. personnel making the decisions and purchase of food items,
  5. particulars of omitted foods
- and 6. the use of tinned foods.

An empirical study of this nature may throw light on the influencing factors on food expenditure in the form <sup>of</sup> family size, income homemakers educational status house hold food production, source of purchase etc.

## II REVIEW OF LITERATURE

The literature on the factors influencing the expenditure pattern of food by the families is reviewed under the following headings:

- I. Importance of food
- II. Family and Homemaker
- III. Family Expenditure
  - a. Food expenditure and the factors influencing it.
  - b. Studies conducted.

### I. Importance of food:

The term 'food' is commonly used to refer to those substance that form a part of the usual diet of a particular group of people according to Justin and Vail, (1956)<sup>3</sup>. Dent and Dowd (1943)<sup>4</sup> have defined food as any substance which when taken into the body can be utilized to yield heat or energy, to build new tissue and repair worn-out tissue, to regulate body processes, and to aid in the production of important body compounds. But only those substances as opened by Fox and Cameron (1965)<sup>5</sup>, which contain nutrients are foods, this means that not every thing which forms a part of the diet is a food.

Eating is an essential part of the daily lives of every one. Even though the chief function of food is to supply materials to meet physiological needs, it serves other

function also. Food plays an integral role in social life, whether on the college or university campus, in the homes of the land or in the affairs of the convening diplomats of the world. Still another function of foods is that of the psychological or emotional influence. Familiar foods are favourite foods, imparting a sense of well being and satisfaction unrelated to food value but reminiscent of past experiences as opined by Wilson *et al* (1963)<sup>6</sup>. Jacobs (1951)<sup>7</sup> has listed three chief functions of food. First it serves as a fuel for the body, providing heat by a process of slow oxidation, second, it furnishes the building material for growth and repair; and third, it provides for the regulation of the body functions. In infancy, childhood and youth, the growth function is of greater importance than in later years but all through life the entire body is renewed and repaired.

Enough food, as opined by Aykroyd (1964)<sup>8</sup> is a primary human necessity and when people are poor they must rely mainly on the cheaper foods to obtain sufficient calories. This applies both to the countries and to families.

### III. Family and Homemakers

Family is the back bone of society. In the most primitive societies, family was the only institution. Within the family all the business of living is fulfilled. In other words they had no physical or social needs that call for an institutional structure other than that provided by their

family. The family can be considered as an adequate structure for handling the economic production and consumption by the people.

According to Green (1960)<sup>9</sup> family is an extremely varied social institution, it does possess a solid core of universal features. Family, as defined by Burgess and Locke (1960)<sup>10</sup>, is a unity of interacting and intercommunicating persons enacting the social role of husband and wife, mother and father, son and daughter and brother and sister.

The family, whether nuclear or extended, appears to be a general institution among all people. In the intimate family the individual is in a constant sequence of learning situations that link him at some level with some segment of society. And as the economic changes the linkage to it changes.

With the social change, the role of members also change with the change in the functions of the family. The focus of power is not the same when a wife and mother becomes and economic partner with the husband and father, as she earns part of the family income and participates in making decisions and plans for the family, especially in spending the income. Mickell and Dorsey (1970)<sup>11</sup>.

Quoting a study conducted by Warren, Agan (1956)<sup>12</sup> said that about one-third of the homemakers 24 hours was used for housewifing activities, four per cent for farm work, 45 per cent

for personal activities, sleeping and resting and the remainder for miscellaneous activities.

### III. Family Expenditures

For a family with given preferences, the pattern of expenditure is described by a set of expenditure functions showing the effect on various items of expenditure of changes in the income of the family, in the prices of consumer's goods, and in the size and composition of the family as said by Allen (1998)<sup>13</sup>.

As opined by Hatcher and Andrews (1966)<sup>1</sup> no two families are exactly alike in the way they spend their income. Each has its own interest, commitments, responsibilities and even more important its own desires and values. Careful planning of expenditure means better use of income through due consideration and thought. A plan for spending the income is called budget as explained by Justin and Rust (1953)<sup>14</sup>.

As declared by Wilhelms and Heimerl (1959)<sup>15</sup> a budget may be defined as a plan for spending during a set of period, based on an estimate of the funds available for spending.

When we decide to make a budget to guide our spending, we will be in good company, for every successful business firm and every government agency - as well as millions of our most competent individuals - regularly make such budgets.

The most common planning device for the use of money is the budget. The success depends upon its being a realistic, flexible plan suited to the group for whom it was made, and in no small measure, to the quality of the control and

evaluation steps which follow as stated by Gross and Grandel (1954)<sup>16</sup>.

The detailed account of different items of income and expenditure of a particular family covering a definite period, is known as the family budget of the family for that period as defined by Mehta (1962)<sup>17</sup>. The budget is an index for the socio-economic status of the family. It clearly reveals the standard of living of the family.

Budget helps to a great extent in increasing the standard of living. It guides the households in all financial matters (1962)<sup>17</sup>. The decisions as to how much money should be spent on food depends on the family's income, their needs, and their tastes. Nutritious and attractive meals can be prepared at various price levels. Two families of equal income may choose to allocate money very differently. One may put a high value on government goods or eating in fine restaurants another on travel or education.

The planning of food expenditure should take into account the time and energy available for the preparation and purchasing of meals. A working mother may have little time and energy available, one with small children may have little money and also not much time. Another woman may have grown children, and plenty of money to spend on food. What each of these families buys and serves will be quite different.

Their choices will also be influenced by their religious and ethnic background; for instance, smoked fish is popular among Scandinavians, and Spaghetti among Italians as pointed out by Oppenheim (1965)<sup>18</sup>.

Suggestions for planning food budgets as drafted by Oppenheim (1965)<sup>18</sup>:

1. Be realistic in your planning, consider the number of family members to be fed. Allow for their special needs.
2. Allow for personal preferences, base your plans on what is acceptable to family members.
3. Plan for entertaining and eating out if this is important to us.
4. Consider food costs in the neighbourhood where we shop.
5. Keep a constant check on your food spending.
6. Have patience. It takes time to learn to manage food money well, but, with practice we will find that it becomes easier.

It is very difficult to decide in advance just what our family food should cost. The amount of money needed is affected by the number of persons in the family, their ages, occupations and health. The number of meals eaten away from home also affect the food budget. Other factors, seasonal price changes, and shopping and cooking skills also will affect considerably. It is advisable to keep a record of food expenditure, and to examine it regularly to determine how money might be spent more wisely (1966)<sup>19</sup>.

a. Food expenditure and the factors influencing it

1. Size of the family:

The statistical budgetary data throw light on the age old question, 'can two live as cheaply as one?' According to Bureau the answer is 'No', when if one works in the home, it costs a married couple about 100/70 times what it costs a single persons to live, on the average. There are advantages, however, and this amount is still less than it costs two to live singly. Each child in the family invariably adds to the cost of living. Studies of poor families with many children turn up a surprising fact: large families spend a smaller fraction of their income on housing than do small families, because they have to spend so much for food alone as revealed by Sa uelson (1961)<sup>19</sup>.

The annual food budget of social security in the year 1955 showed that two person families spend a fourth of their income for food and three-more person families spend a third of their income for food - Reagan (1967)<sup>20</sup>. A study conducted at San Francisco reveals that an increase in family size on a given income was similar to a decrease in income since the proportion for food increased decidedly (1954)<sup>16</sup>.

2. Age structure of the family members:

Age makes a difference in family food bills. According to Sinclair (1969)<sup>21</sup> a child what ever its age, should be

considered as a separate person and not lumped in with the rest of the family and a pregnant woman is not a non-pregnant woman multiplied by some factor, dietetically she is a different person altogether.

Monroe *et al* (1941)<sup>22</sup> also opinioned that the consumption of a family is affected not only by its income but also by the number and age of persons to be supported, but the average value of family food consumption differs less, however, from one type group to another than did the number of persons to be fed.

Supporting the opinion of Sinclair (1969)<sup>21</sup>, Devadas (1959)<sup>23</sup> says that while feeding the adolescent, one must bear in mind the rapid rate of growth and intense activity as well as the great variability among individuals. Since the adolescents grow so fast they actually need more food than the father or mother.

### 3. Family income:

A consumer will enjoy more or less satisfaction when he has more or less income assuming that the prices of the goods he purchases remain the same. This, according to Sundaram and Vaish (1971)<sup>24</sup>, is known as income effect which might be formerly defined as the effect on the purchases of a good changed by a given change in the money income of the consumer, prices of the goods remaining constant.

A study of the pattern of income used and of expenditure shows that in every case, with two exceptions food claimed the largest proportion (1954)<sup>16</sup>. This study shows that as income increases, the proportion of expenditure for items, other than food, housing and clothing increases significantly.

Engel's law of consumption states that as the income increases, the percentage of expenditure on food diminishes, the percentage of expenditure on clothing remains approximately the same, the proportion of expenditure on house rent, fuel and light also remains the same and as income increases a constantly growing percentage is spent on comforts of life such as education, health, recreation amusement etc. (1962)<sup>17</sup>.

A study on family consumption in relation to income in Ohio Farm Section showed that although the families at the upper income levels enjoyed a higher scale of living than the low income groups, the increase in their average total value of consumption was not in proportion to the increase in their income (1941)<sup>22</sup>.

#### 4. Purchasing Habits:

The amount and quality of goods purchased with the dollars spent, as narrated by Nickell and Dorsey (1960)<sup>25</sup>, depend in large measure upon the homemaker's knowledge, the efficiency of her choice of market, and her ability to select food wisely within the market she has chosen.

As opined by Wright (1962)<sup>26</sup>, the family food shopper controls the food expenditures of the family. Since food is the major living expenditure for most families. The opportunity and the responsibility carried by the family food shopper can determine the health of the family members as well as the health of the family purse.

It is the consumer who would be vigilant and ask for quality products. Every homemaker should try to get the worth of money she spends. Some may say that where she lives she buys what is available. Varma (1971)<sup>27</sup> is of opinion that those who earn daily wages buy the provisions daily, and their shopping definitely lacks in quantity, and a week should insist on good quality.

Take advantages of less expensive foods and of week end specials. Learn to buy quantities appropriate for your family, and avoid waste in handling, serving and storing. Buying in quantity can save time and money, but it is not wise unless you have adequate storage space and do not need the money for other essentials • Lewis et al (1955)<sup>28</sup>.

As pointed out by Devalas (1958)<sup>29</sup> planning meals in advance will help in buying more for the same money. Both time and money are saved by purchasing some food for several meals at one time. Such planning also helps in checking whether the family's institutional needs are being met.

After menus are planned, the items to be purchased in the market should be listed. Shopping will be efficient when the foods are grouped according to their availability in the different basins such as fruits, vegetables, cereals, meat etc. The quantities of each of the items to be purchased should be estimated after checking the stores on hand (1953)<sup>29</sup>.

The following suggestions will help in economic buyings

1. Buy in person whenever possible.
2. Compare prices and qualities in different shops.
3. Buy those foods which are in season or which are locally produced.
4. Buy in weekly fairs and markets. Do not go during rush hours.
5. Buy in large quantities. Preserve the seasonal foods for out of season use.
6. Select fresh vegetables, fruits, eggs and meat.
7. Buy from co-operative markets, dairy farms and agricultural farms.
8. Never buy on credit since it is more economical to pay cash than to purchase on credit.
9. Buy foods by weight rather than by bulk. Measure or count whenever possible. Check the weighing scales of vendors.
10. Buy staple cereals, potatoes, onions, pumpkins, dhals, grains etc. in as large quantities as possible and store them carefully.
11. When a particular food such as egg is expensive, buy a cheaper substitute like dry beans, instead of egg.
12. Before buying packaged foods, read labels carefully.

If there is room in her house to store foods, a homemaker can save money by buying canned goods and other nonperishable foods in large quantities. It is frequently cheaper to buy things by the dozen than in lots of one or two.

Foods are less expensive when they are plentiful, that is, when they are in season as said by Smart and Smart (1958)<sup>20</sup>.

Once menus are planned, it is easy to make a shopping list of the foods that are needed and supplies that must be replenished. A carefully planned and well-arranged list serves times in the store and helps the homemaker keep within her good allowance. It also ensures the purchase of the right amounts of foods, and often saves money by preventing "impulse" buying.

When other members of the family are doing the shopping, the list should indicate the quantities and size of cans and packages needed, as well as brands or grades preferred. A note as to possible substitutions that may be made in buying certain items is also helpful.

Shopping on days and hours when business is the lightest enables one to obtain better and quicker service at the stores, (1960)<sup>25</sup>.

## 5. Sources of Purchases

A shopping survey of Blanford, (1971)<sup>31</sup>, on the habit of house wives in the Hereford area showed that although they liked super markets, still used smaller shops when they felt the need for personal service.

Lankester made a comparison of Super-market and local shops and came up with these views - local shops she found, had a personal and friendly touch and were more likely to see local produce. But they had a limited choice of goods, because of the shortage of storage space. She liked the wide choice of food in super market, and seemed pleased that there were no assistants to bother us and press us to buy (1971)<sup>31</sup>.

A survey conducted at Virgin Islands of United States by Williams and Brush (1965)<sup>32</sup> showed that the family do weekly food purchase in super markets and day-by-day purchases, in small independent stores. Prices in the latter appeared higher than in the Super-markets.

## 6. Storage of foods

Storing food is just as important as buying foods. If foods are not properly cared for, the money saved by careful buying may be lost. Moist food should be kept moist. Dried foods must be kept dry. All perishable foods must be kept in the coolest part of the house or in underground pits, dug and constructed for the purpose - Devadas (1969)<sup>33</sup>.

Devadas and Krishnamurthy (1963)<sup>34</sup> reveal that proper home storage of vegetables and fruits help to reduce foods costs and improve the family diets. A joint responsibility along with food shopping is that of storing the purchased food adequately (1953)<sup>14</sup>. It must be stored so that its nutritive value is retained and so that it remains sanitary. Also the way or the condition in which it is stored will affect the time and energy required for using it during meal preparation.

If there is room in her house to store foods, a homemaker can save money by buying canned foods and other non-perishable foods in large quantities (1953)<sup>30</sup>.

#### 7. Traditional and Superstitious beliefs:

The traditional diet in Kalyandri consists of three meals, two of rice, curry and a pulse and a breakfast of the water that had been poured off the rice when it was cooked the previous day. Some people will not eat egg because of religious restrictions.

Schneider (1972)<sup>35</sup> through his study on factors contributing to local dietary practices found that superstition beliefs, traditions and religious customs are the factors which influence the dietary practices of the people in Kalyandri District in Orissa. Examples of superstition regarding food include the idea that bananas can be a cause of constipation and consequently intake of this fruit is limited by some people. They consider egg and milk as heat producing

food and not consumed during hot season.

### 8. Caste and Social class:

Food grains are also subject to caste distinction. In Mysore for example, Brahmins eat rice as their staple and disdain the millets, ragi and jowar. The rice cultivating peasants of the state regard rice as the rich man's cereal, insufficiently nourishing and too quickly digested to sustain manual labour. They eat ragi and sell rice for cash, consuming it only at festivals and when they eat meat - as narrated by Whyte (1963)<sup>36</sup>.

The desire to imitate the food pattern of people who are regarded as of higher status in terms of birth, wealth, class, caste, education, is a world wide phenomenon as told by Yudkin and McKensie (1964)<sup>37</sup>. Martinson has concluded from the study by the Chicago Tribune that social class differences are more significantly determinant of buying behaviour than is income narrated by Busk (1967)<sup>38</sup>.

### 10. Packed and processed foods:

U.S.D. & refers convenience foods as the foods which have service added to the basic ingredients to reduce the amount of preparation required in the home - Soosne (1971)<sup>39</sup>.

A great deal affects the prices of the food we buy, the quality of the product, the preparation that has been done by the manufacturer, the kind of store in which we shop, the size of the package we purchase, the amount of money the

company has spent on advertising the value of money itself (inflation or depression), and the season of the year. Packaging and processing do add to the cost of the food because any extra manufacturing process costs money, as pointed out by McDermott and Nicholas (1966)<sup>40</sup>. Wright (1962)<sup>26</sup> also had pointed out the same point that packing, processing and more "Convince" foods have added to the labour and the cost required to move food from farm to consumer.

A study conducted by Robert (1972)<sup>41</sup> in United Kingdom showed that over half a pound of margarine or butter is eaten per person per week. This shows the growing interest of people in the increasing purchase of convenience foods.

#### 11. Household production:

Families living in the country and in small towns found there is further advantage in living in the country and in small towns find there is further advantage in living in the region where food is produced. In many cases they are able to produce for themselves much of the food that they used. Farm families ordinarily produce a substantial part of the food that they consume.

Hystrom formulates the following principles. As the opportunity for home production of food increases the amount of food consumed increases, the actual expenditure for food is some what less, but the retail cash value of the food the family consumes is more - Beglov (1953)<sup>42</sup>.

### b. Studies Conducted

A study, on the income expenditure patterns of a hundred and fifty selected families in Coimbatore, conducted by Sumitra and Bhatji (1964)<sup>43</sup> indicated that proportion of income spent on food and shelter decreased as the income increased, whereas, the proportion spent in clothing increased with increased income.

Suhnsini *et al* (1970)<sup>44</sup> through another study 'Income Expenditure pattern in the selected village' came to the conclusion that the families spent forty seven per cent of the expenditure toward food, nine and a half per cent for clothing, eight per cent for household operation and 0.7 per cent for residence.

From a study of income, expenditure and family budget of a cultivator's family of U.P. Village, Pandey (1972)<sup>45</sup> revealed that about 84-77 per cent of the total expenditure was spent on feeding and remaining on others by the family. The diet of the family is formed of mostly cereals and pulses.

A diet survey carried out during the past 20 years in different parts of India revealed that the average diets consumed by the low income groups of the population were lacking in protective and protein rich foods such as milk, eggs, meat and fish and green leafy vegetables as stated by Swaminathan (1966)<sup>46</sup>.

The All India Consumer Expenditure survey showed that at every level of income, rich consumption per capita in the developmental areas is substantially lower than in the non-developmental, in terms of both of quantity consumed and rupee expenditure as narrated by White (1968)<sup>36</sup>.

### III EXPERIMENTAL PROCEDURE

The experimental procedure for the study of the factors influencing the food expenditure by the rural families in Coimbatore and Alleppey districts consisted of the following steps.

1. Selection of the method;
2. Formulation of the questionnaire;
3. Pilot study;
4. Selection of the sample
- and 5. Conducting the survey.

#### 1. Selection of the method:

Interview-cum-questionnaire method was selected by the investigator. Since first-hand knowledge is needed for the study of the factors influencing the food expenditure by the families, Good and Seaton (1954)<sup>47</sup> view it as a major tool for gathering evidence in the fields, including census and similar enumerations, social and economic status of families, standard of living, family budgets, and family purchases and buying preferences.

#### 2. Formulation of the questionnaire

The questionnaire is a major instrument for data gathering in descriptive survey studies and used to secure information from varied and widely scattered sources.

The questionnaire for this study was prepared with questions arranged in a logical sequence. It was framed

in such way that no interpretation be needed and no irrelevant question asked. The questionnaire includes the socio-economic back-ground of the families and the details of food production, sources of purchase, expenditure pattern, believes of the people in the selection of food for different groups, practices of food preparation etc.

### 3. Pilot study:

The questionnaire thus framed was used for pretesting by doing a pilot study on 20 rural families. Pilot study helps us to recognise the lack of order in answers and non-response to certain questions. It helps us to include additional questions and to avoid repetition of questions.

After the pilot study, the results were presented to a team of research workers for discussion. With their suggestions, the questionnaire was modified as presented in the Appendix I.

### 4. Selection of the sample:

Three villages Chinnathadagan, Edayarpalayan and Keundampalayan from Coimbatore District and Vayalar, Pattanamudi and Tharavoor from Alleppy were selected for this study by random sampling.

Venkatesan (1965)<sup>43</sup> defines random sample as one in which each item when being selected has the same chance of selection as every other item in the parent population.

Hundred families from each district were taken as samples and the homemakers were chosen as interviewees, since they are directly involved in the purchase of food items.

#### 5. Conducting the surveys:

Since the investigator had already made rapport with these village people through her project works she could find no difficulty in interviewing the homemakers. The data collected in this way, were consolidated, grouped and would be analysed under results and discussion.

#### IV RESULTS AND DISCUSSION

The grouped data on the factors influencing the food expenditure by the selected rural families in Coimbatore and Alleppey districts have been analysed to draw inferences as follows.

The families socio-economic background was studied, for it provides the basis for studying the factors affecting the expenditure pattern of food.

Nature of the family is a significant factor moulding the consumption pattern of food. In the sample seventy one per cent were nuclear and the rest belonged to joint family system. The disintegration of the joint family system in India can be attributed to the development and spread of democratic ideas, the greater employment opportunities generated by industrialization and the spread of education among the masses.

Regarding religion, Hinduism was dominant one, for 97 per cent and 79 per cent in Coimbatore and Alleppey respectively were Hindus. Christianity and Muslim constituted the minority. The prevalence of castes and sub-castes in the sample reflects the caste-ridden nature of the Indian Society.

**TABLE I**  
**SEX-WISE FAMILY SIZE**

Size of the families Number of members	No. of families		Sex Composition			
	in	in	in		in	
	Coimbatore	Alleppey	Coimbatore	Alleppey	Female	Male
2	15	4	15	11	4	4
3	16	6	25	23	8	10
4	12	14	23	25	32	24
5	20	12	52	49	28	32
6	10	21	33	27	62	64
7	15	20	46	45	64	76
8	8	7	44	20	32	24
9	5	8	18	27	27	45
10	2	3	9	11	16	14
11	1	2	8	3	11	11
12	-	1	-	-	5	7
13	-	-	-	-	-	-
14	-	1	-	-	8	6
15	-	-	-	-	-	-
16	-	1	-	-	7	9
<b>Grand Total</b>			273	240	304	326
			513		630	

# SIZE OF THE FAMILIES

SCALE : 5 FAMILIES = 1"

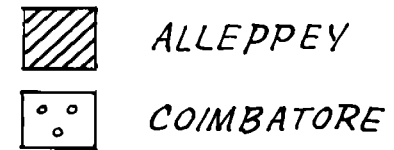


FIGURE-1

The study of the families in terms of size, sex, age, education, occupation and income per month has been undertaken because of their bearing on the expenditure pattern on food.

As revealed in the Table I, families in Coimbatore had a population of 513 and that of Alleppey 630. The average household size was 5 in Coimbatore and 6 in Alleppey which is above the national average of rural families (1971)<sup>42</sup>. The largeness of the families can be attributed to the existence of joint families and that of the high birth rates (1971)<sup>50</sup>.

The sex ratio between females and males was 273:240, and 304:326 in Coimbatore and Alleppey respectively. The existence of more males in Alleppey is in tune with the census of 1971 where the corresponding ratio is 932:1000 (1972)<sup>50</sup>.

As evidenced from the table above, the percentage of households between 4-11 size in Coimbatore is 71 per cent and 90 per cent in Alleppey falls between 4-16. The large size of the families in the survey indicates the need to popularise the message of Family Planning in an intensive way in the rural areas. It also pre-supposes the spending of more money income on food, and other basic needs like clothing, shelter etc.

**TABLE II**  
**SEX WISE AGE ANALYSIS**

Age range (in years)	In Coimbatore		In Alleppey	
	Female	Male	Female	Male
Below one year	13	13	20	22
1 - 6	24	18	20	23
7 - 12	42	35	45	61
13- 18	50	36	73	72
19- 50	103	103	112	105
Above 50	36	30	32	38
<b>Total</b>	<b>273</b>	<b>240</b>	<b>304</b>	<b>326</b>

Age-structure of the family members may have its effects on the food expenditure. A cursory glance at the table above will indicate that 155 members were children below 12 years of age in Coimbatore and 111 in Alleppey. The adolescents between 13 and 18 in Coimbatore were 86 and in Alleppey 147. Adults in Coimbatore were 272 and in Alleppey 237. In essence, the population was constituted by more of adults and less of children and adolescents.

**TABLE III**  
**EDUCATIONAL STATUS OF THE FAMILY MEMBERS**

Nature of Education Received by the Family Members	In Coimbatore		In Alleppey	
	Female	Male	Female	Male
Elementary School	62	72	159	160
Middle School	20	24	26	59
High School	40	52	37	45
College	1	11	5	7
Professional	--	--	3	--
Illiterates	108	45	54	8
<b>Total</b>	<b>251</b>	<b>204</b>	<b>264</b>	<b>276</b>

Education is the best form of human investment for education that is imparted to the individual influences his behaviour in all fields and may have an impact on the food expenditure. The number of females received education in Coimbatore and Alleppey was 125 and 210 respectively and the number of the males 159 and 263. In Coimbatore 108 females and 45 males were illiterates and for Alleppey, the corresponding figures were 54 and 8. The remaining 78 and 90 members in Coimbatore and Alleppey districts respectively, were below 5 years and hence their exclusion, in the study.

The percentage of illiteracy in these areas is 34 and 12 respectively which is far below the national figure of illiteracy. The presence of high rates of literacy in these districts may be attributed to the spread of education owing to the provision of free school education in our country.

TABLE IV  
 OCCUPATION WISE DISTRIBUTION OF FAMILY MEMBERS

Nature of the occupation	Number of members pursuing			
	Collegiate		All other	
	Female	Male	Female	Male
Farming	21	23	—	7
Business	6	8	—	18
Labour (Agri.)	23	30	—	97
Factory Work	—	27	—	27
Weaving	12	14	—	—
Coir-making	—	—	162	—
Fishing	—	—	4	6
Tailoring	—	—	—	3
Driving	—	1	—	3
Painting	—	1	—	—
Masonry	—	1	—	—
Milking	—	—	—	1
Military	—	2	—	2
Line-work	—	1	—	—
Postal job	—	1	—	—
Clerical	—	7	1	6
Teaching	2	7	2	—
Moulding	—	2	—	—
<b>Total</b>	<b>64</b>	<b>185</b>	<b>169</b>	<b>172</b>

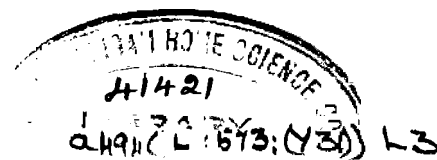
Occupation is the parameter of the economic status of the family. The families in Coimbatore and Alleppey were pursuing occupations like farming, business etc. as shown in the Table IV. The distribution of member's occupation reflects the inequalities of income and economic status. One striking feature of the analysis is that 162 families in Alleppey were engaged in coir-making. The availability of coconut fibres in abundance has impelled the women folk of Kerala to engage in coir-making. But the number of people doing white collar jobs is negligible in the families.

TABLE V

## INCOME-WISE DISTRIBUTION OF FAMILIES

Income range (In rupees)	Frequency of families in	
	Coimbatore	Alleppey
51 - 100	7	3
100 - 150	10	19
151 - 200	23	23
201 - 250	20	19
251 - 300	11	15
301 - 350	5	5
351 - 400	8	4
401 - 450	2	3
451 - 500	6	0
Above 500	8	7

The fringe of income accruing to the families is presented in the Table V. Forty per cent of families in



# INCOME WISE DISTRIBUTION OF FAMILIES

COIMBATORE

ALLEPPEY

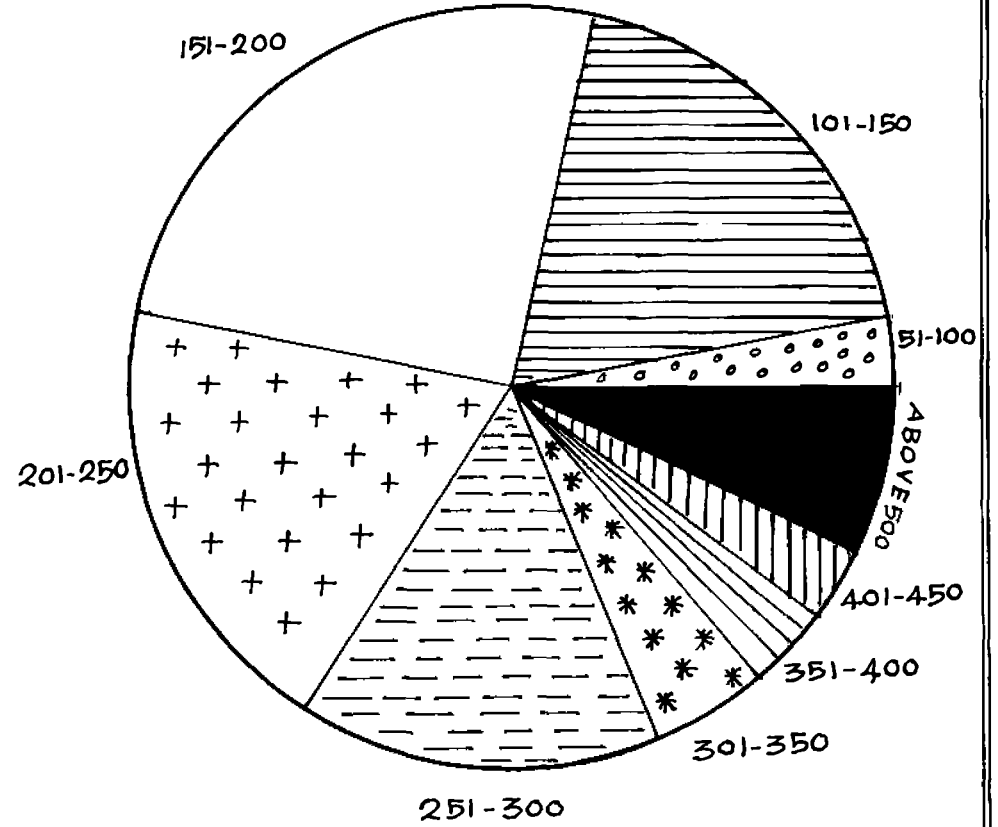
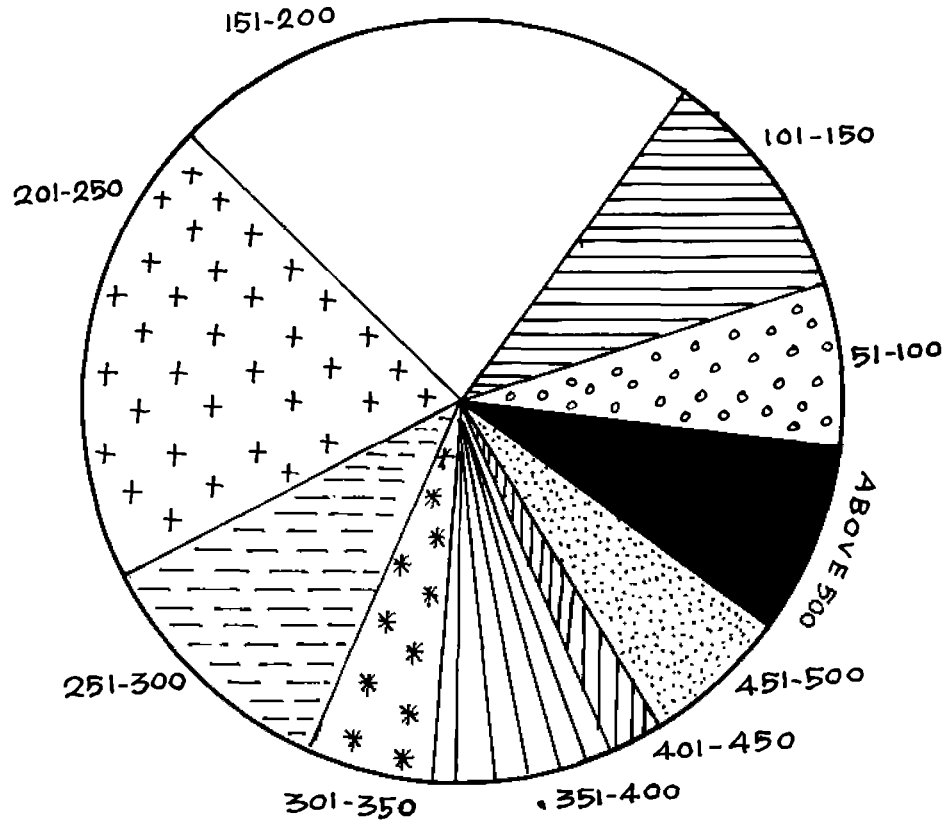


FIGURE - B

Coimbatore and 47 per cent in Alleppey received income in the range of rupees 51-200, for 60 per cent of families in Coimbatore and 53 per cent of families in Alleppey the income range was from Rs.200-500 and above.

The average monthly income of the families in Coimbatore and Alleppey was Rs.321 and Rs.275 respectively which was reflecting the low economic status of the rural areas. To help the families in getting good income (money and real) supplementary occupations can be popularised suitable to the local skills and needs. Unless the economic status of the families are increased families can not reap good standard of living.

From the socio-economic background analysis of the families in Coimbatore and Alleppey districts the following inferences are drawn.

1. Majority of the families in the sample (71%) are of nuclear.
2. Families belong to different castes but speaking the caste-ridden Indian Society.
3. The family size is comparatively big (5 in Coimbatore, 6 in Alleppey).
4. The population has more of adults and less of children and adolescents.
5. Families pursue different occupations and the average monthly income is low (Rs.321 in Coimbatore and Rs.275 in Alleppey).

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\* Average income for the families in the survey is arrived at by totalling up both the money and real incomes and dividing it by the number of families.

TABLE VI  
ITEM WISE ACCRUSION OF REAL INCOME

Items of real Income from the main occupation	Number of families		Total income per month (Rs.)		Average income in Rs. per month	
	Coim- batore	Alle- ppey	Coim- batore	Alle- ppey	Coim- batore	Alle- ppey
Rice	7	10	700	663	100	66.3
Cholan	33	—	402	—	10.5	—
Pulses	27	—	605	—	22.4	—
Vegetables	10	—	500	—	50.0	—
Roots and tubers	9	11	320	50	35.5	4.5
Fruits	9	3	273	8	30.5	2.6
Sugar cane	7	—	260	—	37.1	—
Coconut	—	91	—	4372	—	54.6
<u>Supplementary</u>						
Poultry	14	34	171	552	12.2	16.23
Dairy	25	24	2300	672	25.37	—
Kitchen garden	6	3	32	8	5.3	2.6

Farming formed the main occupation for 42 and 93 per cent families in Coimbatore and Alleppey respectively.

Rice, cholam, pulses, vegetables, roots and tubers, fruits, sugar cane, coconut etc. were the items got from the farming. The average income received by the families vary from 10 to 100 rupees in Coimbatore and 2.6 to 66 rupees in

Alleppey as given in the Table VI. One peculiar feature is that families in Alleppey were not cultivating cholan, pulses, vegetables sugar cane like their counterparts in Coimbatore. This can be attributed to the climatic conditions in Alleppey which is not conducive for the cultivation of these items. Supplementary occupations are followed by the families with the acquisition of money income in the range of Rs.5 to 25.37 in Coimbatore and Rs.2.6 to 16.3 in Alleppey.

But however with the time and resources available to the rural families they must be motivated to adopt supplementary occupations to increase their money and real incomes.

TABLE VII  
BUDGET MAINTENANCE

Type of the budget	Number of families maintaining in	
	Coimbatore	Alleppey
Written	4	—
Oral	7	3
Nil	89	97

Budget is a plan of the families expenditure of the income received over a period of time. The budgeting of families' expenditure will help them in spending the

limited income in an effective manner. It is surprising to find that 89 per cent of families in Coimbatore and 97 per cent of families in Alleppey are not maintaining budgets. The remaining five per cent of the families in both the districts maintained oral budgets and only 4 per cent of the families in Coimbatore had written budgets. Majority of the families in Coimbatore and Alleppey (83%, 92%) expressed the absence of need to maintain budgets. The rest found it difficult to maintain budgets.

The reasons given evidenced the absence of need for them to maintain budgets. Added to that 5.5 per cent of the families in both districts have expressed difficulty in the maintenance of budget.

From this study, it can be recommended, that families must be taught of the need to maintain budget, irrespective of the income they receive, to help them in becoming wise-spenders of money. Short training and orientation courses for the homemakers may be organised on the art of Homemaking which will go a long way in cultivating good habits in them.

An analytical study of the expenditure of families on the various items will throw light on their mode of spending which is presented in the table below.

# PERCENTAGE OF FOOD EXPENDITURE (Income wise)

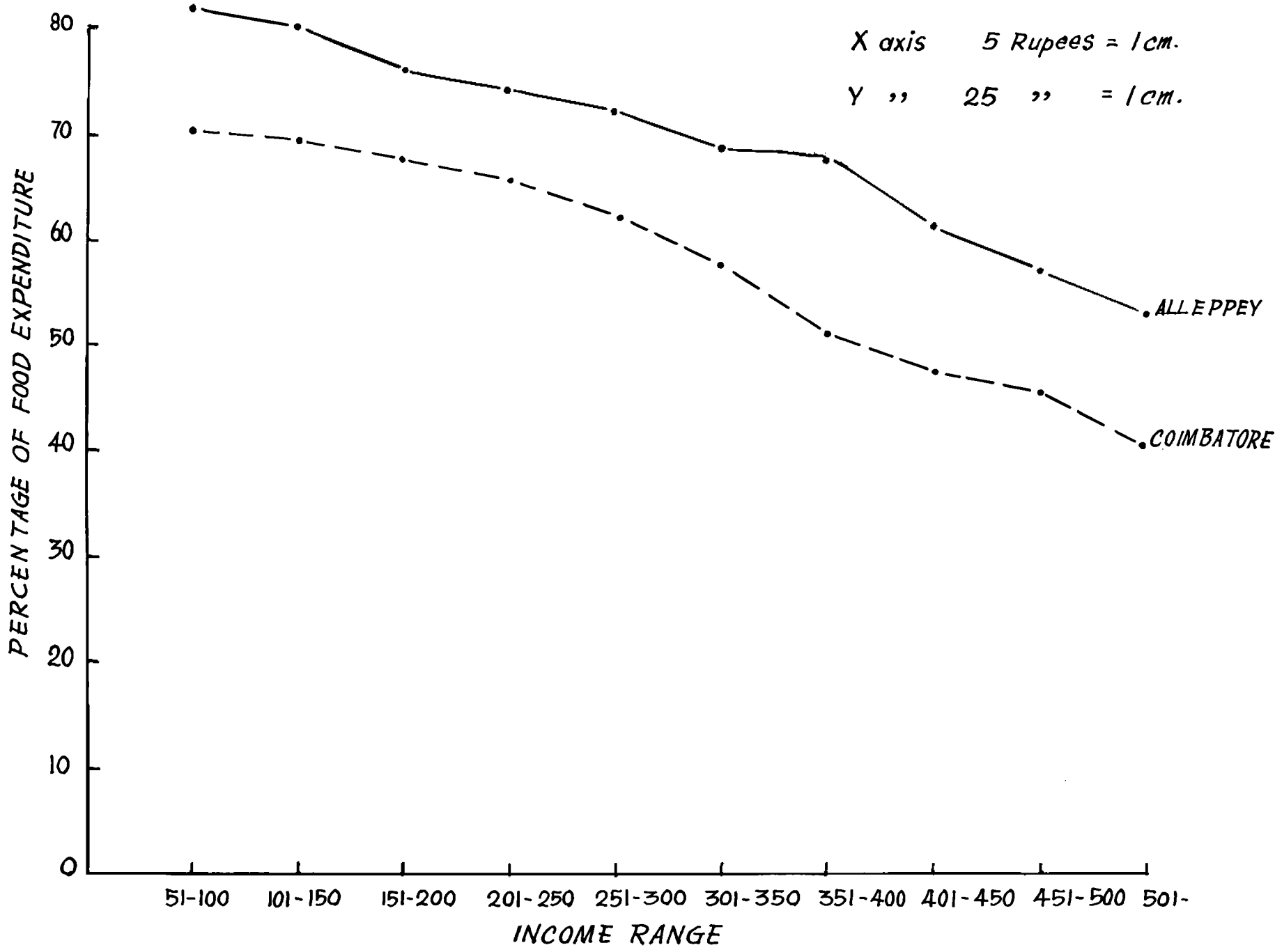


FIGURE - C

The Table VIII reveals the average monthly income of the surveyed families together with their percentage expenditure on items like foods, housing, clothing, health etc. Slightly four per cent of the families in Coimbatore and 90 per cent in Alleppey were getting less than Rs.400 per month. The remaining families average income falls between Rs.400 to 700 (16 families in Coimbatore and 10 families in Alleppey). The families income analysis only reveals their poor economic status.

Food, one of the basic triviratos of Man, ranks first as the important item of expenditure. An observation of the expenditure on food by the families revealed that as the income increased the percentage of expenditure on food decreased in both Coimbatore and Alleppey districts. This is because that the low income families have to spend the major part of their income on food. This pattern of the food expenditure by the families is in conformity with Engle's Law of Consumption.

The percentage range of expenditure on food in two districts, Coimbatore and Alleppey is 70 to 79 per cent and 82 to 85 per cent respectively. The difference in the percentage expenditure on food by the families in two districts may be attributed to the difference in family size, availability of foods, tastes and preferences of the consumers and the general purchasing habits. As already noted the big average size of the families in Alleppey (6 members) is a factor

that has impelled them to spend more percentage of their income on food than their counterparts in Coimbatore (5 members). Hence it can be inferred that family size is a factor influencing the expenditure on food. There is found to be high correlation between the size of the family and the average food expenditure as shown in the Appendix II. The significance of correlation between the size of the family and the average food expenditure in Coimbatore is  $+ 0.855$  and in Alleppey  $+ 0.895$ . The difference in the values is due to the bigger size of families in Alleppey.

Statistical appraisal showed that there is high significance between the income and the average food expenditure of families ( $+ 0.945$  in Coimbatore,  $+ 0.910$  in Alleppey) as given in the Appendix III.

Housing is an important need of the families. The surveyed families in two districts had their own houses, however they incurred some expenditure on housing monthly as shown in the tabular column. Coimbatore families were spending more than their counterparts in Alleppey. This may be due to the difference in rental rates. There is no functional relationship between the monthly income and the monthly expenditure of this item.

Expenditure on operation includes expenditure on lights, washing etc. This is found to be more for Coimbatore families than Alleppey families. On an average the various

income groups in Coimbatore and Alleppey spent five per cent and four per cent of their income respectively on this item.

The families were spending only an insignificant percentage on furnishing and equipment. This is relevant in the context of low incomes, big family size and inadequate housing facilities to the surveyed families.

The clothing expenditure increases in an irregular pattern for the various income groups in both districts. This may be on account of their meagre incomes and lack of good purchasing habits.

Health expenditure in these families was more than the expenditure on furnishing and equipment and it increased with the increase of income. This justifies their taking inadequate, irregular meals leading to sickness.

Development expenditure includes the expenditure on education, reading matters, public welfare, recreation, vacation and trips and vocation. Because of the inadequate money income families spent only a small percentage on this item. The percentage of expenditure increased with the increase in income.

Personal expenditure includes drinks, tobacco, betel leaves, beauty parlour, cosmetics and candy. It is surprising to find that families in Coimbatore spent a

bigger percentage than Alleppey families on this item. This expenditure increased with the increase of income. Betel leaves chewing and drinks have become ingrained habits of many people and thus necessitates an expenditure even with inadequate income.

Savings were seen and the percentage of savings was more in Coimbatore and it increased in accordance with the increase in income. From the analytical study of the table certain findings can be incurred (1) the average monthly income of the families in Coimbatore and Alleppey was low (2) they were spending greater percentage of their income on food. (57.3% in Coimbatore and 77.4% in Alleppey)

The percentage expenditure on food decreased with the increase in income. The amount spent on clothing ranked second and that on operation third and housing fourth. Even with inadequate income families were spending on betel leaves and drinks due to their ingrained habits. Savings had a place, but their magnitude was small. However the percentage of Savings were found to be increasing with increase in income but in a non-proportional manner.

TABLE IX

## ITEM-WISE AVERAGE FOOD EXPENDITURE PER MONTH

Items of food	Average Expenditure/month	
	Colabatore Rs.	Alloppy Rs.
Cereals	111.65	115.9
Pulses	9.52	3.9
Sugar	4.76	7.75
Beverages	2.76	3.59
Milk and milk products	6.56	3.48
Meat and fish	6.99	20.35
Egg	—	2.6
Vegetables and Fruits	12.72	3.48
Roots and tubers	5.35	13.44
Packed foods	4.35	4.21
Fats and oils	9.44	5.88
Hotel	9.10	4.97
<b>Total</b>	<b>104.19</b>	<b>194.55</b>

The type of foods the family consumes has a great influence on the expenditure. The availability and purchase of foods may depend on the seasonal changes and regional variations.

Table IX shows the expenditure on various food items. From this table it is revealed that in both districts the expenditure on cereals was leading than the total expenditure on other items, that is in Coimbatore it was 60.6 per cent of the total food expenditure as against 59.5 per cent in Alleppey. This analysis is in line with the opinion of Justin and Must (1955)<sup>14</sup> that, as income decreases cereals and bread stuffs must be used rather liberally and if the income is larger, more meat will be included. Average food expenditure is less in Coimbatore than in Alleppey, which speaks of the big size of Alleppey families. There is a correlation between food production and total food expenditure in Coimbatore (+ 0.37), and in Alleppey (+ 0.297) as shown in Appendix IV. This is because Alleppey families produced more coconut than other food items and the consumption of coconut is very limited when compared to other food items. From the amounts of expenditure with various food items as spent by the Coimbatore and Alleppey families, there is found to be heterogeneity in their food habits and the rank correlation the value is .4036 as shown in the Appendix V.

#### Duration and sources of purchases:

The nature of the shop, distance from house, and the frequency of purchase will affect the expenditure on food.

Sixty one per cent of families in Coimbatore were buying on a weekly basis from the grocery shops. The per-

centage buying from the cooperative is negligible (1%). Purchases from the retail shops on a daily basis were done by the remaining families.

Fifty six per cent of the families in Coimbatore bought vegetables, fruits, and roots and tubers from the hawkers weekly, ten from super market & 9 buying on a weekly basis and one on the daily basis. Ten per cent of the families had their own vegetable, nine had fruits, roots and tubers. Vegetable market was resorted by the other families.

They bought meat monthly or twice a month and not eggs or fish. Sugar, beverages, oil and packed foods were bought from the nearby grocery shops or petty shops.

Seventy five per cent of the families bought milk and milk products from the hawkers or from neighbouring houses. Others had dairy products of their own.

It was found that since super market is far from the three villages of Coimbatore, most of them found it convenient to market in the nearby shops.

In Alleppey, except 2 per cent of families, the rest had ration rice and sugar got from the ration stores on a weekly basis. These stores were not far from their houses. Two per cent had their own cereals. Other things except milk, fish, eggs, meat and vegetables were got from grocery shops daily. Fish and vegetables were purchased from the common

market on a daily basis. Meat from the slaughter houses was bought only occasionally, ~~was purchased~~.

Except meat other things were purchased from the market nearer to their dwellings.

TABLE X

PERSONNELS MAKING DECISIONS AND PURCHASES OF THE ITEMS OF  
CONSUMPTION

Designation of the personnel	Decision making in purchasing in			
	Coimbatore	Alleppey	Coimbatore	Alleppey
Homemaker	86	73	37	47
Husband	7	1	47	1
Mother	1	1	1	1
Father	-	-	2	4
Brother	1	-	1	1
Daughter-in-law	-	3	-	4
Friends and neighbours	-	-	1	10
Servants	-	-	-	3
Daughter	4	20	4	23
Son	1	2	7	6
Total	100	100	100	100

The making of decisions implies the existence of objectives towards which decisions are originated, as marked by Thomas (1956).

As indicated in the Table X, 86 per cent of the homemakers in Coimbatore and 73 per cent in Alleppey were decision makers. The role of husband, father and others in decision making was negligible in the sample. Thirty seven per cent homemakers in Coimbatore and 47 per cent in Alleppey did the purchasing of various items. But 47 per cent of the husbands in Coimbatore were found doing this, might be because while returning from their working place they did this. Unlss in Coimbatore in Alleppey members like daughter, friends, servants also did the purchasing. No uniformity was seen in the purchasing and decision making activities in terms of personnel in these two districts. They may be doing it as a matter of habit. However, Homemakers in the two districts still do the decision making (86% and 73%) which is an indicative of their big responsibility to the families.

#### Storage facilities

Storage of food is an important thing. Sacks, pots or tins were the materials used for storing cereals in both districts. Paper, tin or bottles were used for sugar and bever ges. Pots were in use for storing vegetables and roots and tubers.

**TABLE XI**  
**USE OF PACKED OR TINNED FOODS**

Food items	No. of families who are buying		Average expenditure Rs.		Reasons for buying							
					For the Child		For Family Consumption		For guests		For the sick	
					C	A	C	A	C	A	C	A
Bread	68	61	6	5	59	50	2	7	2	2	5	2
Horlicks	5	5	6	12	-	-	2	3	3	-	-	-
Baby-foods	1	5	2	8	-	1	5	-	-	-	-	-

Use of packed or tinned foods will also influence the food expenditure. From the Table XI it is revealed that in Coimbatore 68 per cent of the families bought bread with a monthly average of Rs.6 and in Alleppy 61 per cent families on an average of Rs.5. The other items bought were Horlicks and Baby Foods. The reasons for buying as stated by them were for children, for the family consumption, for guests and for the sick.

**TABLE XII**  
**USE OF BABY FOODS**

Name of the items	Number of families in		Reasons for the selection							
	Coimbatore	Alloppay	Good for the child		Baby like it		It is easy available		Less expensive	
			G	A	G	A	G	A	G	A
Tinned Baby Foods	5	5	3	4	1	-	1	1	-	-
Cow's milk	93	94	24	29	7	-	26	-	26	65
Nil	12	1	-	-	-	-	-	-	-	-

Only five per cent of the families in both the districts were using tinned baby food, the rest falls back on cow's milk. They have a preference for cow's milk because of its good quality and easy availability.

TABLE XIII  
OMITTED FOODS

Name of the omitted foods	No. of families in Coimbatore	Nature of families		Reasons for omitting		
		Joint	Nuclear	Dont' like (tradition)	Poor people diet	Not good for health
Fish	8	6	2	8	-	-
Egg	1	1	-	1	-	-
Meat	2	2	-	2	-	-
Cholam	26	10	16	15	3	8
Cambu	6	3	3	2	1	3
Ragi	3	1	2	3	-	-
Papaya	13	4	9	-	-	13

Table XIII Shows the omitted foods by the Coimbatore families which was not seen in Alleppey families.

The omitted foods by 59 Coimbatore families <sup>were</sup> fish, egg, meat, cholam, cambu, ragi and papaya as shown in the table and this was done on purely traditional grounds. Cambu, Cholam and papaya were opined to be generating heat in the body by 24 per cent of the families.

The non-omission of foods by the Alleppey families may be due to their huge rate of literacy.

**TABLE XIV**  
**PREPARATION OF MEALS**

In Coimbatore					
Name of the meal	Rice and dhal or vegetable curry	Dosa, idly or any other tiffin	Cholan and dhal or vegetable curry	Coffee	Snacks
Breakfast	12	85	5	—	—
Lunch	85	—	17	—	—
Tea	—	—	—	85	5
Dinner	73	15	14	—	—

In Alleppey					
Name of the meal	Rice & fish or tapioca	Chappa-thi or tapioca	Snacks with tea	Kunji & fish or tapioca curry	Kunji vegetable curry
Breakfast	8	73	—	—	5
Lunch	63	—	—	32	—
Tea	—	—	98	—	—
Dinner	92	—	—	8	—

Table XIV shows the normal food preparations <sup>in</sup> of both districts.

For breakfast 85 per cent of the families in Coimbatore prepared dosa, idly or any other tiffin, usually with rice, but in Alleppey they took tapioca or chappathi. For lunch, 85 per cent of the Coimbatore families prepared rice and dhal or vegetable curry, but in Alleppey 68 per cent consumed rice and fish or tapioca. And for dinner the same preparations were done by 75 per cent and 92 per cent of the families of Coimbatore and Alleppey respectively.

For festivals in Coimbatore, Vadai, Lada, Payasam were the main preparations while in Alleppey they prepared meat, and payasam.

These variations in the habits of food intake may be due to the availability of foods or the differences in income.

#### Foods Given to Mothers:

In Alleppey all foods were given for the expecting mothers and only solid foods for the nursing mothers. For other groups like teething child, old people, working people all the available foods were given.

In Coimbatore except four per cent of families the rest gave no special foods, other than they prepared usually, for the expectant. Milk was given for expectant mothers by four per cent of families. For nursing mothers 15 per cent gave no egg, since it was opined not to be good to them. All families in Coimbatore gave bread and hot coffee,

soon after delivery. For teething child, old people and working people, except three per cent of families <sup>others</sup> gave no special foods. But rice was given to teething child, old people and working people (Head of the families) in the 3 per cent of families while for others cholera was served.

Food preparation by the families for different diseases are given in the Table XV.

TABLE XV

## FOODS GIVEN DURING SICKNESS

	What doctor prescribes		All kinds of foods		Kunji		Seasoned rice		All foods		Cold		Fruits butter milk & curds		Fruits and coconut water		Tea with lime		Coconut water		Bread coffee	
	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A
Fever	-	20	-	-	8	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	20
Cold	-	-	10	30	5	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	30
Cough	-	-	95	60	6	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	25
Small pox	-	-	-	-	-	-	-	-	5	35	95	-	2	65	-	-	-	-	-	-	-	-
Diarrhoea	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-
Dysentery	-	80	-	-	-	5	100	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-

Cold foods such as fruits, curds, butter milk were suggested by Coimbatore families for small pox and Alleppey families mostly preferred coconut water and fruits for this disease. All the Coimbatore families reported of giving seasoned rice for diarrhoea and dysentery.

#### Ready made foods

The purchase of ready made foods is conditioned by habits and impelled by necessity, more income, etc.

In the survey 83 per cent of families in Coimbatore and 53 per cent in Alleppey had purchased ready made foods mostly rice and tiffins. The average monthly expenditure by the families on this item was Rs.10.9 and Rs.9.3 respectively in Coimbatore and Alleppey.

## V SUMMARY AND CONCLUSION

The study on the factors influencing the food expenditure by the selected rural families in the Coimbatore and Alleppey districts has resulted in the following findings:-

1. Seventy one per cent of the families were nuclear in nature.
2. Hindus constituted 97% in Coimbatore and 73% in Alleppey with many sub-castes.
3. Five was the average house-hold size in Coimbatore and six in Alleppey.
4. Adults were more in number (53% and 59% in Coimbatore and Alleppey respectively) in the population.
5. Sixty six percent and 38 percent were the rates of literacy in Coimbatore and Alleppey respectively speaking of the availability of improved educational facilities to the masses.
6. Occupations of different types such as farming, business, coir-making, teaching etc. were followed by the families reflecting the inequalities in the income.
7. Rupees 321 and 275 were the average monthly incomes of the families in Coimbatore and Alleppey respectively.

8. Forty two families in Coimbatore and 93 in Alleppey had farming as the main occupation cultivating rice, cholam, pulses, vegetables roots and tubers fruits, sugar cane, coconut etc. with the average monthly income varying from Rs.10-100 in Coimbatore and 2.6 to 66 in Alleppey.
9. Budgetary practices were absent in 89 per cent of families in Coimbatore and 97 per cent in Alleppey.
10. The monthly average food expenditure was Rs.184 (57.3%) for Coimbatore and Rs.194.5 (77.4%) for Alleppey. The biggest amount in both the districts was spent on cereals (Rs.111 in Coimbatore and Rs.115 in Alleppey) The allocations of money on the other items of food like pulses, sugar, milk, milk products, egg etc. indicated a high degree of inadequacy necessitated by low incomes and big families. There was heterogeneity in the food habits of the samples. Regarding food expending it was found out that  
(a) as the income income increased, the percentage of expenditure on food decreased.

- (b) The percentage range of food expenditure was 70 to 99 in Coimbatore and 82 to 93 in Alleppey. This difference in the percentage range of expenditure between Coimbatore and Alleppey could be accounted for the difference <sup>in</sup> income. The correlation between income and food expenditure was significant at 1 per cent level (+ 0.945 in Coimbatore and + 0.910 level in Alleppey.)
- (c) Alleppey families had spent more (77.4%) on food necessitated by their big size. The correlation between the size and total expenditure on food was + 0.853 in Coimbatore and + 0.895 in Alleppey.
11. Coimbatore families were spending more on washing than their counterparts in Alleppey. There is no functional relationship between family income and expenditure on housing.
12. The expenditure on operation was 5 per cent in Coimbatore and 4 per cent in Alleppey on an average, reflecting the difference in the income of families in the two districts.
13. Only an insignificant percentage of (1.6% in Coimbatore and 0.92% in Alleppey) income was

spent on furnishing and equipment in both the districts, pre-supposing the low incomes and large families etc.

14. The irregular pattern of clothing expenditure (7% and 4.75% in Coimbatore and Alleppey respectively) could be connected with the non adoption of budget by the families together with low income and absence of good purchasing habits.
15. Health expenditure (4.3% and 3.16%) was seen increasing with the increase of income, reflecting their taking inadequate food.
16. Only a small percentage (4.4% and 3.3%) was spent on development expenditure and this increased with the increase in income.
17. Because of the ingrained habits, the families were found spending a certain percentage (5.8% and 2.65% in Coimbatore and Alleppey respectively of their income on drinks, tobacco, betel leaves etc. revealing that habits do influence the consumption of some items irrespective of their incomes.

18. Savings were seen and the average percentage was Rs.6.2 and Rs.3.9 in Coimbatore and Alleppey respectively. It was noted that with that with the increase in income savings were seen going up.
19. No uniformity in the pattern of decision making and purchasing of the items of consumption in terms of the personnel could be evolved. However both in the real of decision making and purchasing, homemakers played a key role justifying their greater association in the task of homemaking.
20. Co-operative were not popular for the families. However Alleppey families got rice and sugar from the ration shops in a weekly basis.
21. Purchases of food items were made on a daily weekly and monthly basis in an irregular way from the retailers and petty shops in both the districts.
22. Storage facilities were primitive in that, sacks pots and tins were the mainly used containers for this purpose.

23. Bread, horlicks and baby foods were the only purchased items of packed foods.
24. Only 5 per cent of the families in the sample purchased tinned foods.
25. Coimbatore families (59%) had omitted foods such as fish, egg, meat, chicken, omelet, papaya because of their traditional and superstitious believes. In Alleppey this trend was not seen, may be on account of the high literacy rate.
26. Rice was the main item of meal preparation for Coimbatore families and tapioca and fish for Alleppey families.
27. There was wide difference in the number of foods given to members like, nursing mothers, teething child, old people and working people.
28. Fruits, nuts, buttermilk were suggested for small pos in Coimbatore and coconut water in Alleppey.
29. Eighty three percent of families in Coimbatore and 55 per cent in Alleppey bought ready made foods from the hotels spending on an average Rs.10.9 and 9.5 per month respectively.

To sum up the findings of the study, family size, occupation, income, traditional practices and superstitious beliefs, eating habits, availability of food products, together with the general purchasing habits are found to have their influence on the food expenditure of families.

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III. 1. Sources of income and the use of products

Sources	Amount income		Usage of the products for the family consumption		If not what do you do with the products
	per month or year	per month or year use	Amount	Money value	

Main

Rice

Cholan

Wheat

Roqi

Milao

Nuts &  
Oilseeds

Leafy vege-  
tables

Other vego-  
tables

Roots & tubers

Fruits

Sugar cane

Coconut

Others

Sources	Amount per month or year	Income per month year Rs.	Usage of the products for the family consumption Amount Money value	If not what do you do with the products
---------	-----------------------------------	---------------------------------------	---	--

Supplementary  
Occupation

Poultry

Dairy

Bee keeping

Kitchen  
garden

Others

2. Other sources of incomes

Sources	Income/month or year (Rs.)
---------	-------------------------------

a. House rent

b. Dividend in shares and investments

c. Others

**IV. Are you in the habit of maintaining a budget?**

Yes	Reasons	No	Reasons
.....			

**Oral**

**Written**

.....

**b. The estimate of expenditure on various items:**

Items	Monthly expenditure Rs.
.....	

**Food**

**Housing**

**Operation**

**Furnishings & equipments**

**Clothing**

**Health**

**Development**

**Personal**

**Automobile**

**Savings**

**Other items**

.....

V. Particulars of the decision maker and purchaser:

.....  
 Decisions                      Purchaser  
 maker

Homemaker

Husband

Father in law

Mother in law

Sister in law

Brother in law

Daughter

Son

Relatives

Friends or  
 neighbours

Servants

.....



-----  
1.      2.   3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.  
-----

**Leafy  
vegetables**

**Other  
vege-  
tables**

**Roots &  
tubers**

**Fruits**

**Fats &  
Oils**

**Others**

-----

**IIIc Details of storage of food items**

Items	Fridge	Jama- tha refri- gerator	Under ground store- ge	Any other
-------	--------	-----------------------------------	---------------------------------	--------------

Cereals

Pulses

Sugar &  
Jaggery

Beverages

Milk

Meat & Fish

Eggs

Vegetables

Roots &  
tubers

Fruits

Fats & Oils

**VIIfc Do you buy packed or tinned food?**

Yes

No

S.No.	Items	Expenditure/ month(₹s.)	Reason for buying
1.	Jam		
2.	Bread		
3.	Pickles		
4.	Herlicks or viva		
5.	Baby foods		
6.	Tinned vegetables		
7.	Any others		

IX. Which food do you select for babies?

Tinned	Cow's milk	Reason for selection

X. Foods you have omitted:

Foods	Reasons

**XI. What do you cook normally for:**

Items	Reason
-------	--------

**Breakfast**

**Lunch**

**Tea**

**Dinner**

**Festivals**



**XII. Foods given to:**

Various Personnel Foods Given	Reason for giving these foods
-------------------------------	-------------------------------

**Expectant Mother**

**Nursing mother**

**Teething child**

**Old people**

**Working people**

**Diseases**

- Fever
- Cold
- Cough
- Small Pox
- Diarrhoea
- Dysentery
- Others



**XIII. Purchase of ready made foods:**

Sources	Food items	Expenditure	Reason for buying
---------	------------	-------------	-------------------



APPENDIX II - A

CORRELATION BETWEEN FAMILY SIZE AND FOOD EXPENDITURE IN ALLEPPEY

X Food expenditure											Σ	ΣY	ΣY <sup>2</sup>	ΣXY	ΣX <sup>2</sup>		
	-4	-3	-2	-1	0	1	2	3	4								
	51- 100	101- 150	151- 200	201- 250	251- 300	301- 350	401- 450	451- 500									
Y Family Size																	
7																	
8	4																
9	1	5															
10		10	4														
11		5	6														
12		4	11	6													
13			5	8	6												
14				1	4	2											
15					2	5	1										
16						2	1										
17							1										
18								1									
19									1								
20										1							
21											1						
Σ	5	25	29	20	26	4	0	1	1	100	-270	1525	-180	740			
ΣY	-20	-75	-64	-20	0	4	0	5	4	-180							
ΣY <sup>2</sup>	80	225	112	20	0	4	0	9	16	485							
ΣXY	-34	-125	-60	-15	-10	6	0	7	5	-270							
ΣX	150	240	180	25	0	6	0	21	20	740							

$r = +0.895^{**}$

There is correlation between size of the family and food expenditure at one percent level.

APPENDIX III

CORRELATION BETWEEN INCOME AND FOOD EXPENDITURE IN COOPERATORS

X	-4	-3	-2	-1	0	1	2	3	4	5	$\Sigma y$	$y^2$	$\Sigma xy$	$\Sigma x^2$
Food expenditure	51-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500					
Y	Family income													
-4	51-100	7									7	49	-28	112
-3	101-150	3	7								10	100	-30	99
-2	151-200	2	13	6							23	529	-46	128
-1	201-250		9	6	5						20	400	-20	44
0	251-300		2	3	5	1					11	121	-11	0
1	301-350				2	3					5	25	-5	9
2	351-400					5	3				8	64	-16	36
3	401-450						2	2			2	4	-4	4
4	451-500						2	4	2		6	36	-12	40
5	above 500							4	2	2	8	64	-16	100
$\Sigma x$		12	31	17	12	9	7	9	2	2	200	400	-35	655
$\Sigma xy$		-28	-33	-54	-12	0	7	16	8	8	-180	360		
$\Sigma x^2$		16	27	12	12	9	7	9	4	4	640	640		
$\Sigma y$		-41	-35	-22	-5	15	20	28	10	10	-35	1225		
$\Sigma y^2$		1681	1225	484	25	225	400	784	100	100	561	6400		

$r = +0.945^{**}$

There is correlation between family income and food expenditure at one percent level.

APPENDIX III-A

CORRELATION BETWEEN INCOME AND FOOD EXPENDITURE IN APOEPPEY

X		-4	-3	-2	-1	0	1	2	3	4	$\Sigma x$	$\Sigma x^2$	$\Sigma xy$	$\Sigma y^2$
Food expenditure		51-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500				
Y	Family income													
	-4	51-100	5								5	25	5	25
	-3	101-150	2	17							10	100	17	289
	-2	151-200		7	18						25	400	35	676
	-1	201-250		1	10	5					25	250	10	100
	0	251-300				9	6				15	225	0	0
	1	301-350				3	2				5	25	5	25
	2	351-400				2	1	1			4	16	2	4
	3	401-450				1	2				3	9	2	4
4	451-500									0	0	0	0	
5	above 500					2	3		1	1	7	35	17	49
$\Sigma x$		5	25	25	20	15	4	0	1	1	100	-81	551	-180
$\Sigma x^2$		25	225	400	500	900	1225	1600	2025	2500	1000	8100	3025	10000
$\Sigma xy$		50	225	112	20	0	4	0	9	15	100	-81	551	-180
$\Sigma y$		5	25	25	20	15	4	0	1	1	100	-81	551	-180
$\Sigma y^2$		25	625	625	400	225	16	0	1	1	100	64	3025	324

$r = +0.910^{**}$

There is correlation between income and food expenditure at one percent level.

**APPENDIX IV  
CORRELATION BETWEEN HOUSEHOLD FOOD PRODUCTION AND FOOD EXPENDITURE IN ODISHA**

X		-2	-1	0	1	2	3		$\Sigma$	$\Sigma Y$	$\Sigma Y^2$	$\Sigma X$	$\Sigma XY$
Food expenditure		51-100	101-150	151-200	201-250	251-300	301-350						
	Y												
-5	1-50	4	1	2				7	-35	175		6	45
-4	51-100	2	2	1				5	-20	80		15	24
-3	101-150		2	2				4	-12	36		12	6
-2	151-200		1	5	1			7	-14	28		6	6
-1	201-250			6				6	-6	6		6	6
0	251-300			1				1	0	0		6	0
1	301-350				2			2	2	2		2	2
2	351-400				3			3	6	12		3	6
3	401-450					1		1	3	9		2	6
4	451-500				2			2	8	32		2	8
5	above 500					3	1	4	20	100		9	45
$\Sigma X$		6	6	17	8	4	1	42	-48	480		1	142
$\Sigma Y$		-12	-4	0	8	8	3	1					
$\Sigma Y^2$		24	6	0	8	16	9	65					
$\Sigma XY$		-28	-21	-36	14	28	8	-48					
$\Sigma Y^3$		56	21	0	14	26	15	142					

$r = +0.660^{**}$

There is correlation between household food production and Food expenditure at one percent level.

TABLE IV A

CORRELATION BETWEEN HOUSEHOLD FOOD PRODUCTION AND FOOD EXPENDITURE  
IN APPROPRIATE

X Food Expendi- ture		-4	-3	-2	-1	0	1	2	3	4	5	$\Sigma$	$\Sigma^2$	$\Sigma X$	$\Sigma Y$	
		51- 100	101- 150	151- 200	201- 250	251- 300	301- 350	351- 400	401- 450	451- 500						
Y Food Production	-5	8	20	20	7	10						60	-300	1600	-120	565
	-4	2		1	5	4				1		18	-52	328	-12	144
	-3				3		2	0	1			6	-28	54	2	19
	-2		1			1						2	-4	8	3	9
	-1					1						0	0	0	0	0
	0		2		2	1						5	0	0	5	25
	1		1		2							3	3	3	3	9
	2			1	1							1	2	6	1	1
	3				1							1	3	9	1	1
	4											0	0	0	0	0
	5						2					2	20	20	2	20
$\Sigma X$		6	24	22	20	16	4	0	1	1		93	-368	2935	-145	647
$\Sigma Y$		-20	-72	-44	-20	0	4	0	3	1		-75				
$\Sigma X^2$		60	216	198	20	0	4	0	9	16		443				
$\Sigma Y^2$		-25	-101	-102	-20	-68	4	0	-3	-4		-358				
$\Sigma XY$		92	303	204	80	0	4	0	-9	16		647				

$r = +0.297^{**}$

There is correlation between household food production and food expenditure at one percent level.

APPENDIX V

RANK CORRELATION BETWEEN THE FOOD HABITS OF COIMBATORE AND ALLEPPEY DISTRICTS

Items	Percentage of expenditure		X	Y	X - Y (d)	d <sup>2</sup>
	Coimbatore	Alleppey				
Cereals	60.62	59.57	1	1	0	0
Pulses	0.17	2	3	8	-5	25
Sugar	2.58	1.98	10	4	6	36
Beverages	1.80	1.85	11	11	0	0
Milk & milk products	1.88	1.79	7	9.5	-2.5	6.25
Meat and fish	1.79	10.48	6	2	4	16
Egg	0	1.54	12	12	0	0
Vegetables & Fruits	6.91	1.79	2	9.5	-7.5	56.25
Roots & tubers	1.12	9.49	8	3	5	25
Fats & oils	1.15	1.02	4	5	-1	1
Packaged food	2.62	2.18	9	7	2	4
Hotel	4.84	2.85	5	6	-1	1
						170.5
$P = 1 - \frac{\sum (d^2) + \frac{1}{n} (n^3 - n)}{(n^3 - n)}$						

where P (res) = Correlation Coefficient = 0.404

n = number of ties