



**"SOCIO-ECONOMIC AND
CULTURAL DETERMINANTS
INFLUENCING THE
NUTRITIONAL STATUS
OF WOMEN WORKERS OF
INFORMAL SECTOR IN
THIRUVANANTHAPURAM
DISTRICT"**

**REPORT SUBMITTED
TO THE
INDIAN COUNCIL OF
SOCIAL SCIENCE RESEARCH
(ICSSR)
NEW DELHI**



**DEPARTMENT OF HOME SCIENCE
COLLEGE OF AGRICULTURE, VELLAYANI 695 522
KERALA AGRICULTURAL UNIVERSITY
1995**

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INTRODUCTION

INTRODUCTION

Research on women is not new, nor is attention to the household as a unit of analysis. Women now live longer and are better educated than they have ever been, but women's deteriorating situation has not changed and is undoubtedly related to a more general decline in living conditions. Studies on women in poverty have been documented to respond to the economic hardships affecting their families, by increasing their work time and work load both inside the house and in the work place; so much so that the increased work load of women has come to be termed the "invisible adjustment" of households and communities in crisis during the past decade.

Lack of gender disaggregated household data has obscured the reality of women's roles. Intra household research is useful in revealing the complex factors that affect women's actions and women's choices. The concept of production, needs to be broadened, to include unremunerated activities that provide goods and services to the household that may or may not have a market equivalent. It underscores the importance of recognizing and documenting variation in women's activities within households. Persons engaged in the production or processing of primary and non primary products and services for use in the home and other domestic and related activities such as meals preparation (preparing and cooking food, serving food and cleaning up) cleaning the dwelling and the surroundings, care of clothing (laundering, ironing and mending), personal care of other household members and all shopping related to these tasks need recognition. These activities also become economic in the broad meaning of the term; since these activities are considered to have economic value if they could be performed by a paid worker to achieve the same results.

Women's varied activities and the mediating efforts of the households may depend on the location of the activity (at home or away) nature of the

activity (whether child can accompany the mother), other social and household factors (existence of alternative caretakers) and women's control over their own income, degree to which they bear responsibility for providing for the child and for others. All these interact in diverse and interesting ways to create varied strategies and corresponding variations. There are changes in the pattern of household activities and qualitative shifts in child rearing practices as the days go by and these changes have significant bearings on women's time use patterns, allocation of resources within the household and intra-household interactions. Inter-household variation will also be influenced by household type and composition (eg. the proportion of dependents to productive workers) and a host of intra-household factors plus extra household relations (such as economic and social ties to the kin).

Women today live longer, have fewer children and are more likely to be literate and tend to work outside the home. Yet it is also true that millions of women in the country live lives of grinding poverty; work desperately hard, care for others more than for themselves and receive little reward or recognition for their efforts.

Demand for reliable household data on the above is increasing since it provides a way of identifying planning needs and problem areas. Useful informations on productive activities like patterns of employment and unemployment, the household division of labour and decision making, income generating enterprises within the home and the value of household production, demographic characteristics such as size and composition of households, number of female headed households, fertility rates and living conditions like household income and expenditure, standards of housing, health, nutrition, education and energy use need to be generated.

The informal sector is of major importance in understanding the scope of women's economic contributions. Within this informal sector of the economy the output from women's productive activity may be channeled into increased household consumption or into a local market as a means of

income generation for the household depending upon the current balance between needs and resources of the household.

In the informal sector, women are actively involved in the sale of dairy products, street foods, personal services, food processing, petty trading and cottage industries; all of which taken together constitute a significant portion of the national economy. Although in the past, neither subsistence production nor the informal economy were well documented in national economic accounts, efforts are now under way to include them more accurately. In this context, household studies are invaluable in documenting women's roles in these areas. Understanding the interaction between women's personal characteristics and their work has become a major area of public policy research and the household is the nexus of these interactions.

In India, women's organisations, such as Self Employed Women's Association (SEWA) of Ahmedabad, Annapurna Mahila Mandal of Bombay and Working Women's Forum (WWF) of Madras have made great strides in documenting the extent and importance of the informal activities of women of the urban poor. The involvement of rural women in the informal economy, however, remains largely unaccounted although efforts are being made in this direction too. However the data available at present is scanty.

In a report of National Commission on Self Employed Women and Women in the Informal Sector, Government of India, the extent and variety of women in the activities under informal sector in both urban and rural India is documented and it called for improved data on women's paid as well as unpaid activities both within the home and outside.

Because of the urgent need to improve household income levels, to increase food production and to enhance health and nutritional status, development programs have emphasized women's formal and informal employment and their work outside their homes. A more comprehensive approach to women's productive activities including unpaid household

production may help development planners to plan better programmes for women. Attempts to increase productivity in the formal sectors of the economy can be enhanced if women's essential productive roles within the household are understood.

Problems pertaining to socio economic and nutritional situations faced by the women engaged in informal sector in Kerala are immense and different from that of their counterparts in other states. In Kerala only 35.76 per cent of women are engaged in agriculture and the remaining seek employment in informal sector. These women are observed to have internalised the oppressive norms of their domestication and seclusion.

Status of women belonging to this sector in each state may also vary, depending on their culture and tradition. Studies on the problems and issues of women employed in the informal sector in Kerala are few and far between. Hence a study on "Socio economic and cultural determinants influencing the nutritional status of women workers of informal sector in Thiruvananthapuram district" was undertaken with the following objectives:

- (i) To locate factors which perpetuate poverty and subsistence condition among the low income working women.
- (ii) To monitor the socio economic conditions which favour the female worker to offer herself to the labour market.
- (iii) To assess the various strategies evolved by her in daily life to undertake these multifarious activities.
- (iv) To study how the women combine the roles of productive worker, homemaker and mother, and
- (v) To assess the health and nutritional status of these women.

MATERIALS AND METHODS

MATERIALS AND METHODS

The study on socio economic and cultural determinants influencing the nutritional status of women workers of informal sector in Thiruvananthapuram is an attempt to ascertain the impact of certain socio economic dietary variables on the nutritional status of the women employed in this sector.

LOCALE OF THE STUDY

Six NES Blocks, three municipalities and one corporation were selected purposively for the study from Thiruvananthapuram district.

NES Blocks selected

Athiyanthoor

Nemom

Trivandrum Rural

Vellanad

Kazhakuttam

Chirayinkil

Municipalities selected

Neyyattinkara

Nedumangad

Varkala

Corporation selected

Trivandrum

SAMPLE SELECTION

Seventy five families from the above ten areas (6 NES Blocks, 3 municipalities and 1 corporation area) each where at least one woman was employed in the informal sector were selected for the study. Socio economic and dietary data were collected from these 750 respondents.

Out of these 750 respondents, a group of 75 were further selected at random which served as the experimental group for the conduct of indepth studies pertaining to time utilisation pattern and nutritional status.

A matching sample of 75 respondents and their families selected at random from the different (ten) selected areas who were housewives and were unemployed functioned as a control group for the purpose of comparison.

PLAN OF STUDY

Based on the objectives, the plan of study comprised of,

1. A survey to monitor the socio economic status, food consumption and dietary habits of the families
2. A time utilisation study to ascertain the daily time utilisation pattern of the women
3. A survey to assess the nutritional awareness of the women, and
4. Assessment of the nutritional status of selected employed women (75) through
 - i) anthropometric measurements viz. height and weight
 - ii) food weighment survey to assess their actual food intake and

METHODS ADOPTED FOR THE STUDY

Interview method

Interview method through house visits was selected to collect the required information on socio economic and dietary habits of the families and also to assess the nutritional awareness of the respondents.

Time utilisation study

Time utilisation study was conducted using time diaries which indicate the activities and the time they start and end these activities. The diaries contained preclassified categories of activities in which the interviewer recorded the duration of activities using predetermined symbols.

Anthropometry

Commonly employed anthropometric measurements such as height and weight were collected and compared with that of Reference Indian woman (ICMR, 1989). Body Mass Index (BMI) of the women were worked out using the formula $\text{weight} / \text{height}^2$.

Actual food intake

Among the different methods, weighment method is considered to be the most reliable, since the actual foods consumed by the individuals are weighed. One day weighment survey was conducted among 75 women to determine their actual food intake. The average food and nutrient intake were worked out.

Haemoglobin level

Haemoglobin estimations on blood collected from the above 75 women were also carried out.

Energy expenditure pattern

The energy expenditure was calculated from the time and activity schedule of selected 75 women. The energy intake was computed from the actual food intake. From this data the energy balance was assessed by comparing the energy intake and expenditure and actual energy requirement.

DEVELOPMENT OF TOOLS AND CONDUCT OF THE STUDY

To elicit information on the socio economic and personal characteristics of the women a schedule was developed. The schedule comprised of details to collect informations on religion, caste, place of residence, type, size and composition of the family, marital status of the women, monthly income, housing condition, food expenditure pattern, and indebtedness of the families. The schedule also included details about the staple foods, frequency of use of various foods, meal pattern, foods included and excluded during special occasions and special conditions and knowledge about nutrition and health. An activity schedule was also prepared. The schedules were pretested before field application.

Anthropometric measurements were taken using universally accepted methods.

Anthropometric measurements, actual food intake and haemoglobin levels were used to compute the nutritional status index of the women.

Nutritional awareness of the women was ascertained by assessing their knowledge about nutritional significance of various foods in daily diet, need for health care, functions of nutrients, foods given during special condition, work efficiency, children's diet, scientific methods of conserving nutrients in foods and benefits given to women and children through nutrition intervention programmes, and assigning scores for varied statements. On the basis of the total scores the nutritional awareness of the respondents was categorised.

Analysis of data

Independent variables such as educational level of the women, family size, family income and number of employed members in the family were selected to find the association with the food expenditure pattern of the families.

Relationship between the time expenditure pattern and health status of the women was statistically tested. Independent variables such as family size, education, number of employed members in the family and family income were selected to find the association with time expenditure pattern of the women.

The anthropometric measurements and haemoglobin values were compared with the standard values by students "t" test. Mean food intake and nutrient intake of the women were compared with the Recommended Dietary Allowances (RDA) suggested by ICMR and haemoglobin values with standard values.

Nutritional status index of women of different occupations were compared by "t" test. Relationship of selected socio economic variables such as family size, educational level of the women and family income, with actual food and nutrient intake of the women was assessed.

RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

This chapter comprises of comprehensive information on

1. Socio Economic profile of the families
2. Dietary habits of the families
3. Socio Economic and nutritional profile of women
4. Nutritional status of the employed women

SOCIO ECONOMIC PROFILE OF THE FAMILIES

In India 12 per cent of working women work in the organised sector while 28 per cent are in the unorganised sector. Urban female work participation in this sector in Kerala (11.76 per cent) is higher than that of all India level. Female work participation rate is high for low paid work in the state and the work habitually done by women is classified as lighter or less skilled than the work done by men and consequently becomes less paid.

Quality of life of a community is influenced by social customs, beliefs, superstitions, religion, cultural values and socio economic status of the families, and there is a need for analysis of the role of wide variety of cultural factors which contribute to varying nutritional status among family members. In this study, details pertaining to place of residence, religion, caste, type, size and composition of family, educational level, economic and employment status, and housing facilities are major factors studied.

Among the families surveyed, 68.80 per cent were from rural areas, 5.87 per cent from slums and remaining 26.33 per cent of the women were residing in urban areas (Table 1).

Table 1. Place of residence of the respondents

Place of residence	Experimental group	Control group
Urban	190 (26.33)	0 (00.00)
Rural	516 (68.80)	68 (90.66)
Slum	44 (05.87)	7 (09.34)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

In the control group 90.66 per cent were from rural areas and only 9.33 per cent were from slum areas.

In the population under focus, 83.34 per cent were Hindus; 9.6 per cent Christians and 7.06 per cent were Muslims in the experimental group (Table 2). In the control group there were more or less similar distribution of major three religions as Hindus (97.33 per cent) Muslims (1.33 per cent) and Christians (1.33 per cent).

Table 2. Religious status of the respondents

Religious group	Experimental group	Control group
Hindu	625 (83.34)	73 (97.34)
Christian	72 (09.60)	1 (01.33)
Muslim	53 (07.06)	1 (01.33)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Caste-wise distribution of the respondents revealed that 59.33 per cent of the respondents in the experimental group belong to backward classes; 25.47 per cent were from scheduled castes and only 15.2 per cent belonged to the forward castes (Table 3). While in the control group 40 per cent belonged to scheduled castes; 22.66 per cent to other backward castes and 37.33 per cent belonged to the forward castes.

Table 3. Caste-wise distribution of the respondents

Caste	Experimental group	Control group
Forward Castes	114 (15.20)	28 (37.33)
Other Backward Castes	445 (59.33)	17 (22.66)
Scheduled Castes	191 (25.47)	30 (40.00)
Total	750 (100)	75 (100)

Figures in parenthesis indicates percentage

The social system of Kerala has changed during the last two decades and nuclear families have become very common in this state. Families surveyed in the study were mainly of nuclear type. Out of the 750 families studied 625 (83.33 per cent) were nuclear families while only 125 families (16.67 per cent) were of joint type; 77.07 per cent of the families were male headed and 22.93 per cent were female headed (Table 4). In the control group, 82.66 per cent were nuclear type families, while 17.33 per cent were joint families. In the joint families either aged parents or married children were staying with the family. Eighty eight per cent of the families were seen to be male headed while only 12 per cent were female headed. Female headed families were more among experimental group; probably these women were forced to take the responsibility

because of desertion or widowhood and these households had better survival chances because of greater dependency on wage income of these women.

Table 4. Type of families of the respondents

Particulars	Experimental group			Control group		
	Male headed	Female/ headed	Total	Male headed	Female/ headed	Total
Nuclear	488 (65.07)	137 (18.27)	625 (83.33)	58 (77.33)	4 (05.33)	62 (82.66)
Joint	90 (12.00)	35 (04.66)	125 (16.67)	8 (10.67)	5 (06.67)	13 (17.33)
Total	578 (77.07)	172 (22.93)	750 (100.0)	66 (88.00)	9 (12.00)	75 (100.0)

Figures in parenthesis indicate percentage

Among the families surveyed 55.73 per cent had 1 to 5 members and 44.27 per cent had more than 5 members in the experimental group. In the control group, 65.33 per cent of the families had 1 to 5 members and 34.67 per cent had more than 5 members (Table 5).

Table 5. Family-size of the respondents

Family size	Experimental			Control		
	Male headed	Female headed	Total	Male headed	Female headed	Total
1-5 (41.20)	309 (14.53)	109 (55.73)	418 (68.18)	45 (44.44)	4 (65.33)	49
6 and above	269 (35.87)	63 (08.40)	332 (44.27)	21 (31.82)	5 (55.55)	26 (34.67)
Total (77.07)	578 (22.93)	172 (100.00)	750 (100.00)	66 (100.00)	9 (100.00)	75

Figures in parenthesis indicate percentage

Age and sex-wise distribution of the families selected for the study will give information on the demographic profile of the population under focus, which in turn would help to find out the influence of the above factor on their socio-economic status. There were a total of 3353 persons in 750 families of the experimental group with an average family size of 4.78 (Table 6). In this total population 49.50 per cent were men and 50.50 per cent were females. Analysis of the family composition further revealed that out of the total population, 60.93 per cent were adults and the remaining were children. In the adult population, 28.24 per cent were males and 32.66 per cent were females. Analysis of family composition with respect to children revealed that 12.23 per cent of the children were adolescents and 14.73 were of school going age. Pre-school children constituted 10.62 per cent of the sample population.

Table 6. Composition of the families surveyed

Age group	Experimental group				Control group					
	Distribution within male population	Distribution within female population	Distribution in the total population		Distribution within male population	Distribution within female population	Distribution in the total population			
	No.	No.	Male	Female	No.	No.	Male	Female		
Adult	947 (57.08)	1096 (64.69)	28.24	32.67	2043 (60.93)	69 (53.90)	124 (67.02)	22.04	39.61	193 (61.66)
Adolescents	204 (12.30)	206 (12.16)	06.08	06.14	410 (12.23)	6 (04.69)	12 (06.49)	01.92	03.83	18 (05.75)
School going children	285 (17.18)	209 (12.34)	08.50	06.23	494 (14.73)	42 (32.81)	38 (20.54)	13.42	12.14	80 (25.56)
Pre-school children	195 (11.75)	161 (09.50)	05.82	04.80	356 (10.62)	7 (05.47)	9 (04.86)	02.24	02.87	16 (05.11)
Infants	28 (01.69)	22 (01.30)	00.84	00.66	50 (01.49)	4 (03.12)	2 (01.08)	01.28	00.64	6 (01.92)
Total	1659 (100)	1694 (100)	49.48	50.49	3353 (100)	128 (100)	185 (100)	40.90	59.09	313 (100)

Figures in parenthesis indicate percentage

Age and sex wise distribution of the population surveyed, revealed that in all age groups there were more male members than females. The population matrix consisted of more than 60 per cent of adults and in the remaining, children, especially the school going children were found to predominate.

Demographic profile of the control group revealed that there were 313 persons in the 75 families studied. Of this, 40.70 per cent were males and 59.09 per cent were females. Regarding family composition, out of a total population of 313, 61.66 per cent were adults. With regard to children, 25.56 per cent were of school going age. Adolescents comprised 5.75 per cent while preschoolers comprised only 5.11 per cent of the subjects surveyed. Average family size of this group was 2.45. Demographic profile of the population studied, revealed similarity to earlier surveys conducted by this University.

Education has been identified as the factor which refines and upgrades the standard of living. It has been proved beyond doubt, that higher literacy rate and consequently the educational status observed among the women of Kerala, has been one of the reasons for the overall development of the social status of Kerala population. In this survey, the educational status of the respondent and that of the head of the family were taken into consideration. In the experimental group 26 per cent of the heads of the families and 24 per cent of the respondents had studied upto high school, while 22 per cent of the head of the families and 26 per cent of the respondents were illiterate (Table 7). In the control group, 27 per cent of the heads of families had education upto high school level, 6.66 per cent had attended colleges and only 6.66 per cent were illiterate. In the case of the respondents, 32 per cent had studied upto high school, 10.66 per cent were illiterate, and 5.33 per cent had attended college.

Table 7. Educational status of the family heads and respondents

Educational level	Experimental group		Control group	
	Head of the family	Respondents	Head of the family	Respondents
Illiterate	137 (22.03)	197 (26.27)	5 (06.66)	8 (10.66)
Knows to read and write	86 (13.83)	92 (12.27)	6 (08.00)	5 (06.66)
Lower primary school	89 (14.31)	108 (14.40)	10 (13.33)	13 (17.33)
Upper primary school	128 (20.58)	142 (18.93)	14 (18.66)	21 (28.00)
High school	164 (26.37)	187 (24.93)	27 (36.00)	24 (32.00)
College	18 (02.89)	24 (03.20)	05 (06.66)	04 (05.33)
Total	622 (100.0)	750 (100.0)	67 (100.0)	75 (100.0)

Figures in parenthesis indicate percentage

Earlier studies stress the fact that as the educational level of an individual enhances, he / she shows less interest to choose self employment programmes for his / her livelihood and aspires for a permanent job at the organised or government sector, suited to the level of education attained. However, data available in these sectors also reveal that percentage of educated population seeking such occupations are increasing as days go by.

Family income, number of earning members in the family and monthly expenditure pattern of the family are considered to have a reflection on economic

status. However the economic status of a family is influenced primarily by the wages carried by the members and the family income is a major determinant of social status. In the experimental group, in 50 families (6.66 per cent) only one member namely the respondent was found employed (Table 8). While in 419 families (55.80 per cent of) the respondent as well as the head of the families were found employed and in 203 families (27.1 per cent) the respondent and more than one adult member in the family were employed.

Table 8. Employment status of the families

Groups	Particulars of family members				Total
	Respondent alone	Head of the family (male)	Two adult members	More than two adult members	
Experimental group	50 (6.66)	419 (55.87)	78 (10.40)	203 (27.07)	750 (100)
Control group	—	54 (72)	12 (16)	9 (12)	75 (100)

Figures in parenthesis indicate percentage

In the control group, it can be seen that since the respondents were not earning members, head of the family alone was employed in 54 families (72 per cent). In 12 families in addition to the head of the family, one adult member was also an earning member. While in 9 families (12 per cent) more than one adult member were found to be wage earners.

This data reveals that compared to control group, families in the experimental group were better placed economically, since more family members were wage earners. In the control group, excluding 18 to 24 per cent families only male heads of the families were employed. It was also observed that in the

experimental group, more female members were engaged in outside work, probably because of the influence of the respondent who is an employed female, herself.

Thus it is seen that the economic status of individual family members helped to enhance the overall economic status of the families.

Table 9. Income level of different family members

Monthly income (in range)	Experimental group				Control group		
	Head	Respon- dent (employed)	Other female members	Other male members	Head	Other female members	Other male members
No income	—	—	—	—	13 (16.02)	117 (76.01)	76 (68.01)
≥ 500	177 (30.41)	640 (85.33)	131 (89.73)	115 (53.24)	7 (09.33)	4 (05.33)	5 (06.66)
501-1000	347 (59.62)	95 (12.67)	14 (09.58)	85 (39.35)	38 (45.33)	14 (18.66)	18 (24.00)
1001-1500	43 (07.38)	14 (01.87)	01 (00.68)	12 (05.56)	14 (18.66)	—	—
1501-2000	9 (01.55)	1 (00.13)	—	4 (01.85)	8 (10.66)	—	1 (01.33)
≥ 2000	6 (01.04)	—	—	—	—	—	—
Total	582 (100)	750 (100)	146 (100)	211 (100)	80 (100)	131 (100)	99 (100)

Figures in parenthesis indicate percentage

An assessment of the economic status of each category of family members in detail revealed that in 60 per cent of the families, monthly income of the head of the family ranged between Rs.501 to 1000, while 30 per cent had an income of Rs.500 or less per month and only 7 per cent had an income in the range of Rs.1001-1500 (Table 9). Regarding the economic status of the

respondent, 85 per cent had a monthly income below Rs. 500/- and 12.67 per cent of the respondents fell in the monthly income range of Rs.501 to 1000. Ninety per cent of the other female members in the families also earned around Rs.500/- mensem and 9.58 per cent between Rs.501/-, and 1000/- every month.

In the control group, in 9.33 per cent of the families head of the families had an income below Rs.500/-. While 45.33 per cent fell in the income range of Rs.501 to Rs.1000/-. In the remaining 18.66 per cent of the families, head of the family had an income in the range of Rs.1001 to Rs.1500 and 10.66 per cent had an income in the range Rs.1501 to Rs.2000/-.

A comparison between the two groups revealed that the dependent female and male members of the families in the experimental group were persuaded to seek employment outside to become economically independent when compared to their counter parts in the control group.

Based on total income of the families, the households were classified into four groups. Among the families 45.33 per cent in the control group and 46.27 per cent in the experimental group had a monthly income of Rs.1000/-

Unlike in the control group 4.40 per cent families in the experimental group, had more than Rs.2000/- as monthly income. A greater per cent of families in the experimental group had a higher monthly income (Table 10), when compared to the families in the control group. Average income of the 750 families was found to be Rs.1207.93 per month while, it was Rs.1154.86 per month for the control group.

In the two groups the major source of income for the families, was their own employment and the employment of spouses (91 per cent). In the remaining few families, regular income was available from business run by other family members (4 per cent) or from subsidiary occupations (5 per cent) and from domestic animals (1 per cent).

Table 10. Economic status of the families

Income	Experimental group	Control group
≤ 1000 (46.27)	347 (45.33)	34
1001 - 1500	273 (36.40)	24 (32.00)
1501 - 2000	97 (12.93)	17 (22.66)
> 2000	33 (04.40)	—
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

It is seen that major part of the income earned by the families is spent on food. An indicator of quality of life next to food is housing. More than 96 per cent of the families in the experimental group possessed their own houses (Table 11). Only 23 respondents (3.07 per cent) out of 750 families surveyed were living in rented houses. It was also observed that three women, who were unmarried were living with their relatives. In the control group, all the 75 families were found to possess their own houses. This indicates that possession of a house reduces the expenditure on housing which helps to improve the standard of living.

Table 11. Details pertaining to the possession of a house

Particulars	Experimental group	Control group
Own house	724 (96.53)	75 (100)
Rented house	23 (03.07)	—
Relatives house	3 (00.40)	—
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Table 12. Details pertaining to the type of house possessed by the families

Type of house	Experimental group	Control group
One room apartment	18 (02.40)	—
Home with kitchen facilities	70 (09.33)	—
Home with kitchen and Bathroom facilities	59 (07.37)	1 (01.33)
Home with kitchen and Latrine facilities	292 (38.93)	35 (46.67)
Home with kitchen, bathroom and latrine facilities	74 (09.87)	11 (14.67)
Home without bathroom and latrine facilities	237 (31.60)	28 (37.33)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Except 2.4 per cent the remaining families in the control group had multi roomed housing facilities (Table 12). Further analysis of the data indicated that 38.93 per cent of the families lived in houses with separate kitchen and latrine facilities, while 31.60 per cent did not have these basic facilities. This may be attributed to the fact that majority of the families surveyed live in rural areas where there is still lack of proper sanitary facilities. Regarding the housing

facilities of the control group, 46.67 per cent had all these facilities while 37.33 per cent of the families did not have such basic facilities.

Apart from the presence of sanitary facilities, such as latrines and bath rooms, availability of water is the prime component that reinforces sanitation in households. Hence the availability of potable water for each household was assessed. Among the families in the experimental group surveyed, 36.40 per cent had drinking water from their own wells, while 29 per cent availed the public facilities of the water supply scheme of the government (Table 13). A very few families (4.4 per cent) extended these facilities to their premises with pipe connection. The remaining families depended on the water sources of the neighbouring households (12.26 per cent) or a public well (13.07 per cent) or a nearby pond (5.07 per cent). This indicates that majority of the families had to spend much time and energy to collect water for their domestic needs.

Table 13. Source of drinking water to the families

Water sources	Experimental group	Control group
Own well	273 (36.40)	53 (70.67)
Public well	98 (13.07)	9 (12.00)
Nearby pond	38 (05.07)	1 (01.33)
Pipe at home	33 (04.40)	1 (01.33)
Public tap	216 (28.80)	9 (12.00)
Neighbouring house	92 (12.26)	2 (03.00)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

In the control group it can be seen that 70.67 per cent of the families possessed their own wells. Remaining families depended on public well (12 per cent) or taps available on road side (12 per cent).

Even though the houses were small, many families were in possession of certain comforts in the form of furniture (60 per cent in the experimental group and 72 per cent in the control group) radio (all the families in the two groups) television (11 per cent in the experimental group and 23 per cent in the control group), aluminium/steel utensils (all the families), kerosene stoves (53 per cent in the experimental group and 67 per cent in the control group) and smokeless chulha (2 per cent in the experimental group and 5 per cent in the control group)

Income available every month was distributed to meet the expenditure on the purchase of clothes, fuel and medicine, travels, and for the education of the children by all the families. Negligible amount was spent every month for recreation ceremonies and festivals. A sizable amount was kept aside for repaying loans.

Irrespective of the status of women in the household, the family income in general was insufficient to many families in the two groups. Thirty three per cent (32.86 to be exact) of the families in the experimental group and 9 per cent in the control group were indebted to different agencies (Table 14).

The present study revealed that 32.80 per cent of the families surveyed were in debt, and they had borrowed money from banks, co-operative societies, and also from local money lenders (Table 15). The debts generally drain away the resources of the families leading to a state of poverty in due course. Apart from economic burden, indebtedness may affect their dietary pattern, health status and also nutritional status. In the control group, the situation was different since only 6.66 per cent of the families had taken loans from banks and only 1.33 per cent of them had taken loans from money lenders and co-operative societies.

Table 14. Details regarding indebtedness of the families

Agency	Experimental group agency	Control group
	Number	Number
Bank	116 (10.50)	5 (07.00)
Money lenders	79 (10.50)	1 (00.66)
Co-operative society	51 (06.80)	1 (00.66)
Total	246 (32.80)	7 (09.33)

Figures in parenthesis indicate percentage

Table 15. Details of loans taken by the families from different agencies

Indebtedness in range	Experimental			Control		
	Bank	Money lenders	Co-ope- rative society	Bank	Money lenders	Co-ope- rative society
Below Rs.500	6 (0.80)	18 (2.40)	6 (0.80)	—	—	—
Rs.501- Rs.1000	15 (2.00)	24 (3.20)	3 (0.40)	—	—	—
Rs.1001- Rs.2000	22 (3.00)	6 (0.80)	13 (1.80)	—	—	—
Rs.2001- Rs.3000	24 (3.20)	7 (0.90)	5 (0.60)	5 (6.66)	1 (1.33)	1 (1.33)
Above Rs.3000	49 (6.50)	24 (3.20)	24 (3.20)	—	—	—
Total	116 (15.50)	79 (10.50)	51 (6.80)	5 (6.66)	1 (1.33)	1 (1.33)

Figures in parenthesis indicate percentage

The range of indebtedness of the families reveals that the majority of the families who have taken loans from banks have availed of loans amounting to a sum of Rs.3001/- (6.5 per cent) and also from money lenders (3.20 per cent). Another 3.20 per cent of families had debts ranging from Rs.501-1000. Another, 3.20 per cent families had taken loans (above Rs.3000/-) from co-operative societies.

In the control group, only 6.66 per cent of the families had taken loans ranging from Rs.2000-3000 from banks, 1.33 per cent of families had availed loans ranging from Rs.2000-3000 from money lenders and another 1.33 per cent of families had taken loans ranging from Rs.2000-3000 from co-operative societies. However loans taken by the families of control group were low when compared to the families of the experimental group.

In the experimental group about 67 per cent of the families were found to have saving habits and (91 per cent of the families in the control group). Post office, banks, co-operative societies and chit funds were the major finance institutions, depended for this purpose, by these families. On an average, Rs.250-300 were saved by the families in the two groups.

DIETARY HABITS OF THE FAMILIES

Dietary habits of the families in the low income strata of our community are subjected to considerable seasonal situations and the seasonal nature of consumption is one of the causes of poor nutrition among these population. Religion, superstitions and ignorance may also affect the food habits significantly. In earlier studies on similar lines on family income, food availability and malnutrition situation had indicated that these variables may not coincide and family income was not sufficient to ensure balanced consumption. Food availability, purchasing power and women employment outside the home are also found to influence the family dietary habits.

In the present study the relationship between family income and food expenditure pattern was ascertained. The per capita requirement of food stuff is

one of the important considerations from practical point of view, in estimating minimum per capita food expenditure.

As observed, significant factors affecting food expenditure pattern of the families were urbanisation, educational and occupational status of members, income and size of family and variation in average food consumption within the household.

Table 16. Details regarding income spent on food

Percentage of income (Per cent)	Experimental group	Control group
Below 10		
10 - 20	—	—
21 - 30	1 (0.30)	—
31 - 40	14 (1.90)	1 (1.33)
41 - 50	37 (4.90)	2 (2.67)
51 - 60	115 (15.30)	16 (21.33)
61 - 70	260 (34.70)	27 (36.00)
71 - 80	252 (33.60)	25 (33.33)
81 - 90	68 (9.00)	4 (5.33)
Above 91	3 (0.40)	—
Total	750 (100)	75 (100)

Regardless of the range of monthly income, the food expenditure pattern of the families were highly varying. Food is the most essential item of expenditure of a family and forms the major item of expenditure, especially among low income groups. In the experimental group (Table 16), 34.70 per cent spent 61 - 70 per cent of income on food and 33.6 per cent spent 71 - 80 per cent of their income on food. In the control group also, 69 per cent families surveyed spent 61 - 80 per cent of their income on food alone leaving only 20-40 per cent of the income for other items of household expenditure.

Food expenditure pattern of these families revealed that availability of foods at subsidised rates, cost and season influenced their purchase habits which may be applicable to households of similar socio-economic background in the other parts of the state.

In this context, it is to be noted that in Kerala through an effective public distribution system, the staple food articles like rice and wheat are distributed weekly to the people at subsidised rates and this has tremendously influenced the food purchasing pattern, and expenditure.

Table 17. Influence of selected parameters on the food expenditure pattern of the families

Selected variables	Correlation co-efficient (r)	
	Experimental group	Control group
Educational level	-0.1437	-0.0166
Family size	0.5636**	0.0459
No. of employed members in the family	0.4842**	0.3109**
Family income	0.7827**	0.9204**

** Significant at 1 per cent level

Amount spent for purchasing food materials by these families was mainly influenced by certain socio-economic factors like education level of family members, family size, number of employed members in a family and family income (Table 17). Except educational level of family members, the remaining three variables were found to influence the food expenditure pattern of the families in the experimental group while two variables viz. number of employed members in a family and family income had significant association with the food expenditure pattern of the families identified under control group. Similar observations were made in a study conducted by Karuna (1993) among women engaged in fishvending in Trivandrum district of Kerala.

In the two groups, 92 per cent of the families (control group) and 99.2 per cent of the families (experimental group) were non-vegetarians.

Among the various foods, cereals, nuts (mainly coconut) fats and oils and spices and condiments were consumed daily by all the families in the two groups since they are basic essential items of Kerala diet (Table 18 & 19). Beverages and sugar and jaggery were essential items in the daily diets of all the families in the control group. 76.53 per cent of the families in the experimental group and 95 per cent of the families in the control group were in the habit of consuming milk and milk products daily although quantitatively these foods were highly insufficient. Daily use of sugar, jaggery and beverages were common among 95.33 per cent and 91.60 per cent of the families respectively in the experimental and control groups. Roots and tubers were frequently used foods at least three times in a week, and 32.40 per cent of the families in the experimental group and 50.00 per cent in the control group were in the habit of using these foods (mainly tapioca, yam and colocasia).

Table 18. Frequency of use of various food items by the families (Experimental Group)

Food stuffs	Daily	Weekly Thrice	Weekly Twice	Weekly Once	Occas- sionally	Never
1. Cereals	750 (100)	0	0	0	0	0
2. Pulses	36 (04.80)	14.3 (19.06)	209 (27.87)	138 (18.40)	106 (14.13)	118 (15.73)
3. Greenleafy vegetables	72 (09.60)	193 (25.73)	70 (09.30)	171 (22.80)	179 (23.87)	65 (08.67)
4. Other veg.	253 (33.73)	271 (36.13)	97 (12.93)	67 (08.93)	44 (05.87)	18 (02.40)
5. Root & tubers	249 (33.20)	243 (32.40)	57 (07.60)	88 (11.73)	76 (10.13)	37 (04.93)
6. Fruits	31 (04.13)	36 (04.80)	30 (00.40)	159 (21.20)	222 (29.60)	272 (36.27)
7. Nuts and Oil seeds	740 (98.67)	4 (00.53)	4 (00.53)	0 0	1 (00.13)	1 (00.13)
8. Milk and milk products	574 (76.53)	25 (03.30)	5 (00.67)	22 (02.93)	19 (02.53)	105 (14.00)
9. Fat & oils	734 (97.87)	1 (00.13)	6 (00.80)	3 (00.40)	3 (00.40)	3 (00.40)
10. Sugar and Jaggery	715 (95.33)	8 (01.07)	1 (00.13)	4 (00.53)	5 (00.67)	17 (02.27)
11. Animal Food	633 (84.40)	49 (06.53)	13 (01.73)	36 (04.80)	18 (02.40)	1 (00.13)
12. Beverage	687 (91.60)	13 (01.73)	2 (00.27)	5 (00.67)	10 (01.33)	33 (04.40)
13. Spices and condiments	746 (99.47)	0 (0)	0 (0)	0 (0)	3 (00.40)	1 (00.13)
14. Processed foods	15 (00.20)	22 (02.93)	4 (00.53)	72 (09.60)	196 (26.13)	441 (58.80)

Numbers in parenthesis indicate percentage

Table 19. Frequency of use of various foods by the families (Control group)

Daily		Weekly			Occasionally	Never
		Thrice	Twice	Once		
Cereals	75 (100)	—	—	—	—	—
Pulses	1 (1.00)	18 (24.00)	13 (17.00)	23 (31.00)	23 (31.00)	3 (4.00)
Green leafy vegetables	5 (6.70)	63 (84.00)	2 (3.00)	10 (13.00)	10 (13.00)	1 (1.33)
Other vegetables	42 (53.00)	26 (35.00)	3 (4.00)	—	2 (3.00)	2 (3.00)
Roots & tubers	9 (12.00)	38 (50.00)	—	12 (16.00)	11 (15.00)	5 (6.67)
Fruits	—	16 (28.00)	4 (5.00)	21 (28.00)	11 (15.00)	23 (30.67)
Nuts & oilseeds	75 (100)	—	—	—	—	—
Milk & milk products	71 (95.00)	—	1 (1.33)	2 (3.00)	1 (1.33)	—
Fats & oils	75 (100)	—	—	—	—	—
Sugar & jaggery	75 (100)	—	—	—	—	—
Animal foods	67 (89.00)	2 (3.00)	1 (1.33)	—	—	5 (6.67)
Beverages	75 (100)	—	—	—	—	—
Spices & condiments	75 (100)	—	—	—	—	—
Processed foods	5 (7.00)	13 (17.00)	2 (3.00)	21 (28.00)	14 (19.00)	20 (26.67)

Numbers in parenthesis indicate percentage

Regarding consumption of animal foods, 84.40 per cent of the families in the experimental group and 89 per cent of the families in the control group, consumed animal foods daily in the form of fish which is comparatively cheap in Kerala. Processed foods were consumed by 26.13 per cent families in the experimental group and 19 per cent families in the control group only very rarely and 58.80 per cent families in the experimental group and 26.67 per cent families in the control group never consumed processed foods at all. Frequency of consumption of pulses was low since only 27.87 per cent of the families in the experimental group and 17 per cent in the control group, consumed pulses twice a week, while 19.06 per cent in the experimental group and 24 per cent in the control group consumed pulses thrice a week. Frequency of consumption of pulses was once in a week by 18.40 per cent families in the experimental group and 31 per cent families in the control group while 15.73 per cent families in the experimental group did not include pulses in their diets.

Green leafy vegetables were also not found highly acceptable, since in the experimental group only 9.60 per cent and 6.70 per cent families in the control group consumed this every day. Among the remaining families, 25.73 per cent of the families and 22.80 per cent families in the experimental group were found to include green leafy vegetable thrice a week and once a week respectively while 13 per cent families in the control group consumed this food item once a week and 13 per cent families in the control group consumed this food occasionally.

Vegetables were included in the daily diets of 33.73 per cent of the families in the experimental group and 53.00 per cent families in the control group daily and this food was included thrice a week by 36.13 per cent of the families in the experimental group and 35 per cent in the control group. Vegetables were included in the diet twice a week by 12.93 per cent and 4 per cent families in the experimental and control groups respectively.

Consumption of fruits was very poor since 36.27 per cent of the families in the experimental group and 30.60 per cent families in the control group never

included fruits in the dietary regimen and 29.60 per cent families in the experimental group and 15 per cent families in the control group, consumed fruits only occasionally. Only 4.13 per cent families in the experimental group consumed fruits daily.

Mean scores for each food item on the basis of frequency of use was measured in a 5 point scale. Based on the frequency of use of various food items by the respondents, food use frequency scores were calculated using the formula of Reaburn et al (1979).

$$\text{Percentage of total score} = \frac{R_1 S_1 + R_2 S_2 \dots R_n S_n}{n}$$

where S_n = Scale of rating
 R_n = Percentage of respondents selecting a rating
 n = Maximum scale rating

Table 20. Food use frequency scores

Food items	Experimental group		Control group	
	Average score	Percentage of total score	Average score	Percentage of total score
Cereals	5.00	100	5.00	100.0
Pulses	2.10	42	2.46	48.0
Green leafy vegetables	2.50	50	4.16	84.0
Other vegetables	3.75	75	4.16	84.0
Roots & tubers	3.50	70	3.19	61.0
Fruits	1.25	25	1.72	40.0
Nuts & oilseeds	4.95	99	5.00	100.0
Milk & milk products	4.05	81	4.83	97.0
Fats & oils	4.95	99	5.00	100.0
Sugar & jaggery	4.85	97	5.00	100.0
Animal foods	4.65	93	4.62	92.0
Beverages	4.70	94	5.00	100.0
Spices	5.00	100	5.00	100.0
Processed foods	0.70	14	1.85	37.4

As indicated in Table 20, only two food items i.e., cereals and spices were found to obtain a mean score of 5 by the families in the two groups, while similar score of 5 was obtained for nuts and oilseeds, fats and oils sugar and jaggery and beverages by the families in the control group. Details pertaining to percentage of total scores for these foods were also the highest in the families of the experimental and control groups. The food use frequency scores were higher for all the food items for the control group than that for the experimental group except for roots and tubers and animal foods.

Based on the percentage scores obtained, the food articles were further classified into three groups i.e., most frequently used foods, moderately used foods and less frequently used foods (Table 21a and 21b).

Table 21(a). Classification of foods based on food use frequency scores of the families in the experimental group

Most frequently used foods (score above 80%)	More frequently used foods (score between 50-80%)	Less frequently used foods (score below 50%)
Cereals	Other vegetables	Pulses
Nuts & oil seeds	Roots & tubers	Fruits
Milk & milk products	Green leafy vegetables	Processed foods
Fats & oils		
Sugar & jaggery		
Animal foods		
Beverages		
Spices & condiments		

Table 21(b). Classification of foods based on food use frequency scores of the families in the control group

Most frequently used foods (score above 80%)	More frequently used foods (score between 50-80%)	Less frequently used foods (score below 50%)
Cereals		
Greenleafy vegetables		
Milk & milk products		
Fats & oil	Roots & tubers	Pulses
Sugar & jaggery		Fruits
Nuts & oilseeds		Processed foods
Animal foods		
Beverages		
Spices & condiments		
Other vegetables		

Cereals, nuts and oil seeds, milk and milk products, fats and oils, sugar and jaggery were the most frequently used food items by the families in the two groups. Other vegetables is another food item most frequently used by the families in the control group, while in the experimental group this was one of the moderately used foods. More frequently used foods with a score between 50 to 80 per cent in the control group was root and tubers while in the case of families in the experimental group, green leafy vegetable also had this status. In both the groups, pulses, fruits and processed foods were less frequently used foods, with a score below 50 per cent.

Table 22. Association between selected parameters and frequency of use of different food items by the families

Food Items	Correlation coefficient (r)									
	Family size		Education		No. of employed members in the family		Family income		Food expenditure	
	C	E	C	E	C	E	C	E	C	E
Pulses	-0.0182	0.0684	-0.0288	0.2262	-0.0136	0.0366	0.0333	0.2884*	-0.0615	0.2113
Green leafy vegetables	-0.1849	0.3249**	0.1230	0.2987**	0.0811	0.1171	0.1139	0.3156**	0.0904	0.3016**
Other vegetables	-0.1198	0.1411	0.2842*	0.2439*	-0.0101	0.1281	0.2064	0.3113**	0.1573	0.3624**
Roots and tubers	0.0364	0.4275**	-0.1020	-0.1176	-0.1052	0.3228**	-0.1886	0.3706**	-0.2307*	0.4154**
Fruits	0.0740	-0.0174	0.3808**	0.1253	0.0709	0.0371	0.2666	0.2791*	0.1631	0.3164**
Nuts and oil seeds	0.0629	0.0701	-0.0241	0.0020	0.0852	0.0697	0.0629	0.0754	0.0835	0.6365
Milk and milk products	-0.0818	-0.0277	0.2767*	0.1752	-0.0894	0.1017	0.1008	0.3615**	0.0955	0.3152**
Fat and oils	-0.0281	0.0492	-0.2127	0.1523	-0.1316	0.2239	0.0040	0.2351*	0.0372	0.2612
Sugar and jaggery	0.0442	-0.0127	-0.1014	-0.0615	0.0598	0.0690	-0.1415	-0.0802	-0.0811	0.1736
Animal foods	-0.0311	0.1850	-0.2577*	0.0119	0.0652	0.1469	0.1284	0.0408	0.2511*	0.1128
Beverages	-0.1508	0.0785	0.1521	0.0156	-0.0582	0.2517*	-0.0486	0.1136	-0.0508	0.1420
Processed foods	-0.1487	0.1370	0.4104**	0.2035	0.0203	-0.0120	0.2087	0.2020	0.1400	0.3950**

* Significant at 5% level E = Experimental group (750)

** Significant at 1% level C = Control group (75)

Association between the selected socio-economic variables like family size, education level of women, number of employed members in the family, family income and food expenditure and frequency of use of various food items is depicted in Table 22. In the experimental group, consumption of green leafy vegetables and roots and tubers were significantly influenced by family size. Educational level of women had significant impact on consumption of green leafy vegetables and other vegetables in the experimental group. The same variable had a positive significant effect on the consumption of other vegetables, fruits, milk and milk products, animal foods and processed foods, among the families in the control group. Consumption of roots and tubers and beverages were also significantly associated with number of members working in the families identified under experimental group. Family income had a positive association with the consumption of fruits in the two groups while in the case of the experimental group, similar impact was observed in the consumption of pulses, green leafy vegetables, other vegetables roots and tubers, milk and milk products and fats and oils. Food expenditure rate had a negative significant association with the consumption of roots and tubers and positive association with the consumption of animal foods, in the control group; while in the experimental group, consumption of green leafy vegetables, other vegetables, roots and tubers, fruits, milk and milk products and processed foods had a significant positive impact on food expenditure rate.

Culinary practices with reference to cooking pattern, fuel used for cooking, meal serving pattern and special foods given to the family members during special conditions and occasions, will also reflect the dietary habits of the families.

Consuming foods immediately after preparation is an ideal way to conserve the nutrients present. Among the families surveyed, few families (13.60 per cent in the experimental group and 20.70 per cent in the control group) were in the habit of preparing food at the time of eating the meal while 39.87 per cent in the experimental group and 12 per cent in the control group had all their meals from food cooked once a day (Table 23).

Table 23. Frequency of cooking meals

Number of times	Experimental group	Control group
Once / day	299 (39.87)	9 (12.00)
Twice / day	349 (46.53)	51 (68.00)
Thrice / day	102 (13.60)	15 (20.00)
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

Table 24. Type of fuel used at home

Type of fuel	Experimental group	Control group
Fire wood	663 (88.40)	70 (93.33)
Kerosene	10 (01.33)	—
Electricity	0 (00.00)	—
Fire wood and kerosene	74 (09.88)	5 (06.67)
Fire wood and electricity	2 (00.26)	—
Fire wood, kerosene and gas	1 (00.13)	—
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

As indicated in Table 24, 88.40 per cent of the families surveyed in the experimental group used only firewood for cooking meals. 9.88 per cent used firewood and kerosene as fuel for cooking. Gas and electricity were used for cooking purposes in combination with firewood and kerosene by 3 out of the 750 families surveyed. Regarding the control group 93.33 per cent of the families used firewood as the main household fuel. None of the families used cooking gas or electricity for cooking purposes in this group.

Discrimination in the intra family food distribution can be ascertained only by verifying the food consumption pattern of every member in the family. An assessment of meal serving pattern revealed that the male members, children, head of the family and employed members were given priority in serving foods in many of the families. The first served would be best served and this indicated the discrimination shown in the case of women in the family, which would negatively influence their status.

Malnutrition among families below poverty line may occur due to unscientific distribution of food influencing the health status of female members. There is possibility of systematic impact of gender effects within the frame work of household models of intra household allocation and such efforts usually tend to favour males. Mother's value of time was also found to have major effect on this matter and in several cases the family food basket depended on women's meagre earnings even though the lionshare of food was consumed by the men.

As revealed in Table 25, in 56.80 per cent of the families, the meals were served and consumed according to the convenience of each of the family members. Only among 29.73 per cent of the families, the meals were taken together by all members of the family. This may be due to the fact that the mother or the responsible female member of the family was engaged in employment out side the family, hence is not available at home to bring the members together for different meals. The employment pattern of the other members of the family could also be one of the factors which influences the timing and consumption of different meals at home. However it is gratifying to note that only in 67 families

(ie., less than 10 per cent of the families) out of 750, the male members or the head of the family took meals prior to other family members. This again indicates a positive aspect of a higher socialistic pattern of society that exists in Kerala.

Table 25. Meal serving pattern followed by the families

Meal serving pattern	Experimental group	Control group
Meals taken together by all members of the family	223 (29.73)	33 (44.00)
Meals taken by head of the family first and then by others	20 (02.67)	—
Meals taken by male members of the family first and then by females	47 (06.27)	6 (08.00)
Meals taken by the children first and then by the parents	32 (04.27)	11 (14.67)
Meals taken by the employed members of the family first	2 (00.26)	—
Meals taken according to the convenience of each member	426 (56.80)	25 (33.33)
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

Meal serving pattern followed by the families of the control group showed that 44 per cent of the families had their meals together. Thirty three per cent of the families took meals according to the convenience of each member. As in the case of the families of the experimental group, only in a small percentage of the families (8 per cent) the meals were taken by male members of the family first and then by the females.

Information on foods prepared during special occasions like marriages, birthdays and other family functions revealed that the meals during such occasions had more variety with sweet preparations. Among certain communities preparations with animal foods dominated the meals during such occasions.

Table 26 indicates the details pertaining to the preparation of special foods in the families surveyed. The table reveals that 38.00 per cent of the families do not prepare any special foods on special occasions. This may be due to the fact that preparation of special foods involves more time and money. To the ordinary working class population, time and money are rare resources. Hence in order to conserve these resources, it is natural that majority of people of this order do not prepare special foods. However other families had reported that they prepare nonvegetarian foods, fried items and or sweets on special occasions.

Table 26. Special foods prepared on special occasions

Special foods	Experimental group	Control group
Sweets	61 (08.13)	2 (02.66)
Fried items	35 (04.68)	0 —
Non vegetarian foods	79 (10.53)	13 (17.33)
Sweets and fried items	91 (12.13)	5 (06.68)
Sweets and nonvegetarian foods	94 (12.53)	13 (17.33)
Fried items and nonvegetarian foods	49 (06.53)	12 (16.00)
Sweets, fried items & nonvegetarian foods	56 (07.47)	6 (08.00)
No special foods	285 (38.00)	24 (32.00)
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

Many families of the control group (32 per cent) also reported that they do not prepare any special foods, on special occasions. Seventeen per cent of the families reported that they prepared nonvegetarian dishes and another 17.33 per cent reported that they prepared sweets along with nonvegetarian dishes on special occasions.

Table 27. Special foods given during pregnancy

Special foods	Experimental group	Control group
No special foods	520 (69.30)	33 (44.00)
Milk	136 (18.10)	28 (37.33)
Fruits	3 (00.40)	6 (08.00)
Milk and meat	9 (01.20)	2 (02.66)
Milk and egg	13 (01.70)	6 (08.00)
Milk and fruits	25 (03.30)	—
Meat and egg	2 (00.30)	—
Milk, meat and egg	3 (00.40)	—
Meat and supplementary food	3 (00.40)	—
Milk, meat and fruits	12 (01.60)	—
Meat, egg and fruits	3 (00.40)	—
Egg, fruits and milk	15 (02.00)	—
Milk, fruit and supplementary foods	6 (00.80)	—
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

Information available on foods given during special conditions namely pre-school age, school age, adolescence, pregnancy and lactation had revealed that no special care was given to the family members during these periods.

From Table 27, it can be seen that in 69.30 per cent of the families of the experimental group, no special food was given during pregnancy. In 18.10 per cent of the families, milk was given as a special food during pregnancy. Consumption of meat, eggs, fruits and other supplementary foods were also found to be very low.

Regarding the control group also it can be seen that in many families (44 per cent) no special food was given during pregnancy. Thirty seven per cent consumed milk as a special food, and consumption of meat, eggs and fruits were low. This throws light on the necessity of imparting nutrition education to this group especially regarding food requirements during pregnancy and ill effects resulting from malnourishment during pregnancy.

Special foods were not given during lactation by many families in both the groups. Sixteen per cent of the families in the experimental and 34.67 per cent of families in the control group consumed milk as special food during the lactation period (Table 28). Only 3.20 per cent of families of the experimental group consumed milk and meat while none of the families of the control group consumed milk and meat.

Strong association between child nutrition and employment of the mother was observed among these families since increasing women's wages had a visible effect on the child's diet. Milk (28 per cent) fruits and supplementary foods (17.7 per cent) were the few foods included frequently in the infants diets (Table 29).

Table 28. Special foods given during lactation

Special foods	Experimental group		Control group	
No special foods	534	(71.20)	46	(61.33)
Milk	117	(15.60)	26	(34.67)
Milk and meat	24	(03.20)	—	—
Milk and egg	21	(02.80)	3	(04.00)
Milk and fruits	3	(00.40)	—	—
Milk and supplementary foods	2	(00.30)	—	—
Meat and egg	2	(00.30)	—	—
Meat and fruits	2	(00.30)	—	—
Milk, meat and egg	6	(00.80)	—	—
Milk, meat and fruits	19	(02.50)	—	—
Meat, egg and fruits	2	(00.30)	—	—
Egg, fruits and milk	12	(01.60)	—	—
Milk, eggs & supplementary foods	3	(00.40)	—	—
Milk, fruit & supplementary foods	3	(00.40)	—	—
Total	750	(100)	75	(100)

Numbers in parenthesis indicate percentage

Table 29. Special foods given during infancy

Special foods	Experimental group	Control group
No special foods	355 (47.30)	31 (41.33)
Milk	210 (28.00)	36 (48.00)
Commercially prepared baby foods	3 (00.40)	—
Milk and egg	2 (00.30)	—
Milk and supplementary foods	16 (02.10)	—
Egg and supplementary foods	2 (00.30)	—
Fruit and supplementary foods	4 (00.60)	—
Egg, fruits and milk	2 (00.30)	—
Milk, meat & commercially prepared baby food	6 (00.80)	—
Milk, egg & supplementary foods	17 (02.30)	—
Milk, fruit & supplementary foods	133 (17.60)	8 (10.67)
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

In most studies on nutritional status, it has been stated that self imposed restriction of food during sickness has a profound role in deteriorating the nutritional status already depressed by illness. Table 30 indicates the food restrictions imposed by the population under focus. It is seen that 16.53 per cent did not make any modification during illness while 31.60 per cent made alterations in consistency of meals and small percentage avoided milk, egg, spices and salt during periods of sickness. Eight per cent changed the consistency and restricted spices in such situations.

Table 30. Food restrictions for sick persons

Type of modification in the meals	Experimental group	Control group
Changing consistency	237 (31.60)	18 (24.00)
Avoiding milk	8 (01.07)	—
Avoiding egg	7 (00.93)	—
Restricting salt	1 (00.13)	4 (05.33)
Restricting spices	8 (01.07)	—
Changing consistency & avoiding milk	5 (06.67)	4 (05.33)
Changing consistency & avoiding egg	49 (06.53)	8 (10.67)
Changing consistency & restricting spices	62 (08.27)	13 (17.33)
Changing consistency & avoiding milk & egg	36 (04.80)	—
Avoiding milk, egg, spices & salt	13 (01.73)	—
Changing consistency & avoiding milk, egg, spices and salt	143 (19.07)	28 (37.34)
Restricting salt and spices	12 (01.60)	—
No modification	124 (16.53)	—
Total	750 (100)	75 (100)

Numbers in parenthesis indicate percentage

Regarding the control group, it can be seen that 24 per cent of these families changed the consistency of the food and all the families made some sort of modification in the diet for sick persons. Many families (37.34 per cent) changed consistency of the meals and avoided milk, egg, spices and salt.

Infants were given cow's milk along with breast milk. Special complementary foods and commercially prepared baby foods had a place in the infants' diet in 15 per cent of the families. No special items or foods were prepared at home for pregnant and nursing mothers. Adolescent children were also given only the ordinary adult diet. During illness solid foods, salt and spices were restricted.

Table 31. Breakfast pattern of the respondents

Particulars	Experimental group	Control group
1. No breakfast	94 (12.50)	—
2. Breakfast at work place	18 (2.40)	—
3. Immediately after reaching work place	25 (3.40)	—
4. Before leaving for work	282 (37.60)	—
5. Between 8'O clock & 10'O clock	331 (44.20)	75 (100)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Dietary habits of the families are reflected in the meal pattern with reference to food combinations, and serving pattern. The daily dietary pattern of many respondents was composed of three meals a day system, consisting of a breakfast, lunch and dinner. Breakfast pattern of the Experimental groups revealed that 12.50 per cent of the employed women were not in the habit of taking breakfast. While 5.80 per cent were in the habit of taking breakfast at work place. For all the housewives in the control group breakfast was found to be an essential part of their meal pattern (Table 31).

Food combinations in daily breakfast menu is detailed in Table 32.

Table 32. Food combinations in daily breakfast menu

Menu	Experimental group	Control group
From hotels	55 (7.30)	6 (8.00)
Baked products	4 0.60	—
Cereals, coconut and tea	288 (38.40)	55 (73.33)
Cereals, pulses and tea/coffee	40 (5.30)	5 (6.67)
Cereals, pulses, egg and tea/coffee	4 (0.60)	—
Cereals and vegetables	9 (1.20)	—
Cereal, chutney, tea and fruits	18 (2.40)	—
Tea/coffee with milk	21 (2.80)	—
Tea/coffee without milk	73 (9.70)	—
Bread & stew	2 (0.30)	—
Bun & milk	2 (0.30)	—
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Among the families surveyed, 7 to 8 per cent of the respondents were depending on nearby hotels for breakfast. 31.20 per cent of employed women kept "left over foods" as breakfast for the family while similar pattern was observed among 12.0 per cent of the families in the control group. Cereal based, menu with beverages were common among 48.90 per cent of the families in the experimental group and among 80 per cent families in the control group. More variety in the menu with egg, milk and baked products were observed among few families in the experimental group.

Food combinations commonly found in the daily lunch are detailed in Table 33.

Table 33. Food combinations in daily lunch menu

Menu	Experimental group	Control group
1. No lunch	20 (02.60)	—
2. Yesterday's left over foods	157 (20.90)	—
3. Cereals & pulse	10 (01.40)	—
4. Cereals & fish curry	75 (10.00)	5 (06.67)
5. Cereals, fish & vegetable	192 (25.60)	35 (46.66)
6. Cereals, egg & vegetable	9 (01.20)	—
7. Cereals & vegetables	62 (08.30)	9 (12.00)
8. Cereals, pulses & chutney	3 (00.40)	—
9. Cereals, fish & curd	18 (02.40)	—
10. Cereals, fish, vegetables & pulses	15 (02.00)	10 (13.33)
11. Cereals and chutney	21 (02.80)	—
12. Cereals & fish & tapioca	132 (17.60)	8 (10.67)
13. Cereals, fish, vegetables & tapioca	36 (04.80)	8 (10.67)
Total	750 (100)	75 (100)

(Figures in parenthesis indicate percentage)

Among the families in the experimental group 20.90 per cent consumed only left over foods of the previous day. Cereals predominated the lunch of all the families. Fish and vegetables were essential items in the lunch of more families in the control group than in the experimental group. It may also be observed that 21 per cent were in the habit of skipping the lunch in the experimental group.

Food combinations in the dinner of the families in the control group, were found to be better than the families in the experimental group (Table 34). Cereals and fish or vegetables formed the basic items of dinner menu.

Table 34. Food combinations in daily dinner menu

Menu	Experimental group	Control group
1. Not taking any foods	6 (00.80)	3 (04.00)
2. Cereals & vegetable curry	86 (11.50)	2 (02.67)
3. Cereals & fish curry	228 (30.40)	26 (34.67)
4. Cereals, fish and vegetable	115 (15.30)	35 (46.67)
5. Cereals, egg and vegetables	2 (0.30)	—
6. Cereals & chutney	30 (4.00)	—
7. Cereals, fish & tapioca	273 (36.40)	4 (5.33)
8. Cereals, vegetables, fish & tapioca	10 (1.30)	5 (6.66)
Total	750 (100)	75 (100)

(Figures in parenthesis indicate percentage)

Table 35. Timing of the major meals in a day

Particulars	Experimental group	Control group
Breakfast		
Before 8 AM	322 (43.80)	—
Between 8 AM & 9 AM	297 (39.60)	3 (04.00)
Between 9 AM & 10 AM	34 (04.20)	64 (85.33)
After 10 AM	3 (00.40)	8 (10.67)
No Breakfast	94 (12.50)	—
No lunch	20 (02.60)	—
No Dinner	6 (00.80)	7 (09.33)
Gap between Breakfast & Lunch		
4 hrs	267 (35.60)	58 (77.33)
5 hrs	419 (55.90)	16 (21.33)
6 hrs	24 (03.30)	1 (01.33)
7 hrs	20 (02.00)	—
Gap between lunch & dinner		
5 hrs	12 (01.60)	52 (69.33)
6 hrs	105 (14.00)	15 (20.00)
7 hrs	497 (66.20)	1 (01.33)
8 hrs	130 (17.40)	—

Table 36. Meal serving pattern of the families

Particulars	Breakfast		Lunch		Dinner	
	Experimental group	Control group	Experimental group	Control group	Experimental group	Control group
1. All family members together	346 (46.13)	55 (73.33)	392 (52.30)	43 (57.33)	601 (80.00)	65 (86.67)
2. Children alone first	10 (01.30)	—	19 (02.50)	—	45 (06.00)	—
3. Children and head first	9 (01.20)	5 (06.67)	13 (01.80)	19 (25.33)	10 (01.40)	—
4. Head alone first	16 (2.10)	—	6 (0.80)	2 (02.67)	9 (01.20)	—
5. Respondent alone first	259 (34.30)	13 (17.33)	234 (31.20)	2 (02.67)	33 (04.40)	2 (02.67)
6. Respondent and head	9 (1.20)	—	13 (01.80)	4 (05.33)	33 (04.40)	7 (09.33)
7. Respondent and female children last	7 (0.90)	2 (02.67)	24 (03.20)	—	10 (01.33)	1
8. Respondent and elder female member	2 (0.30)	—	8 (06.67)	5 (01.00)	—	—
9. Respondent and children	—	—	21 (2.80)	—	3 (0.40)	—
10. Not taking any foods	94 (12.50)	—	20 (02.60)	—	6 (0.80)	—
Total	750 (100)	75 (100)	750 (100)	75 (100)	750 (100)	75 (100)

Timing of the major meals in a day are detailed in Table 35. Unlike in the control group, few women in the experimental group were not in the habit of taking all the three meals and they skipped either the breakfast (12.50 per cent), lunch (2.60 per cent) or dinner (0.80 per cent). However dinner was avoided by 9.33 per cent of the women in the control group. Time gap between breakfast and lunch was from 4 hours to 7 hours. A comparison between the two groups, revealed that higher percentage of women in the experimental group, had longer gap between the meals. Similarly, gap between lunch and dinner was from 5 hrs to 7 hrs for few respondents. Time gap between lunch and dinner was 7 - 8 hrs for 83.6 per cent of the women in the experimental group.

Besides the major meals, the employed women were in the habit of taking foods in between meals.

Meal serving pattern of the families in the two groups revealed interesting results (Table 36). Among the three major meals, breakfast was taken by all the members together in many families (73.33 per cent) in the control group. While similar situations were observed while taking dinner by 80.00 per cent families in the experimental group.

While serving food, special consideration was not given to children by the families in the control group. While few families in the experimental group gave weightage to children. However, in more families of the control group, greater weightage was given to the wage earner of the families. Compared to housewives in the control group, employed women obtained more importance when food was distributed within the household.

There was no special consideration for male or female members in serving special foods like egg, meat, fish and milk. The families were found to celebrate occasions like marriages and religious festivals by preparing special delicious foods like sweets or snacks or combinations of the two.

SOCIO-ECONOMIC AND NUTRITIONAL PROFILE OF THE WOMEN

Statistics relating to women workers in the informal sector are reported to be highly inadequate and unreliable. In the absence of any systematic and comprehensive study of the conditions of women in this complex group of self employed wage earners and entrepreneurs, many occupations selected by the women are based on traditional ideas of what women do best. Women are engaged as housemaids, tailors, launders, cooks, sweets/snacks/pappad makers, sweepers, anganwadi workers, and fish/vegetables/fruits venders. However, the work done by women is described as 'invisible' since they go statistically unrecorded. In many cases, women's work is all about making a living rather than earning a living. Another not able point is that the women themselves are unable to see the value of their work; they do not recognise their social and economic contribution and repeat the general perception of the invisibility of domestic work. To elaborate the point, a women who is employed outside as maidservant in her employer's home for wages will be considered economically active but a housewife, even if she may work much more than a paid servant by cooking for the family or by looking after the household will not be treated as economically active.

Another important point is that the employed women were playing dual role as housewives and as wage earners. Since the women participated in both home and outside employment they worked for longer hours and had less leisure time than men and other housewives. Working women have a conflict between two possible identities that of being a mother and wife and that of having a job. With all these difficulties, there is still a dramatic increase in the participation of women in economic activities as wage earners.

With these immobilities, the employed women are observed to occupy an inferior status to men within their own societies especially the women employed in the informal sector. Their low wages and low skills, were probably the natural consequences of their biological condition. There are certain factors like age of the women, type of occupation, marital status, age at marriage and the nature of

the out side and the work schedule that have profound influence on the daily chores of the women:

Age is an important factor which influences the activity and performance of employed women (Table 37).

Table 37. Age of the respondents

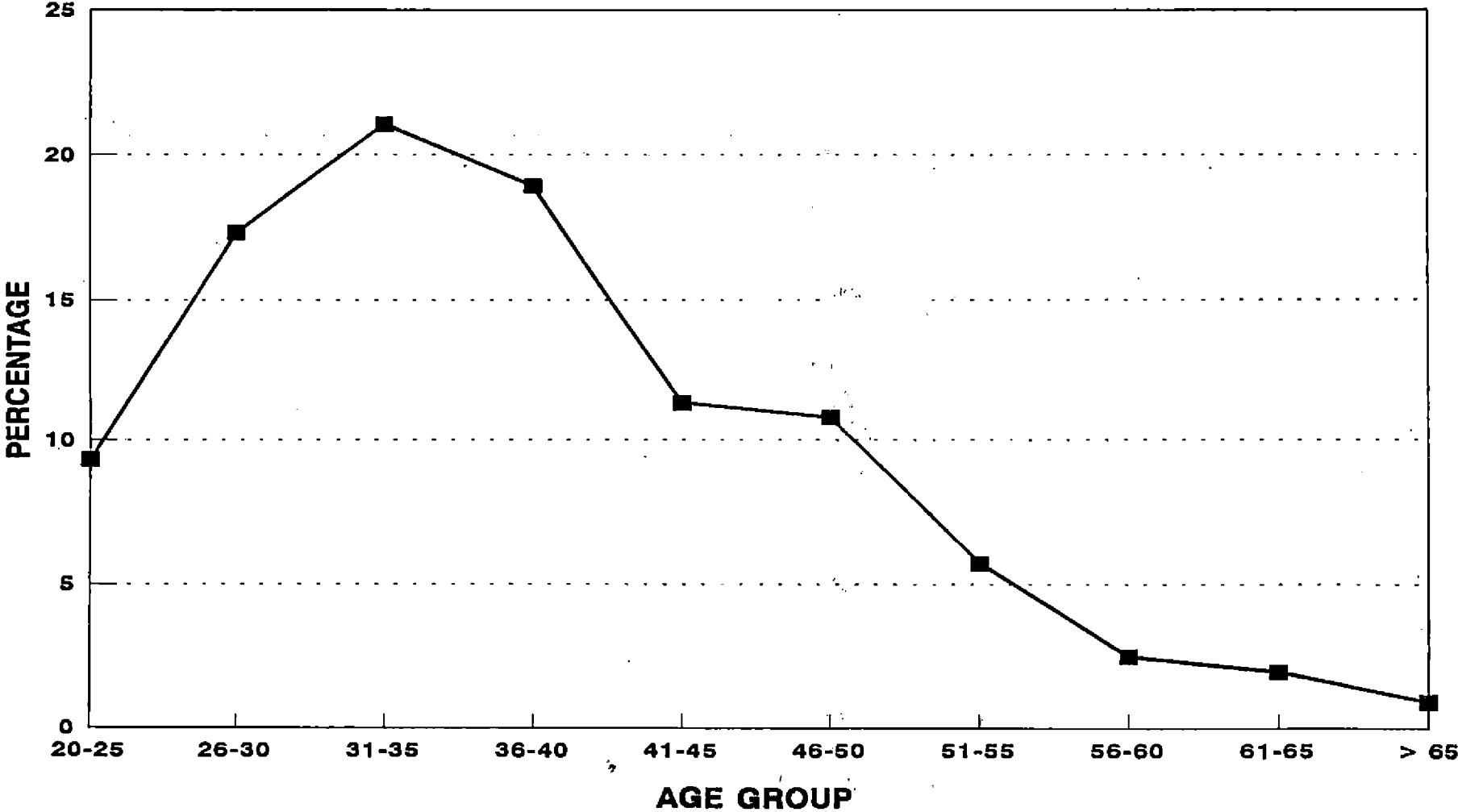
Age in range	Age of respondents	
	Experimental group	Control group
20 - 25	70 (09.33)	11 (14.67)
26 - 30	130 (17.33)	14 (18.67)
31 - 35	158 (21.07)	13 (17.33)
36 - 40	142 (18.93)	12 (16.00)
41 - 45	85 (11.33)	11 (14.67)
46 - 50	81 (10.80)	5 (06.67)
51 - 55	43 (05.73)	6 (08.00)
56 - 60	19 (02.53)	3 (04.00)
61 - 65	15 (02.00)	—
Above 65	07 (00.93)	—
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Analysis of the data revealed wide variation among the respondents i.e. they belonged to the young age of 20 and also to the old age of 65 and above. However, 21.67 per cent of the women belonged to the age range of 31 to 35 years, which formed the largest group. The table records the fact that 18.93 per cent were in the age group between 36 to 40 years, and another 17.33 per cent belonged to the age group of 26 to 30 years. Thus it can be seen that 430 women out of 750 respondents engaged in various occupations fell between the age of 26 to 40 years. It also indicates that after the age of 45, the number of women engaged in gainful employment gradually diminishes. (Illustration - 1).

The above feature clarifies the fact that women between 25 to 40 years formed the major bulk of those who enter into the unorganised sector in this area of study. It may be noted that women in their reproductive period form the chunk of this working class and majority of them enter the employment market to support their growing family. At this stage they have an 'expanding' family and would have had at least 2 children, as revealed by the general demographic profile of Kerala. In this period, these women were over burdened with the responsibility of bringing up the children who are in the growing stage. This is a period that imposes great economic pressure. Hence the women who had the responsibility of running the home were forced to take up work outside their homes, to make both ends meet. Several observations have revealed the fact that the income earned by men in these families were not fully available to run the household, since a major share of it is consumed by the men themselves in order to satisfy their personal needs, such as purchase of cigarettes, alcohol, tea and snacks. Thus the women of this age group who have young children are forced to take up such jobs available in the unorganised sector, which does not call for specialised skills or capital investment.

Illust. 1. Age of respondents



An enquiry on the marital status of the women of the two groups revealed that in the experimental group lesser percentage of women (75.20 per cent) were married when compared to the control group (86.67 per cent). This throws light on the socio cultural profile of Indian women. "Women seek outside employment when placed in difficult situations".

Data on the age at marriage of the women in the two groups revealed a system of early marriage. Fifty nine per cent of the respondents in the experimental group and 55 per cent in the control group were found to be married between the age of 15 and 20 years (Table 38).

Table 38. Marital status of the women

Age at marriage	Experimental	Control
Before 15	7 (00.93)	3 (04.00)
15 - 20	443 (59.07)	41 (55.00)
21 - 25	227 (30.27)	30 (40.00)
26 - 30	34 (04.53)	1 (01.00)
31 - 35	7 (00.93)	—
Above 35	1 (00.13)	—
Unmarried	31 (04.14)	—
Total	750 (100)	75 (100)

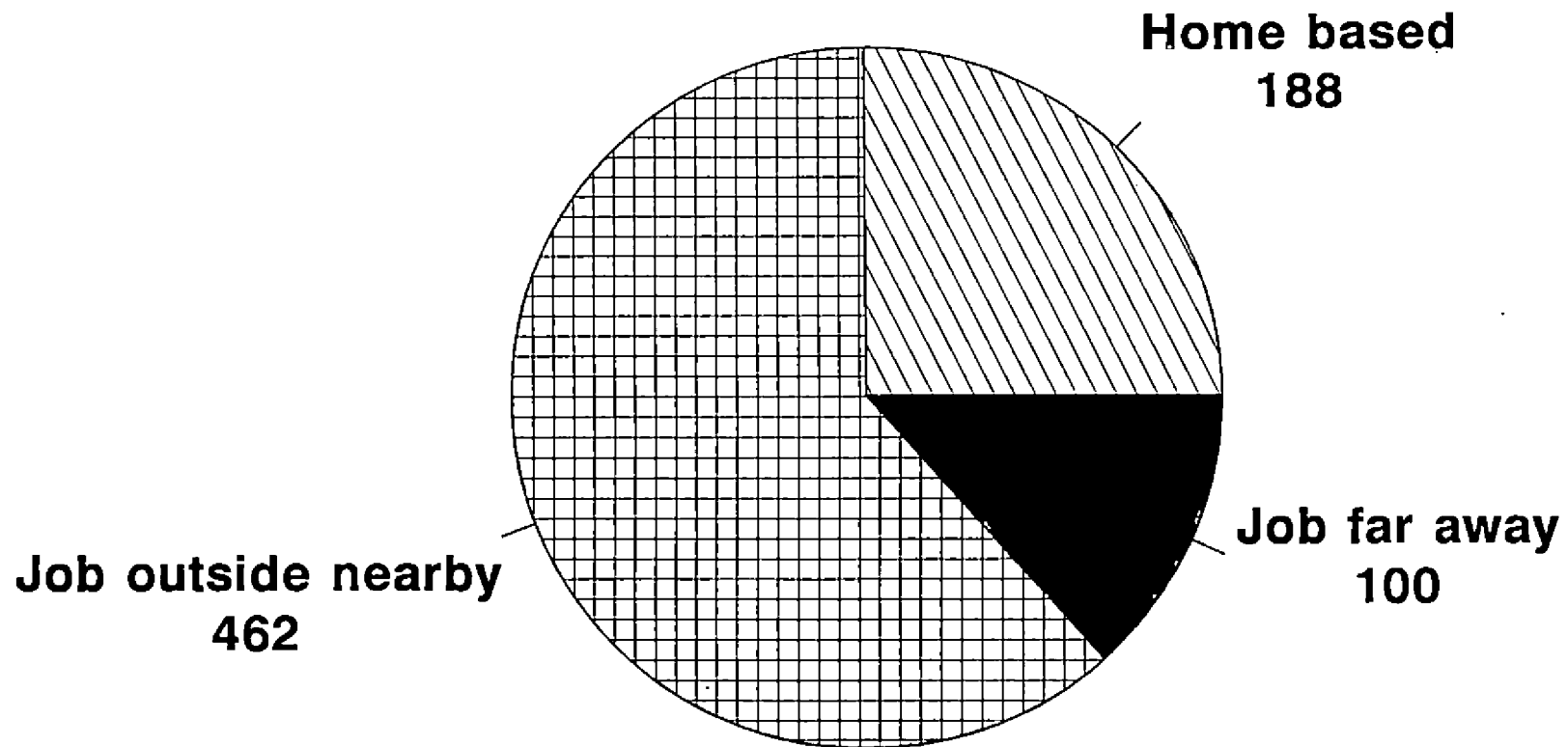
Numbers in parenthesis indicate percentage

Unorganised sector encourages several job avenues. Enquiries made on the types of occupations taken up by the women in the unorganised sector revealed interesting facts.

Table 39. Distribution of the women based on the type of occupations selected

Occupation	Number	Percentage
a. Home based	188	(25.07)
1. Running Small hotels at home	7	(00.93)
2. Tailoring	30	(04.00)
3. Match box making	16	(02.13)
4. Beedi making	3	(00.40)
5. Running Petty shops	25	(03.33)
6. Plaiting coconut leaf as roofing material and selling	35	(04.67)
7. Pappad making	8	(01.06)
8. Pot making	2	(00.26)
9. Animal and poultry rearing	27	(03.60)
10. Basket making	18	(02.40)
11. Mat weaving	17	(02.27)
b. Jobs in the neighbourhood	462	(61.60)
1. Weavers	41	(05.47)
2. Sweepers	9	(01.20)
3. Composers	1	(00.13)
4. Ayas	3	(00.40)
5. Cashewnut peelers	6	(00.80)
6. Anganwadi worker	22	(02.93)
7. Ration shop keepers	1	(00.13)
8. Domestic servants	144	(19.20)
9. Stone breakers	167	(22.27)
10. Dobby	51	(06.80)
11. Agricultural labourers	17	(02.27)
c. Job far away from home	100	(13.33)
1. Vendors of vegetables and fruits	20	(02.67)
2. Vendors of fish and egg	19	(02.53)
3. Sweets and snack makers	1	(00.13)
4. Coir weavers	34	(04.53)
5. Construction workers	26	(03.47)
Total	750	100.00

Illust. 2. Distribution of the women based on the type of occupation selected



Classification of women based on the place of occupation i.e. whether it is home based, or whether they are working in places near their homes, or are working in a place far away from home, showed that 61.60 per cent of the respondents were engaged in jobs outside their homes, but in the neighbourhood of their homes itself (Table 39). Among these women workers 25.07 per cent were indulged in home-based activities, while a minority of 13.33 per cent were found to be working in places far away from their own households. (Illustration - 2).

The type of occupations in which the respondents were engaged in, are varied (Table 39). Among the home based workers, 25.07 per cent were engaged in the preparation of thatching materials from plaited coconut leaves and selling them. (Fig. 1). Tailoring, cattle and poultry rearing, maintenance of petty shops (Fig. 2) and basket making were other major subsidiary occupations taken up by these housewives. Traditional occupations like pot making and pappad making were also taken up by a few.

Among those employed in jobs outside their homes, in the neighbourhood, it was seen that 167 women were engaged in stone breaking (Fig. 3) and another important occupation was that of domestic servants (Fig. 4). Occupations among those who were working far away from the home in which women were engaged were vegetable / fruit / fish / egg vending, (Fig. 5 & 6) sweets and snacks making and selling, coir making and building construction work.

Based on the ICMR classification of work depending on energy utilised for the work as heavy, moderate and sedentary, the jobs taken up by these women were also classified (Table 40). Among these women, 32.53 per cent of the women were engaged in heavy work while 47.20 per cent of the women were engaged in moderate work. Remaining 20.27 per cent of these women were observed to be engaged in sedentary work



Fig. 4. Domestic servant



Fig. 1. Preparation of thatching material from coconut leaf



Fig. 2. Maintenance of petty shop



Fig. 3. Stone breaking



Fig. 5. Vegetable vending



Fig. 6. Fish vending

Table 40. Distribution of women based on the nature of work selected

	Number	Percentage
1. Heavy work	244	32.53
a. Stone breaker	167	22.27
b. Construction worker	26	03.66
c. Dobby	51	06.80
2. Moderate work	354	47.2
a. Running small hotels at home	7	0.93
b. Weaving	41	05.47
c. Vending of vegetable and fruits	20	02.66
d. Vending of fish and egg	19	02.53
e. Domestic servants	144	19.20
f. Sweepers	9	01.20
g. Coir making	34	04.53
h. Sweet and snack making	1	00.13
i. Anganwadi worker	22	02.93
j. Pappad making	8	01.06
k. Pot making	2	00.26
l. Agriculture labour	17	02.27
m. Tailoring	30	04.00
3. Sedentary work	152	20.27
a. Tailoring	3	0.40
b. Match box making	16	2.13
c. Mat weaving	17	2.27
d. Printing press	1	0.13
e. Animal and poultry farming	27	3.60
f. Basket making	18	2.40
g. Ayahs	3	0.40
h. Petty shop keepers	25	3.33
i. Cashew nut peeling	6	0.80
j. Ration shop	1	0.13
k. Making coconut leaf as roofing material and selling	35	4.69
Total	750	100.00

It is seen that cultural constraints and family responsibilities restricted their active involvement in their employment. In this survey, 44.40 per cent of the respondents were employed for more than 251 days year and 28.40 per cent were employed for 225 to 250 days in a year. In the remaining, 10 per cent were employed for 176 to 200 days/year and 9.73 per cent had work from 201 to 225 days/year (Table 41). The financial stress and strain in the families of women workers is a common phenomenon probably because of the uncertainty in work days. Irrespective of their workdays, in all the families the control over money was generally the prerogative of males, implying spending of money, its investment and lending to others.

Table 41. Number of days of employment / year for the respondents

Days in range	Number	Percentage
25 - 50 day/year	1	0.13
51 - 75	0	0.00
76 - 100	5	0.67
101 - 125	1	0.13
126 - 150	37	4.94
151 - 175	12	1.60
176 - 200	75	10.00
201 - 225	73	9.73
226 - 250	213	28.40
251 days and more	333	44.40
Total	750	100.00

It is during the lean season that the family is most vulnerable being indebted and bonded. Indebtedness and delay in repayment closes chance for further credit facilities essentially needed for many occupations chosen by the women. Consequently, these women live under the debt pressure and this situation contributes to very low esteem and self respect. However many women were found to accept outside occupation mainly out of economic necessity and to supplement their family income. However physical mental and environmental well being indices for these women at the work place are of very low order probably due to invisibility of their economic contribution.

Although studies on exact time allocation for work by gender in rural India are few, existing ones indicate that women of this class work longer hours than men. Women in this survey were found to have a busy and untiring work schedule including household and external work which starts in the early hours of morning even before sun rise and they are the last to retire to bed at night. Table 42 reveals the outside work schedule of those women. Forty per cent of the respondents worked outside their homes for more than 7 hours a day indicating a 'double day's work' while 15.20 per cent were observed to spend 4 to 5 hours a day on their outside occupations. The work schedule further reveals that the women who go out to work have an unpaid job at home. This unpaid job affects the efficiency of their paid work.

A woman worker, on reaching home, devotes another 5 to 6 hours to complete her household work and to take care of children, old and the sick, since, according to the prevailing family role norms, in India, household duties are regarded as the sole responsibility of the housewife. Enquiry on the extent of work interference with daily family life, revealed that more than 30 per cent of women reported moderate interference of work with the family life.

Table 42. Work schedule of the respondents.

Working hours in range	Number	Percentage
1 - 2 hrs	5	0.66
2 - 4 hrs	72	9.60
4 - 5 hrs	114	15.20
5 - 7 hrs	255	34.00
7 - 8 hrs	212	28.27
More than 8 hrs	92	12.27
Total	750	100.00

The data on time taken by the respondents to reach the work place reveals that 25.07 per cent of the women were engaged in home based occupations (Table 43). Of the remaining, 51.47 per cent took only 15 to 30 mts to reach the work place while; 10.13 per cent had taken less than one hour and 10.67 per cent took 1 to 2 hours to reach their destination.

Table 43. Time taken to reach the work place by the respondents

Time	Number	Percentage
Home based	188	25.07
Less than 15 mts	224	29.87
Less than 1/2 an hour	162	21.60
Less than 1 hour	76	10.13
1 - 2 hrs	80	10.67
2 - 3 hrs	16	02.13
More than 3 hrs	4	00.53
Total	750	100.00

The distance between the house and work site was covered by 65.2 per cent of the respondents by walk (Table 44) while only 9.74 per cent utilised the public transport system to reach the place of work. Many women normally walk long distances from their residence to reach the work area due to inadequate transport facilities or high cost of transportation. For this they were forced to get up very early, complete their household work and then trek the long distances to be in time for work.

Table 44. Mode of conveyance to the work place

Mode	Number	Percentage
By walking	489	65.20
By Bus	45	06.00
By Bus and the by walking	26	03.47
By Train	2	00.26
Total	750	100.00

Details pertaining to the distance between residence and work place reveals that twenty five per cent women had selected homebased occupation and 48.41 per cent of the subjects were travelling upto 1 km to do out side work. Four per cent women travelled more than 10 kms to reach their work place. (Table 45).

Table 45. Distance between residence and work place

Distance	Number	Percentage
Home itself	188	25.07
Less than 1/4 km	158	21.07
Less than 1/2 km	92	12.27
Less than 1 km	113	15.07
1 to 3 kms	99	43.20
3 to 5 kms	66	08.80
6 to 7 kms	5	00.66
8 to 9 kms	2	00.26
10 to 11 kms	16	02.13
12 to 13 kms	3	00.40
More than 13 kms	8	01.07
Total	750	100.00

Inspite of the outside work, all the women were engaged in household production which can be defined as those unpaid activities which are carried out for the benefit of members of the household. Volume of household input in this study is evaluated specifically through time studies and spot observations which are the most frequently used methodologies for this purpose. The time diaries had pre-classified categories of activities and the respondents were asked to record the duration of activities. This method was applied since many respondents were sufficiently literate and had a concept of "time scale" that is measurable in hours and minutes.

These women perform tasks essential to any society's survival, from rearing children to growing food and feeding the family. Total number of hours which a woman spent on an average exclusively for house work as per this study ranged between 6-12 hours. If women are paid for domestic work and child care equivalent to those services performed by cooks, cleaners and nurses, their wages would account for half of the national income. Recent change in social pattern from joint family to nuclear family had also vested greater responsibilities on the women. These women were observed to be engaged in chores like fetching water and fuel, besides routine household work. However closer observation revealed that the boundary between the outside and household activities were fluid and variable. Another observation made was that when 90 per cent of the work was done at home by the employed women, hardly 10 per cent of the family income was spent for her benefit.

Table 46 shows the time spent for household activities / day in addition to the time spent for outside occupations by the respondents of the experimental group and for household activities alone by the housewives in the control group. (Illustration - 3).

Among the various activities fuel/water collection and cooking were the most time consuming of all household production activities in the two groups. In the control group, the housewives were found to be specialised in the creation of use values through household work rather than exchange values through paid employment and this is counted as "not working" or "unemployed" even though the household work occupies 5 to 6 hours of her day.

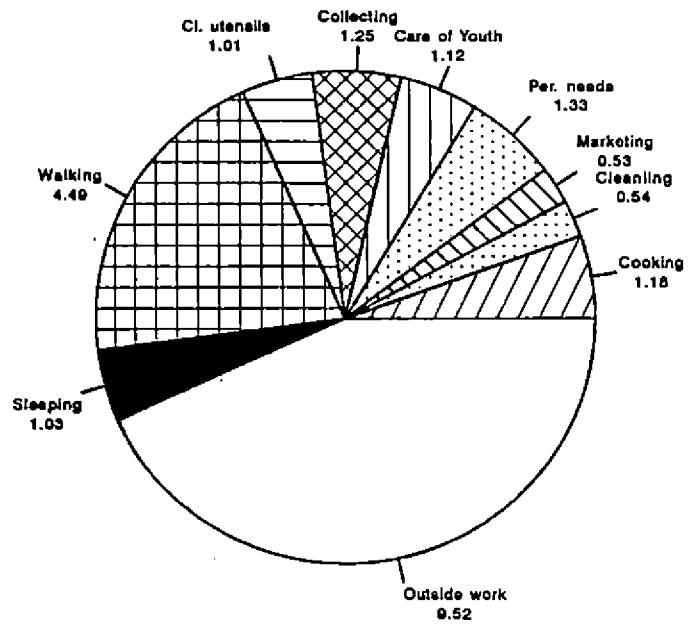
Many of the respondents in the experimental group (59.4 per cent) and 56 per cent of the women of the control group spent 2 to 3 hour/day for cooking. Regarding cleaning in and around the house, the majority of respondents from experimental group (63.60 per cent) were found to spend 1 to 2 hours while majority of the women from the control group spent below one hour for this. For marketing also, 73.60 per cent from the experimental group (73.60 per cent) spent 1-2 hours while 70.67 per cent of the control group spent below an hour for the purpose.

Table 46. Time spent for household activities / day by the working women and housewives

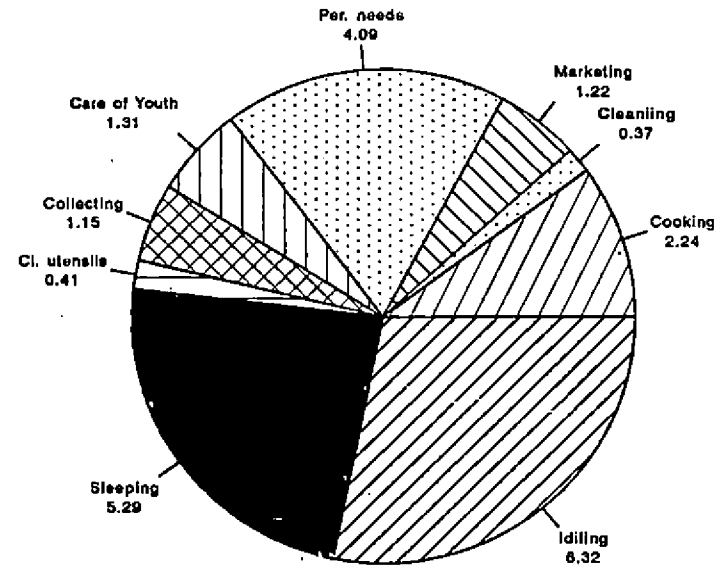
	Category	Below 1 hour	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5-6 hours	No time spent	Total
Cooking	Experimental	3(0.40)	243(32.40)	446(59.40)	6(0.80)	6(0.80)	—	46(06.20)	750(100)
	Control		8(10.67)	11(14.67)	42(56.00)	8(10.70)	4(5.30)	(2.67)	75(100)
Cleaning in and around the house	Experimental	220(29.40)	477(63.60)	—	—	—	—	63(07.00)	750(100)
	Control	43(57.33)	26(34.67)	6(08.00)	—	—	—	—	75(100)
Marketing	Experimental	14(01.80)	552(73.60)	95(12.70)	—	—	—	89(11.90)	750(100)
	Control	53(70.67)	6(08.00)	—	—	—	16(21.33)	75(100)	
Care of young children	Experimental	13(01.70)	434(57.90)	15(02.00)	—	—	—	274(36.50)	750(100)
	Control	26(34.67)	14(18.67)	10(13.33)	—	—	—	25(33.30)	75(100)
Collecting water & fuel	Experimental	30(04.00)	608(81.10)	23(03.00)	7(01.00)	—	—	82(10.90)	750(100)
	Control	2(02.66)	063(84.00)	—	—	—	—	10(13.33)	75(100)
Washing utensils	Experimental	220(29.30)	482(64.30)	—	—	—	—	48(06.40)	750(100)
	Control		6(08.00)	43(57.33)	26(34.67)	—	—	—	75(100)

Figures in parenthesis indicate percentages

Illust. 3. Time utilization pattern



EXPERIMENTAL GROUP



CONTROL GROUP

21.33 per cent of the control group and 11.90 per cent of the experimental group reported that no time was spent for marketing, since it were done by other members of the family

Problems related to the general management of the house, time and children were mainly faced by the employed homemaker. The work time of employed women competed with domestic responsibilities and additional work out side the home was reported to encourage the women to reduce family responsibilities such as housekeeping and child care activities. These observations revealed that the employed women were not released from their household duties when they took up remunerative work out side their home, it was assumed that they had managed to do their household work in lesser time by increasing their efficiency or lessen their burden by getting help from others.

Information on the time spent for personal care and sleep per day by the respondents (Table 47) revealed that many respondents (74.8 per cent) spent only 1 to 2 hours for personal care while 8.7 per cent of them spent 2 to 3 hours and 7.6 per cent spent below 1 hour only for their personal care.

Few housewives in the control group (32 per cent) spent 2-3 hours for personal care, while 8 hours were spent by 28 per cent of the women in the control group for the same work.

The table also shows the time spent for sleep by both the groups. The data shows that majority of the women of the experimental group (45.10 per cent) spent 6-7 hours while the majority of the control group spent 7-8 hours for sleep. While only 12.90 per cent of the women from the experimental group spent more than 8 hours for sleep while 38.67 per cent of the women from the control group spent more than 8 hours for sleep.

Table 47. Time spent for personal care and sleep / day by the working women and housewives

Activities	Below 1 hour	1 to 2 hours	2 to 3 hours	3 to 4 hours	4 to 5 hours	5 to 6 hours	6 to 7 hours	7 to 8 hours	More than 8 hours	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Personal care	57	561	65	23	20	12	3	3	6	750
Experimental group	(7.60)	(74.80)	(8.70)	(3.07)	(2.67)	(1.60)	(0.40)	(0.40)	(0.80)	(100)
Control group	2	10	24	2	—	—	6	10	21	75
	(2.67)	(13.33)	(32.00)	(2.66)			(8.00)	(13.33)	(28.00)	(100)
Sleep -	—	—	—	8	—	118	338	189	97	750
Experimental group				(1.10)		(15.70)	(45.10)	(25.20)	(12.90)	(100)
Control group	—	—	—	—	—	3	9	34	29	75
						(04.00)	(12.00)	(45.33)	(38.67)	(100)

Figures in parenthesis indicate percentage

Table 48. Distribution of women, based on the total time spent for house hold activities in a day

Total hours household activities	Distribution of women spent for	
	Experimental group	Control group
10	8 (10.67)	1 (1.33)
9	31 (41.33)	2 (2.67)
8	3 (4.00)	7 (9.33)
7	1 (1.33)	20 (26.67)
6	2 (2.67)	20 (26.67)
5	— —	11 (14.67)
4	5 (6.67)	6 (8.00)
3	19 (25.33)	4 (5.33)
2	3 (4.00)	1 (1.33)
1	3 (4.00)	3 (4.00)
Total	75 (100.00)	75 (100.00)

Numbers in parenthesis indicate percentage

From the 750 women in the experimental group, a sub sample of 75 women were identified, depending on the type of occupation. In depth analysis on the time allocation for different domestic chores was conducted and compared with the similar observations listed for housewives in the control group (Table 48).

The table reveals that 41.33 per cent of the women under the experimental group spent 9 hours for household activities. On one side while 33.33 per cent spent ten than 3 hours for the same. 68.04 per cent of the women under the control group were found to spend 5 to 7 hours for household activities. However, wide variation were observed in the average time spent for household activities by the employed women (as depicted in the table), probably due to variation in the extent of help available from other family members, place of work and distance to be travelled to the work place.

Average time spent for different domestic chores by employed women and housewives reveal variation in the allocation of time for different activities by these women (Table 49). With exception for few activities like cleaning the house and premises, washing utensils and collecting fuel or water, the housewives were spending more time for the remaining activities than the employed women. The employed home makers, on an average spends approximately 10 hours for outside work. Housewives spent 6 to 10 hours daily for sleep besides idling for an equal time during day, while the employed home makers were observed to be devoid of proper rest and sleep. Over and above this, in order to reach the work place, these women were found to spend 1 to 3 hours daily.

Further the data was analysed to position the women in the 'high', 'medium' or 'low' category based on the time utilisation pattern for different household activities (Table 50).

Housewives, employed or unemployed, do a variety of tasks which have one thing in common - a link to the home and its occupants. They tend the children, and they obtain the family food supply. For three activities, cooking, cleaning in and around the home and for marketing 40 per cent to 70.67 per cent employed home makers were identified under "medium category" and 14.66 per cent to 46.67 per cent come under "high category".

Table 49. Average time spent for different domestic chores by employed women and housewives (in hours)

Household's activities	Experimental Group			Control Group		
	Time in range	Mean time	Percentage of total time spent for household work	Time in range	Mean Hrs/mts.	Percentage of total time spent for household work
Cooking	0-4	1.18	5.41	1.5-4	2.24	10.00
Cleaning the home & premises	0-4	0.54	3.75	0-1	0.37	2.57
Marketing	0-2	0.53	3.68	0-3	1.22	5.69
Personal needs	5-2	1.33	6.46	0-13	4.09	17.29
Care of youngchildren	0-5	1.12	5.00	0-7	1.31	6.32
Collectingwater & fuel	0-4	1.25	5.90	0-2	1.15	5.21
Washingutensils	0-4	1.01	4.24	0-5	0.41	2.85
Walking to reach the workplace & back	1-3	1.03	4.38	—	—	—
Sleeping	5-8	4.49	20.07	6-10	5.29	22.85
Idling	—	—	—	0-7	6.32	27.22
Outside work	0-10	9.52	41.11	—	—	—
		24.00	100		24.00	100.00

Table 50. Distribution of respondents into low, medium and high categories based on daily time utilisation pattern

Activities	Experimental group			Control group		
	Low	Medium	High	Low	Medium	High
Cooking	9 (12.00)	48 (64.00)	18 (24.00)	17 (22.61)	40 (53.20)	18 (23.94)
Cleaning in and around the home	10 (13.33)	30 (40.00)	35 (46.67)	55 (73.15)	— —	20 (26.60)
Marketing	11 (14.66)	53 (70.67)	11 (14.66)	37 (49.21)	31 (41.23)	7 (9.31)
Personal needs	26 (34.67)	38 (50.67)	11 (11.66)	7 (9.31)	32 (42.56)	36 (47.88)
Child care	34 (45.33)	34 (45.33)	7 (9.00)	29 (37.70)	14 (18.62)	32 (42.56)
Collecting water and fuel	44 (58.67)	23 (30.65)	8 (10.67)	42 (55.86)	11 (14.63)	23 (30.59)
Washing utensils	37 (49.33)	25 (33.33)	13 (17.33)	8 (10.64)	66 (87.88)	1 (1.33)
Sleeping	35 (46.67)	23 (30.66)	17 (22.67)	3 (3.99)	5 (6.65)	67 (69.11)

When the time allocation pattern of unemployed home makers were analysed, it was seen that, high priority was given to sleep by 69.11 per cent, of the women surveyed while 47.88 per cent had given priority in time allocation for personal care, followed by collection of water and fuel by 42.56 per cent, 42.56 per cent of the respondents had given high priority in time allocation for child care.

Based on these classification, areas such as personal needs and child care were found to be comparatively neglected areas of domestic chores for the employed home makers. In the context of measurement of time for child care, it was noticed that child care was often carried on simultaneously with cooking, food processing and even along with income generating activities.

Type of occupation (home based or job in the neighbourhood or job far away from home) is also found to influence the time allocation for different domestic chores (Table 51). Women engaged in home based occupations were finding more time for household work while the situation was different in the case of employed home makers, whose work place is far away from home.

Table 51. Influence of type of occupation on the time allocation for domestic chores by employed home makers

Different occupations	Number of women	Average time spent household work (Hrs.)	Max.time spent for household work (Hrs.)	Min. time spent for household work (Hrs.)
Home based occupation	12	6.30	8.00	5.00
Job in the neighbourhood	53	5.47	10.30	4.00
Job far away from home	10	4.45	8.30	2.00

Association of selected socio economic variables like family size, employment status of women, number of employed members and family income, with the time utilisation pattern of the women was tested (Table 52).

Significant association was not observed between the independent and dependent variables. Family size and number of employed members in a family had negative influence on the time allotted for the household work by the women in two groups. As the family size increased, there were more members to help the housewife but it ultimately resulted in spending more time for certain household work by the house wife.

Family income level of employed women too had a negative effect on the time spent for household works and however this was not explainable.

Table 52. Influence of selected parameters on the daily time expenditure pattern of the women (τ value)

	ACTIVITIES							
	Household activities		Outside work		Leisure		Sleep	
	C	E	C	E	C	E	C	E
Family size	-0.0346	-0.0998	—	0.0220	0.0033	-0.1996	0.1628	-0.0960
Employment status of women	0.1473	0.0813	—	-0.2086	-0.2822	0.0795	0.0669	0.0645
Number of employed members	-0.1183	-0.0332	—	0.0207	0.0405	-0.0547	-0.1784	-0.0143
Family income	0.0082	-0.0725	—	-0.1199	0.3150	0.1332	0.1115	0.1157

E - Experimental group = 750

C - Control group = 75

Time spent for outside work by the women were also negatively influenced by the total family income. Time spent for leisure by house wives had positive association with their family income, while family size, and number of persons employed in the family, were two variables which negatively influenced their time allocation for leisure and sleep by the employed women.

Discrimination against women clearly has tangible effects on their bodies and it may have equally profound but less tangible effects on their minds. Statistics from all over the world indicate that women are twice as likely as men to suffer the kind of physical and mental distress. It is thought that economic development would automatically lead to improvement in the nutrition and health of the family members especially the poor. Findings of the study, however, showed that this tenet does not always hold true. Hence the prevalence of common illness among these employed women were collected (Table 53). It can be seen that only 36 per cent women from the experimental group were free from any of the illnesses like allergies, anaemia, asthma, arthritis, backache, cardiac problems, diarrhoea, diabetes, gastrointestinal problem, hearing problems, night blindness, skin diseases, thyroid gland defects, urinary infection, rheumatism, chest pain, uterus complaint, and blood pressure.

Due to women's dual burdens of domestic responsibilities and income generating activities which is chronic over work, more women in the experimental group never found time to seek medical help except in extreme cases. Long hours of work at home and outside the home along with nutritional stress affected their physical efficiency and health.

Frequency of occurrence of illness among women in the two groups, reveal that such situations were prevalent more among women who were working outside (Table 54).

Table 53. Prevalence of illness among employed women and housewives

Illness	Experimental group	Control group
1. Allergies	7 (00.9)	1 (1.33)
2. Anaemia	12 (01.6)	1 (1.33)
3. Asthma	91 (12.1)	4 (5.33)
4. Arthritis	10 (01.3)	—
5. Backache	65 (08.7)	1 (1.33)
6. Cardiac problems	29 (03.9)	—
7. Diarrhoea	2 (00.3)	2 (2.67)
8. Diabetes	10 (01.3)	—
9. Gastrointestinal problems	7 (00.9)	—
10. Hearing problems	3 (00.4)	—
11. Headache	83 (11.1)	5 (6.67)
12. Kidney problems	2 (00.3)	—
13. Night blindness	2 (00.3)	—
14. Skin diseases	23 (03.1)	—
15. Thyroid gland defect	3 (00.4)	—
16. Urinary infection	2 (00.3)	—
17. Rheumatism	92 (12.3)	15 (20.00)
18. Chest pain	27 (03.6)	—
19. Uterus complaint	3 (00.4)	—
20. Blood pressure	7 (00.9)	4 (05.33)
21. No illness	270 (36.0)	42 (56.00)
Total	750 (100)	75 (100)

Figures in parenthesis indicate percentage

Table 54. Frequency of occurrence of illness among women

Frequency	Experimental group	Control group
No illness	270 (36.00)	42 (56.00)
Alternate days	420 (56.00)	28 (37.34)
Twice in a week	2 (00.30)	1 (01.33)
Once in a week	4 (00.60)	1 (01.33)
Twice in a month	2 (00.30)	
Once in a month	2 (00.30)	1 (01.33)
Occasionally	50 (06.80)	2 (02.67)
Total	750 (100)	75 (100)

More women employed outside (56 per cent) were frequently affected by different illnesses than the housewives in the control group (37.34 per cent).

However the prolonged working has not affected the physiological functions of these women. Ninety per cent of the women in the experimental group and 97.33 per cent of the women in the control group had normal deliveries.

Investment in children is a long term investment in the nation's future. Responsibility for the provision of child care and socialisation has always rested with the household and the mother has been considered the primary care taker of young children.

Women in the experimental group were unhappy about the time they devoted to their children and for household activities, since they were not able to participate fully in child rearing due to the full time nature of the jobs and lack of facilities such as a creche at the work place.

Childcare responsibilities have to be shared by family members or children will have to be entrusted to creches or balwadies since the mothers are employed outside. In this study, 60 per cent of the respondents from the experimental group and 82.67 per cent of the respondents from the control group managed this responsibility by themselves (Table 55). In the remaining 23.40 per cent the respondents depended on other family members to take care of these children. Public facilities such as creche and balwadis were utilised only by 6.67 per cent of the employed women in the experimental group.

Table 55. Care of pre-school children at household level

Person responsible	Experimental group	Control group
Respondent herself	450 (60.00)	62 (82.67)
Older children	30 (04.00)	4 (05.33)
Other adult members	175 (23.40)	4 (05.33)
Balwadi / Creche / Daycare centre facilities	49 (06.60)	—
No specific arrangements	46 (06.00)	5 (06.67)
	750 (100)	75 (100)

Table 56 depicts the difficulties encountered by the women of the experimental group due to dual responsibilities. Except a few (22.30 per cent) all the women were observed to have difficulties in running the house along with their outside work. Few respondents faced much difficulties in managing their various responsibilities like child care (16.30 per cent) education of children (0.40 per cent) care of elderly members (0.80 per cent) and personal care (4.20 per cent) along with their outside work. Women, if they take employment outside, should be allowed to work out a joint system for solving their problems of domestic responsibilities through incorporating child care facilities (creche) and food (mid day meals) at the workspot itself.

Eventhough the remaining respondents have not expressed any interruption in home management, carrying out almost all the duties and responsibilities of home single handed overstrains a working woman and makes her tired and irritable which in turn makes her an unpleasant and unenjoyable company for her family and sometimes lead to friction in family relationships.

Table 56. Difficulties encountered by the women due to dual responsibilities

Difficulties	Number	Percentage
Running the home	406	54.00
Child care	137	18.30
Personal care	32	4.20
Education of children	3	0.40
Care of elderly members	6	0.80
No difficulties	166	22.30
Total	750	100.00

Outside work simply increases their burden and severely curtails or eliminates any unobligated time. Women employed outside are primarily housewives, passive, dependent and additional outside work to these housewives results in roping their elder daughters in after sacrificing their education. In this study also data on assistance obtained from others in carrying out household activities, revealed that 39.80 per cent of the women in the experimental group and 65.33 per cent of the women in the control group managed the domestic chores without assistance (Table 57). 59.40 per cent of the women in the experimental group and 34.67 per cent of the women in the control group obtained help from elder children or other elderly members in the family.

Decision making in the family is a major activity usually performed by the head of the family and the earning capacity of the women increases their social and family status as many studies have proved.

One of the major indicators of status of women in the family is the voice she has in decision making process. High levels of labour force participation are not a panacea for women. Waged work may be a precondition for women's economic power but wages alone does not necessarily improve their status or position in the family. Without a change in the domestic division of labour and with women contentd to low status and low paid jobs, waged work may have little liberating effect for women. Effect of women's employment on the family power structure revealed that the increase in her financial contribution to the family budget did not give more control over family matters. In many families matters are controlled by husbands in the case of married women and other elder members in case of unmarried / divorced women or widows.

Table 57. Assistance obtained from others for household work

Assistance	Experimental group	Control group
Respondents alone	298 (39.80)	49 (65.35)
Elderly members	140 (18.60)	3 (04.00)
Elder children	306 (40.80)	23 (30.67)
Servant	6 (00.80)	—
Total	750 (100.00)	75 (100.00)

Table 58. Decision makers in the family

Different categories	Experimental group	Control group
Respondent	109 (14.50)	—
Husband	221 (29.50)	41 (54.67)
Respondent and husband	183 (24.40)	15 (20.00)
Other elder members	60 (07.80)	14 (18.66)
Altogether	177 (23.80)	5 (06.67)
Total	750 (100)	75 (100)

The present study reveals that, in the experimental group 29.50 per cent of the families and in 54.67 per cent of the families in the control group, husband was the decision maker. The respondent and husband together took decisions in 24.40 per cent of the families and all members together in 23.90 per cent of the families in the experimental group even though 21.10 per cent of the families in this group were female headed. In spite of this, only in 14.50 per cent of the families, decisions were made by the respondents alone.

In the control group, respondents did not have the role of a decision maker. In 20 per cent of the families decisions were taken by both the respondent and her husband together.

Assessing the knowledge of the women on foods and health

Traditional beliefs and ignorance of the women prevent proper utilisation of the available resources to their families. Lack of awareness about the need for adequate diet is an important contributory factor for the poor dietary practices some of which have detrimental effect on health. Locally available, cheap, nutritious foods are neither given to children nor consumed by women respectively due to wrong beliefs. Media has a profound influence on the knowledge, attitude and practices of women of all socio economic levels especially to the literate population of Kerala. Poor economic condition does stand in the way of improving nutrition. Some improvements can be expected when the economic condition of the family enhances, due to the employment of the mother.

Two main impediments here are complacency and habit. Though health is the most important concern of every human being, it is given the lowest priority in daily life. Even the women who knew that nutrients were necessary for a healthy and active life, they did not care to include certain food materials like easily available leafy vegetables and fruits which provide nutrients in abundance. The other impediment is habit. Food habits are difficult to change. Regional, religious, social, economic and other factors contributed to the cultivation of certain food habits. Certain traditions and customs contribute to the fact that

women stuck on to their food habits, taking their nutritional needs for granted. The gravity of this situation is not communicated to people convincingly and the problems get increasingly more disastrous.

In this study, knowledge of the respondents regarding nutrition and health was measured using a teacher type achievement test specifically developed.

Information on food and health was collected with the help of a suitably structured scale. A set of 100 statements on health and nutrition were prepared and these statements were circulated among experts and academic personnel. On the basis of their comments, 65 statements were found suitable. Areas from which these statements are included in the scale are listed below.

Sl. No.	Important areas of food & health and nutrition	Number of statements
1.	Constituents of balanced diet	12
2.	Health care	10
3.	Functions of nutrients	7
4.	Foods given during special conditions	7
5.	Work efficiency	7
6.	Diet of children	7
7.	Scientific methods of preparing adequate diet	7
8.	Significance of existing nutrition intervention programmes	8
Total		65

Each statement was provided with two response categories namely "yes" or "no" with a score of "1" for the correct answer and "0" for the

wrong answer. Finally the scores were all added up to get the knowledge score for each respondent. The maximum score for the test developed was 65. The statements were read to the women and they were asked to say "Yes" or "No" and scores were allotted and totalled. The mean scores were calculated.

Based on the mean scores obtained by the women, they were divided into two groups viz. high and low knowledge groups. Those who had obtained scores above the mean score was regarded as the high knowledge group. Knowledge levels of the two groups of the women are presented in Table 59.

The percentage of women in the low knowledge group were more in the control group. Knowledge scores obtained in the seven areas as detailed by the women of the two groups are presented in Table 60.

Table 59. Percentage distribution of the beneficiaries based on the knowledge levels

Knowledge levels	Experimental group	Control group
Low	405 (54.00)	50 (66.00)
High	345 (46.00)	25 (34.00)
Total	750 (100)	75 (100)

In the areas of "functions of nutrients" and "scientific methods of preparing adequate diet" many women in the two groups (approximately 30 to 52 per cent) were totally ignorant about the elementary aspects. A comparison between the two groups revealed, that nutrition cognition of the women in the two groups were poor. However, employed women were found to obtain higher scores than housewives probably because of their constant exposure to outside world and more interaction with women placed in similar situation.

Table 60. Knowledge level of the women based on the percentage scores obtained

Sl. No.	Important areas of food & health	Percentage of scores											
		0		1-24		25-49		50-74		75-99		100	
		E	C	E	C	E	C	E	C	E	C	E	C
1.	Constituents of balanced diet	—	—	36 (4.80)	10 (13.33)	427 (56.90)	39 (52.00)	267 (35.60)	25 (33.33)	20 (2.67)	1 (1.33)	—	—
2.	Health care	—	—	27 (3.60)	7 (9.33)	177 (23.60)	31 (41.33)	468 (62.40)	31 (41.33)	78 (10.40)	6 (8.00)	—	—
3.	Functions of nutrients	309 (41.20)	39 (52.00)	129 (17.20)	14 (18.67)	141 (18.80)	13 (17.33)	157 (20.90)	9 (12.00)	14 (1.90)	—	—	—
4.	Foods given during special condition	15 (2.00)	6 (8.00)	12 (1.60)	3 (4.00)	285 (38.00)	38 (50.67)	379 (50.50)	26 (34.60)	54 (7.20)	2 (2.67)	5 (0.70)	—
5.	Work efficiency	2 (0.30)	—	52 (6.90)	10 (13.33)	324 (43.20)	45 (60.00)	369 (49.20)	20 (26.67)	3 (0.40)	—	—	—
6.	Diet of children	23 (3.10)	2 (2.67)	55 (7.30)	3 (4.00)	372 (49.60)	31 (41.33)	298 (39.70)	39 (52.00)	2 (0.30)	—	—	—
7.	Scientific methods of preparing adequate diet	225 (30.00)	23 (30.67)	38 (11.70)	11 (14.67)	176 (23.50)	23 (30.67)	249 (33.20)	17 (22.67)	9 (1.20)	1 (1.33)	3 (0.40)	—
8.	Significance of existing nutrition intervention programme	48 (6.40)	15 (20.00)	113 (15.10)	11 (14.67)	205 (27.30)	27 (36.00)	187 (24.90)	20 (26.67)	192 (25.60)	2 (2.67)	5 (0.70)	—

E - Experimental group C - Control group

NUTRITIONAL STATUS OF THE EMPLOYED WOMEN

The nutritional status can be measured by several methods such as diet survey, actual weighing of foods consumed, anthropometric measurements and Clinical and Biochemical investigations.

This chapter details the nutritional status of the employed women assessed through weighing of actual food uptake, anthropometric measurements, and haemoglobin estimation.

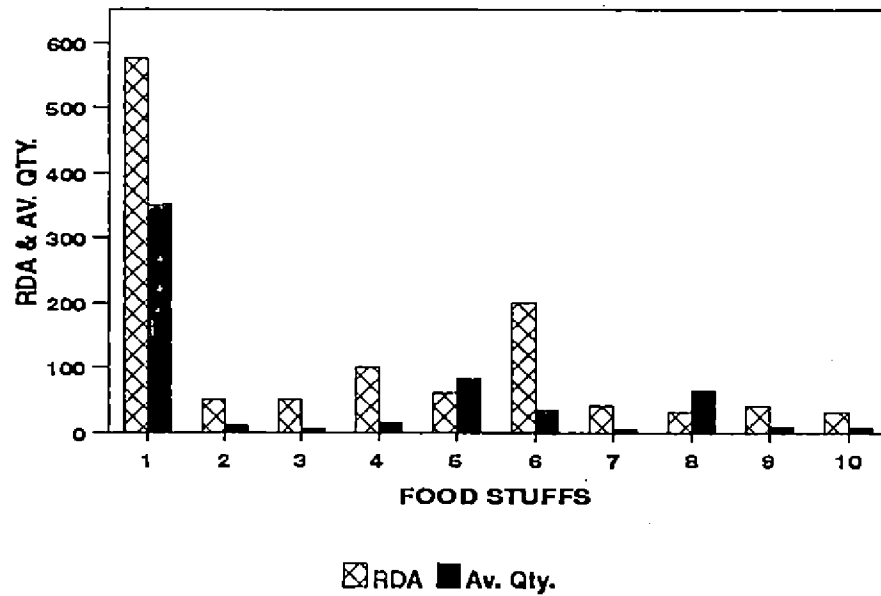
Dietary intake of selected 75 women (moderate workers 31 and heavy workers 44) from the experimental group were assessed by three day weighing method. The intake was compared with the Recommended Daily Allowances (RDA) suggested by ICMR (1984).

Average quantity of various food groups included in the dietaries of the women engaged in moderate work were inadequate except for roots and tubers and fish (Table 61). Consumption of cereals was only 71.59 per cent of Recommended Dietary Allowances. Only negligible amount of green leafy vegetables (4.5 per cent) was found to be included in their diets. Foods such as pulses, milk, sugar and jaggery were observed to meet only 20 to 25 per cent of RDA., while 26 to 30 per cent of RDA was met with respect to foods like fruits, fats and oils.

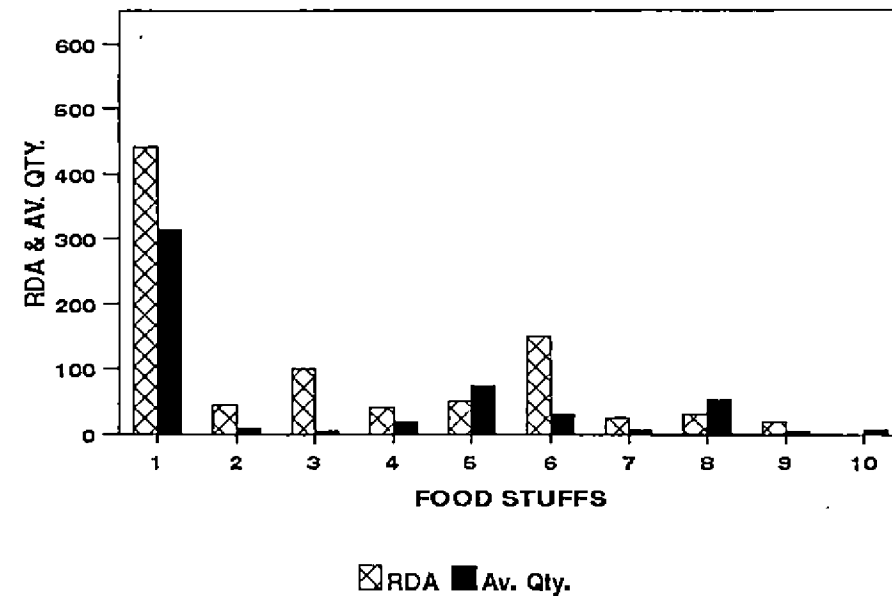
Dietary analysis of the second category of women, engaged in heavy work, revealed a further deficient state, even though their meals were rich in roots and tubers and fish. Intake of all the other foods were below the RDA. Foods like green leafy vegetables, other vegetables, milk, fats and oils were too little, meeting only less than 20 per cent of the women's requirements. The requirement for foods like pulses and fruits, were met only up to 25 per cent (Illus.4).

Average quantity of food stuffs consumed by the respondents

MODERATE WORKER (52)



HEAVY WORKER (23)



1 - Cereals, 2 - Pulses, 3 - Green leafy veg., 4 - Other vegetables, 5 - Root and tubers, 6 - Milk, 7 - Fat and oils, 8 - Fish, 9 - Sugar and jaggery, 10 - Fruits

Table 61. Average quantity of food stuffs consumed by the respondents.

Food stuffs	Moderate worker 31			Heavy worker 44		
	RDA	Average quantity consumed /day	Percentage of RDA met	RDA	Average quantity consumed	Percentage of RDA met
Cereals	575	352.7	61.34	440	315	71.59
Pulses	50	11.0	22.00	45	10	22.22
Green leafy veg.	50	5.0	10.00	100	4.5	4.50
Other vegetables	100	15.0	15.00	40	19	47.50
Root and tubers	60	83.0	138.33	50	75	150
Milk	200	35.0	17.50	150	30	20
Fat and oils	40	5.4	13.50	25	7	28
Fish	30	63.7	212.33	30	53	176.67
Sugar & jaggery	40	8.2	20.50	20	5	25
Fruits	30	6.4	21.33	30	8	26.67

Insufficient consumption of food articles by these women had resulted in low availability of nutrients (Table 62). All the nutrients were deficient in their diets and more than 75 per cent of requirement of the women doing moderate work were met with respect to nutrients such as energy, protein and calcium, derived from roots and fish. Women doing heavy work were found to get only 60 per cent of energy from their diet. Fats, were highly inadequate in their diets since only 25 per cent and 27.5 per cent of requirement were met for moderate and heavy workers respectively. Diets of the two categories of women were also highly deficient in iron and only 56 per cent of the iron requirement was met. (Illustration 5)

Illust. 5. Average intake of nutrients by the women

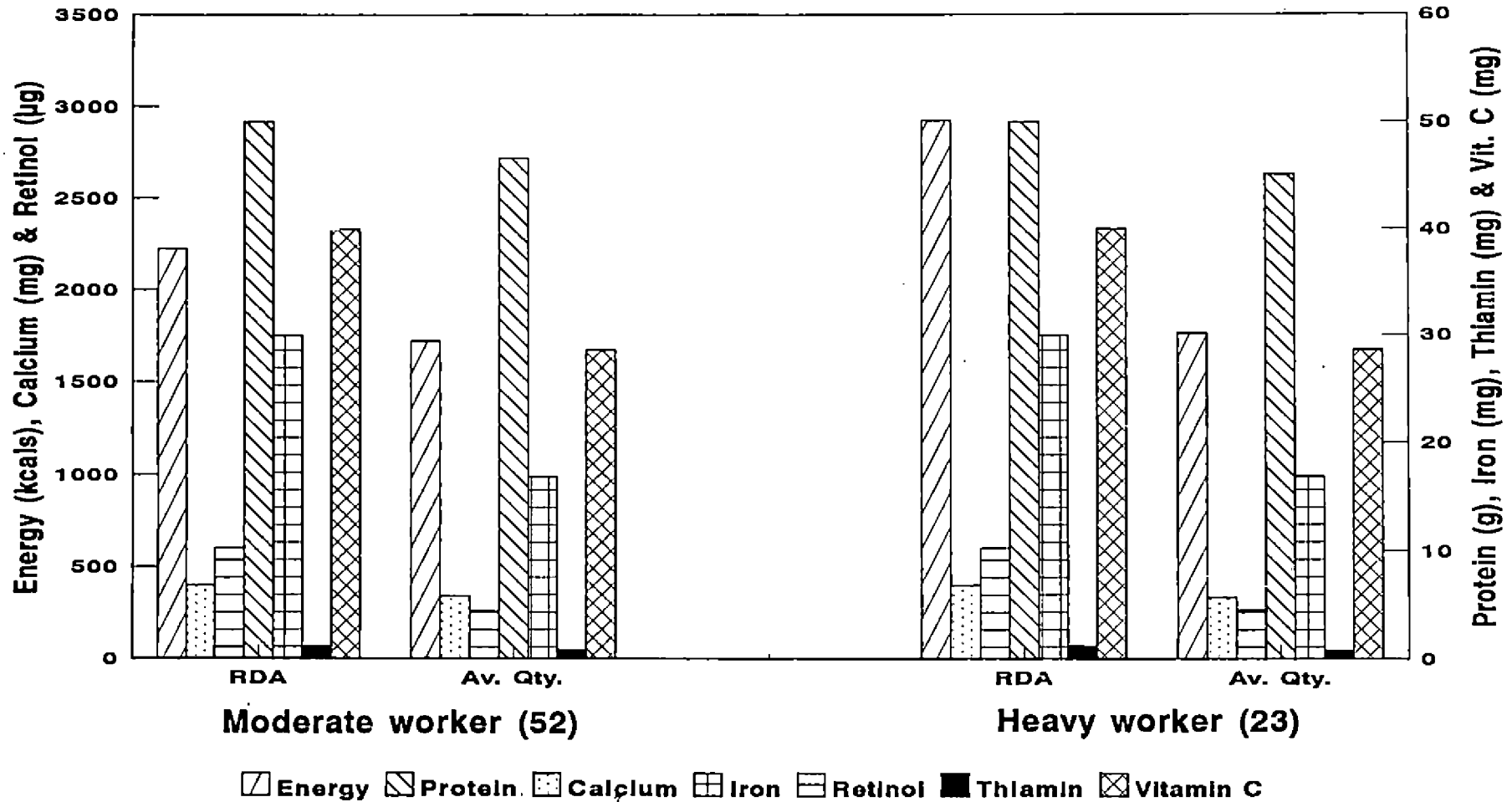


Table 62. Average intake of nutrients by the women

Nutrients	Moderate worker n = 31			Heavy Worker n = 44		
	RDA	Average quantity consumed	Percentage of RDA met	RDA	Average quantity consumed	Percentage of RDA met
Energy	2225	1717.65	77.29	2925	1760.6	60.19
Protein (g)	50	46.65	93.30	50	45.1	90.20
Fat (g)	20	5.00	25.00	20	5.5	27.50
Calcium (mg)	400	339.77	84.94	400	333.5	83.38
Iron (mg)	30	16.91	56.37	30	16.9	56.33
Retinol (ug)	600	259.44	43.24	600	265.0	44.17
Thiamine (mg)	1.1	0.79	71.80	1.2	0.78	65.0
Vitamin C (mg)	40	28.67	71.68	40	28.61	71.53

Prolonged consumption of inadequate amount of foods generally result in low health status of the individual and reflections of the same are seen in their anthropometric measurements. Anthropometry deals with the comparative measurements of the body. This is one of the most frequently used methods for assessing nutritional status. In this study the height and weight of 75 women from the experimental groups were measured.

Table 63. Weight for age profile of the respondents

Age years	Range of the observed weight	No. of samples	Mean weight (kg)	Standard weight (kg)	t value
18-40	35 - 37	42 (56.00)	45.88	50	3.2609**
41-70	38 - 70	33 (44.00)	50.52	50	

Numbers in parenthesis indicate percentage of women

** Significant at 1% level

The data revealed that 65 per cent of the women were having low body weights when compared to Indian reference woman. The mean weight of 56 per cent of the women in the age group of 18 to 40 years were found to be below the value suggested to Indian reference women, while that of 33 per cent of women in the age group of 41 to 70 were equal to or higher than their standard weight, revealed in Table 63. Further analysis of the available data (Table 64) revealed that 30 women in the category of 'Heavy workers' and 19 women among the 'Moderate workers' were observed to deviate negatively from the standard weight. The average weight of the heavy worked was 47.10 kg while that of moderate worker was 49.21 kg. The data endorse the findings of Gopalan and Kaur (1989) who had collected data on heights and weights of women in the age group of 20 to 24 from different States of India. They had reported that 12 to 33 per cent of the women they surveyed had heights below 145 cm and 15 to 29 per cent of women had weight below 30 kg.

Besides dietary factors, there are certain environmental factors which cause occupational hazards and might adversely affect the health, well being, efficiency and productivity of these women. Among these environmental factors, monotonous working condition and unsanitary work place are major constraints.

Table 64. Distribution of women according to duration from standard weight of reference women

Category	Average weight (kg)	Mean deviation from standard weight					
		Weight (kg)	+ve No.	%	Weight (kg)	-ve No.	%
Heavy worker (n = 44)	47.10	+5.44	(9)	20-45	-5.07	(30)	68-1
Moderate worker (n = 31)	49.21	+5.29	(12)	38-70	-5.16	(19)	61-2

The energy consumption pattern of the above 75 women when studied in detail revealed that there was an 'energy gap' ranging between 10 to 30 per cent in the case of moderate workers and in the range of 21 to 50 per cent in the case of heavy workers (Table 65). This clearly indicates that there is an absolute energy deficiency in the diet and adjustments are not made in energy consumption even when the work load becomes heavy. As the calorie gap continues to prevail over a season, and then spreads further over years it results in two major alterations. The first change is that the lower energy consumption leads to reduction in body weight. The second change is that the body adjusts its energy balance to a lower level, that the individual is able to carryout the daily activities at a lower energy intake.

Table 65. Distribution of women according to percentage deviation of energy from RDA

(n = 75)

Energy deviation percentage in range	Moderate workers	Heavy workers
0-10	1 (3.23)	—
11-20	8 (25.8.)	—
21-30	22 (70.97)	1 (2.27)
31-40	—	21 (47.73)
41-50	—	22 (50.00)
	31 (100.00)	44 (100.00)

Classification of women according to percentage of energy spent for three different categories of activities namely household activities, outside occupation, sleep and leisure revealed interesting findings.

Table 66. Distribution of women according to percentage of energy spent for different activities

Percentage of energy spent	Household Activity		Outside occupation		Sleep and leisure	
	Heavy worker	Moderate worker	Heavy worker	Moderate worker	Heavy worker	Moderate worker
0-10	4 (5.33)	—	—	—	—	—
11-20	3 (4)	5 (6.66)	—	3 (4)	5 (6.66)	4 (5.33)
21-30	18 (24)	12 (16)	8 (10.66)	5 (6.66)	21 (28)	15 (20)
31-40	19 (25.33)	10 (13.33)	14 (18.67)	9 (12)	12 (16)	8 (10.66)
41-50	—	4 (5.33)	12 (16)	9 (12)	3 (4)	—
51-60	—	—	7 (9.33)	3 (4)	3 (4)	3 (4)
61-70	—	—	3 (4)	2 (2.66)	—	1 (1.33)
	44	31	44	31	44	31

Twentyfive per cent of heavy workers and 13 per cent of moderate worker spent 31 to 40 per cent of their total energy expenditure for household activities while 24 per cent and 16 per cent of heavy and moderate workers spent 31 to 40 per cent of their total energy expenditure for household activities respectively (Table 66). It may be noted that a higher percentage of heavy workers spent a greater amount of energy for household activities than the moderate workers. The selected population spent 21 to 60 per cent of their energy for occupation related activities. Data reveals that the household activities termed to be 'economically unproductive' takes a major share of the energy expenditure of both heavy and moderate workers. Thus this accounts for a 'double day' wherein the employed women plays the role of a 'house wife' as well as that of a 'bread winner'.

Body Mass Index (BMI) of the women was worked out in order to classify the women based on the energy deficit. The details are given in Table 67.

Table 67. Body Mass Index (BMI) of the women

BMI class	Presumptive diagnosis	Number of women	
		< 40 years	> 41 years
< 16 - 0	CED Grade III (Severe)	—	—
16.0 - 17.0	CED Grade II (Moderate)	—	—
17.0 - 18.5	CED Grade I (Mild)	9 (12.00)	
18.5 - 20.0	Low weight (normal)	23 (30.16)	25 (33.33)
20.1 - 25.0	Normal	10 (13.34)	8 (10.67)
		42 (56.00)	33 (44.00)

Numbers in the parenthesis indicate percentage

The data reveals that severe and moderate energy deficiency were not prevalent among these women, while mild energy deficiency was observed among 12 per cent of women who were below 40 years. Sixty six per cent of the women were normal but of low weight and 24 per cent of the women were found to be normal with respect to their energy.

Iron deficiency anaemia has been widely reported among women who are employed. The iron status of the 75 employed women was assessed through estimation of haemoglobin. This investigation revealed that only 38 per cent of the women had value $> 118/100\text{cc}$ of blood. This reveals that majority of the subjects were found to be anaemic (Table 68).

Table 68. Percentage distribution of the women based on haemoglobin levels

Haemoglobin levels	Details of women	Hb value (range)	Mean Hb value
$> 11 \text{ g/dl}$	29 (38.66)	8.7 - 10.9	11.8
$< 11 \text{ g/dl}$	46 (61.34)	11.2-12.4	10.4

Number in parenthesis indicate percentage

Nutritional surveys conducted points to the fact that employment has the potential to improve the health status of the women. However it would be naive to presume that provision of universal employment would lead to better health status under all circumstances. One aspect that needs careful consideration is whether this employment is likely to affect any of the intervening variables which will in turn produce desired change in nutritional status. The second aspect to be considered is the balance time costs and income benefits and the effect of such employment on the woman's already over burdened life. At

length, one must be able to say whether employment *per se* would lead to a better quality of life for the woman and her family.

Table 69. Relationship between the time expenditure pattern for activities and health status of the women

Activities	Correlation coefficient (r)		
	Weight	BMI	Haemoglobin
Household activities	-0.0433	-0.0693	-0.0844
Outside work	-0.0006	-0.0442	-0.1035
Leisure	0.0341	0.1175	0.0286
Sleep	0.0304	0.0071	0.0274

Relationship between the time expenditure pattern BMI, body weight and HB level of the selected 75 employed women was statistically tested. Total time spent for various household activities and outside work by an employed woman had only direct negative effect on the health parameters of the women. As the time spent for various activities reduced, the health status of the women were found to improve. Similarly, time spent for leisure and sleep by these employed women had a positive association with the health parameters of the women like weight, BMI and haemoglobin. However this was not statistically significant.

Nutritional status index

Nutritional status index is an indicator of social well being of a community. The nutritional status index of above 75 women was developed on the basis of

weight, BMI and haemoglobin level of the women and the results are furnished in Table 70.

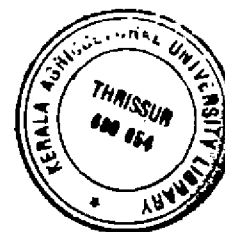


Table 70. Nutritional status index

Nutritional Status Index (in range)	Details of women	
	No.	Per cent
Below 23.52	13	17.33
In between 23.52 - 25.78	48	64.00
Above 25.78	14	18.67
Total	75	100

Nutritional status index of the women ranged from 22.01 to 27.33 with a mean of 24.65. Based on this the respondents were classified as having low, medium and high nutritional status. Lowest nutritional status index was observed only in 17.33 per cent of the women studied. The majority of women (64.00 per cent) were in the medium level category and 18.67 per cent had higher level nutritional status. Low nutritional status index may be due to the deficient intake of proteins and calories.

SALIENT OBSERVATIONS AND RECOMMENDATION

A. SOCIO ECONOMIC PROFILE

1. 70% of the population selected for the study belong to rural area, which indicates that more women from rural areas go out to take up employment outside the family.
2. Nearly 85 per cent subjects of the study belonged to 'the backward' and 'scheduled castes'.
3. Nearly 85 per cent of the population from Nuclear families were seen to go out to take up employment, when compared to those women from 'Joint families' probably because of the greater responsibilities of the women^{of} former group.
4. Less than 20 per cent of the families were female headed, indicating that women became managers only under condition of family crisis or stress.
5. Sixtyeight per cent of the women who sought employment were from male headed families. This indicates that in order to maintain the economic status of the family, these women are forced to take up subsidiary/or outside employment.
6. About 45 per cent of the women also take up employment outside their homes had a family composing of more than 5 members. The larger size of the family itself might be a factor which has driven the female members to seek employment outside the family.

7. Analysis of the family composition revealed that presence of higher percentage of adults (60 per cent) a higher number of females than males, and the families having a lower percentage of preschool children (10 per cent) were factors which might have helped these women to go out of the household, for employment
8. As far as the present study is concerned the role played by literacy or educational status remain ambiguous in motivating rural women to seek employment in the unorganised sector, since the sample has an equal number of women who have studied upto highschool level, on the one side and who are illiterate on the other side (24 and 26% respectively).
9. It looks as though, these women, seem to motivate other members also to take up employment out side. It indirectly indicates that, other members of the family realize the benefits derived by the employed women and hence they are also trying to follow her foot path. Thus these women may act as trend setters of the community.
10. A woman, when engaged in an employment outside the family earns an income ranging between Rs.500 to 2000, adding substantially to the total income and standard of living of the family.
11. The living condition of the families where women were employed, seem to be just adequate, as 96 per cent possessed their own houses. However the sanitary and drinking water facilities were not in the reach of these families. With additional income that they earn, these families could aspire for better living conditions and our social welfare schemes should extend their programmes to uplift such families, also, since they could be pulled above poverty line easily by providing such facilities which would help to improve their living conditions.

12. Though several families have savings in terms of 'cash', 246 families were found to be indebted. Out of these families 10 per cent were in the clutches of money lenders. This indebtedness could be one of the factors which might have driven the members to take up employment.
13. When dietary habits were studied it was clear that there were wide variations in the intra-family food expenditure pattern. The range of expenditure varied from 31 per cent to 90 per cent. However 83 per cent women were observed to spend 51 to 80 per cent of their income on food.
14. It is seen that family size, number of family members employed in a family and family income were directly found to influence the expenditure on food significantly.
15. The dietary pattern reveals that the diets were not well balanced, since the items such as pulses and fruits were not used regularly. It is seen that other vegetables, roots and tubers and green leaf vegetables, were also used regularly by all the families.
16. The daily diet consisted of three meals, viz. breakfast, lunch and dinner but there was a long gap of 4 to 7 hours between breakfast and lunch and 5 to 1 between lunch and dinner in the case of employed women. This itself is not conducive to good health. However few of the women were in the habit of taking coffee/tea or snacks in between meals. It is also seen that since the women were working, most of the meals were not eaten together by the family members and each one had their meals to suit their own convenience.
17. A positive note that comes out from the study is in the intra family distribution of food, special consideration was given to children, followed by women who are employed.

B. ADVANTAGES OF WOMEN DUE TO EMPLOYMENT OUTSIDE HOME

1. Income generation by rural women can be regarded as an important measure in the amelioration of rural poverty.
2. Women wage earners contribute substantially to family income (50 per cent or more of total house hold income).
3. When woman's income increases, she is able to supply more goods and services to her family members, especially to her children.
4. Economic independence had given more importance to women as 'decision makers' on major family issues.
5. Employed woman are considerably more egalitarian in their views than women who are full-time home makers.

C. DISADVANTAGES OF WOMEN DUE TO EMPLOYMENT OUTSIDE HOME

1. Many women surveyed are found to be highly disadvantaged in terms of self protection and bargaining power and are subject to exploitation, being employed in unorganised sector
2. Women employed in informal sector experience discrimination in pay, promotion, working condition and hiring practices.
3. Many of the occupations carried out by the women involve a lot of physical strain which do, in the long run, create health problems, particularly to those who are in the above middle age group.

4. A good proportion of women may come under the category of casual labourers and are therefore not protected by labour laws regarding maternity or sick leave and hours of work.
5. Compared to housewives, employed women are more frequently affected by external infections.
6. Unlike housewives, employed women get less time for personal care and sleep.
7. Important home based activities and child care activities were neglected by the employed women for want of time. They face extra burdens because of inadequate child care facilities at work place and the long distances between home and work place.
8. Hazards due to prolonged physical work are more common among employed women.
9. In the absence of mothers, infants are observed to be served commercial baby foods in inadequate amounts and in unhygienic ways, impairing the state of infant nutrition. This problem will increase in dimensions in the years ahead.
10. The sex ratio favours women after the age of 60 years. Many elderly women, employed in the younger days with dual responsibilities, have its "after effects" in the old age. Nutritional and health problems of such destitute old women are increasing day by day.
11. The study reveals that the money the women earn from outside work is not comparable to the enormous work added to their already heavy work load.

D. DUAL RESPONSIBILITIES OF THE EMPLOYED WOMEN

1. Employed women compensate by working long hours (11 to 18 hrs a day) when employment and domestic responsibilities are considered.
2. The managerial role of employed women surveyed in supervising and performing daily household activities and in maintaining the complex net work of reciprocal relationships between kin and community is significant and it needs to be recognised.
3. The women have to spend considerable amount of time and energy to fulfil the role of home maker and wage earner resulting in the degeneration of their health.
4. Women are the chief care takers of family nutrition including their own. Despite the fact that these activities are performed by women, their control over resources is determined by certain social and cultural norms prevalent in the society that are not always favourable to them. Discrimination in few households in the allocation of food between males and females within the family, the males getting better food is a common phenomenon in Indian families and this discrimination at domestic sector make the most women physically weak, under nourished and malnourished.
5. Maternal morbidity, frequent births, heavy household work and lack of opportunities contributed to the low health profile of the women.
6. Among women employed, food intake and energy intake were found to be below the allowances recommended.
7. Facilities available in and around their houses where they stayed were found to be far from satisfactory and were one of the reasons for the deficient health profile of the women.

8. Meal serving pattern was better among the families in the experimental group since discrimination between male and female was more in the families in the control group. However food combinations attempted in different meals were equally inadequate in both the groups.
9. A coherent national nutrition policy is needed taking into consideration not only women's current status of nutrition and health but also the issue of women's multiple roles and their position within the house.
10. The poor state of environmental sanitation and the over crowding and poor housing conditions can be responsible for increasing the alimentary and respiratory infections.
11. Women's nutrition and health are determined not only by household availability but by a number of complex factors within the households which need to be documented clearly.
12. Women's heavy work load in these poor household is deterrent to their physical well being.

E. HOW TO EASEN THE WORK SITUATION

1. Supporting services such as easy access to drinking water and lowest fuel are to be formulated so as to conserve time and energy of these employed women.
2. Existing child care services need to be strengthened to support the women and lessen the burden they face because of their multiple responsibilities and work load.

3. Appropriate simple technologies economical in terms of time and resources in their occupations are to be introduced to improve the work efficiency and to reduce drudgery.
4. In technology generation process, women perspectives are to be included and women specific technologies are to be evolved deliberately.
5. Employed women in the informal sector have very little leisure time because of their multiple role at home and in the work place. They need sufficient rest for better health and family welfare. Hence the time rationalisation factor at the time of technology generation and dissemination is to be considered.
6. Areas which will be better managed by women are to be identified in the informal sector. Women's participation in these areas are to be promoted by imparting suitable trainings frequently.
7. Policies that aim at increasing the income earning opportunities of women need to include provisions for care of young children. Specific programmes are to be sorted out for the all round development of these children who face the double deprivation of poverty and neglect.
8. Programmes that aim at child survival should also take into account the opportunity cost it involves for women who must earn in order to feed themselves and their children.
9. Women must be persuaded to improve the quality of life of their own and their children by utilising the primary health facilities effectively and by attending mother education programmes offered through various intervention programmes.

SOCIO ECONOMIC CONDITIONS WHICH FAVOUR THE FEMALE WORKER TO OFFER HERSELF TO THE LABOUR MARKET

The woman's activities are primarily connected to the home and family, they have been in the labour market from time immemorial. IN the initial periods women of lower economic and social strata were equal participants in the labour scenario. In recent decades more and more women are coming out of their household, tie-ups with respect to employments to become 'economically 'productive' and "socially" more acceptables. Several factors have directly and indirectly contributed to this change, particularly in a progressive state like Kerala.

The place of residence is seen to be one of the factors that govern the entry of women in to the labour market. The available data reveals that the women from rural areas go out to take up jobs in the unorganised sector more than those from the urban or slum areas because of low income, larger family size, low percapita availability, of income and more opportunity for unskilled labour even on an adhoc basis.

The monotony of rural life may motivate the women to take up employment which offers her opportunities for socialization.

Caste seems to be another factor which pushes or permits women to enter in to the labour market. The basic data available from the study reveals that women from the backward caste/class (including the scheduled castes) enter into the labour market (from the unorganised sector) in larger numbers than the women from the forward classes. This might be due to the fact that even today the trend established in the pre-historic period continues to exist even today, though we acclaim that there exists a socialistic pattern of society in Kerala. The type of employment taken up was on the basis of caste system or the caste

system was based on type of employment. The data (from Table 3) reveals that 84.80 per cent of women engaged in the different petty occupation belonged to backward classes, while only 15.20 per cent were from forward classes. This justified the facts that women from the backward communities take up employment in the unorganised sector following the trends already set by the predecessors.

Unlike the common belief that women from joint families find more opportunity to go out to work the data proves that more woman from nuclear families (83.33 per cent) take up employment outside their homes. This may be due to the fact that in nuclear families the number of earning family members are few and to run a home for themselves, more money is to be earned, and the women are forced to contribute her might in this respect. This could also be due to the fact that the women in nuclear families are at liberty to utilize their time profitably, and they are not under the clutches of their mother or sister in laws. This could be also due to the realization of decision making power of the women in a nuclear family of Kerala, where the women are literate.

FACTORS WHICH PERPETUATE POVERTY

From the study, it is observed that the following factors may help to perpetuate poverty among low income families.

- (1) Lack of employment itself is a primary factor which would lead to poverty in low income groups. When women are employed it brings added income, and they seem to lead other members to go out to work, thus enhancing the standard of living of the entire family and lifting them above the poverty line.

- (2) It seems that forward caste women, if they belong to low economic strata may succumb to ill effects of poverty, if they remain indoors. Breaking the barriers of caste they are to take up such manual jobs, if they are to help themselves and to become economically independent and to keep away from the clutches of poverty.
- (3) Poverty can be alleviated, if the family size can be kept to a minimum (say less than five). Nuclear type of family seen to give women more independence and freedom to take up employment and through that to upgrade the standard of living of the family. If the family composes more of adults and adolescents, and lesser number of preschool children, it enables the women to take up subsidiary or income generating activities which ameliorates poverty.
- (4) Income earned by women forms a "visible" portion of the family income which determines the economic power a family enjoys. By working in the vicinity of the home itself, and taking care of the house hold, she enables herself to earn a living. Then the income earned by the women help to ward off poverty. It has been reported that the income earned by the women are utilized profitably to enrich the family resources.
- (5) Possession of a house, absence of indebtedness and savings would help women to circumvent the effects of poverty.
- (6) The availability of safe drinking water from a nearby source, presence of sanitary facilities within the household, availability of minimum quantity of fuel and food, which is within the purchasing power of the families would help the women, to attain a better standard of living , a better nutritional status, and improved working efficiency.

