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Socio-economic status, dietary pattern and clinical status of selected rural population in Coimbatore district of Tamil Nadu

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Abstract
The socio-economic, dietary pattern and clinical status of selected rural / urban population in Coimbatore district were studied. The questionnaire was administered by interview method to a group of women members of Veerakeralam block of Coimbatore District. As planned two blocks in district with 3 villages each covering a total population of 300 was selected. Lectures and demonstrations were conducted for the women's group by the consultant, scientist and co-investigator. The clinical study was conducted in Thondamuthoor block with Clinical Physician, Tamil Nadu Agricultural University. In Coimbatore district 106 (35%) of the families had the low income of less than Rs. 2500. Of the total 247 families studied in Coimbatore district 61 (20.33%), 155 (51.67%), 16 (5.33%) and 15 (5%) had qualified up to primary, secondary, higher secondary and higher education respectively. A total of 67 (22.33%) families utilize the facility of free education. The expenditure pattern for cereals revealed that maximum number of 300 families purchase boiled rice. The meal planning is done only in 52 families (17%), those who don't plan the meal in Coimbatore with 248 (83%). Weaning foods as supplements are introduced at the age of 8 months by 135 families and at one year by 165 families. Among the 300 studied 7.33%, 21.33% and 13.66% showed sparse, discolored and easily pluckable hair. It is encouraging to have 57.66% with normal hair. With reference to face, 96.33% had normal, 3.00% had moon face and only 0.66% with Nasolabial Dysebacea. A number of 29 (9.66%) persons had mild anaemic and 26 (8.66%) persons had anaemic among the total of 300 families.

Keywords: Coimbatore district, 300 families, socio-economic status, dietary pattern and clinical status

Introduction
In India due to tremendous efforts of our farm scientists and farmers, Green Revolution has resulted in increased agricultural and horticultural production. But still there is malnutrition existing in India depicting the dire need of our population to acquire nutritional knowledge and training in post-harvest techniques including food processing technologies with a view to avoid the waste, to generate employment and income resulting in the upliftment of the life quality of our rural and urban population. There is an immense scope for the development of new value added products which have not appeared in the market, which would be innovative. Nutrition education assumes special significance in Indian context because the problem of malnutrition in India in mainly due to ignorance, poverty and lack of knowledge regarding the values of food. Dietary practices especially in women and children are often governed by social taboos based on food fads. Nutrition education is the foundation for improvement in the dietary habits and nutrition awareness is essential to bring changes in dietary habits and creating nutrition awareness which entirely depends on education and training. The Government of India has launched the National Rural Health Mission in 2005 to improve basic health care delivery system in India.

Lectures and demonstrations were conducted for the women's group by the consultant, scientist and co-investigator. The clinical study was conducted in Thondamuthoor block with Dr. Arulmozhi, MBBS, Clinical Physician, and Tamil Nadu Agricultural University, Coimbatore and explained nutrition education and health with special reference to oral health by Dr. V. Saraswathi Ramesh (Dentist).

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The physicians while doing the clinical checkup, also distributed the iron and vitamin tablet with the other medicines as required by the people. For any special cases they were advised to have a checkup with the specialist concerned.

Results and Discussion
The details regarding socio economic status of 300 families is given in Table 1.

In Coimbatore district 106 (35%) of the families had the low income of less than Rs. 2500, while 137 (46%) had the middle income of Rs. 2600-5000 and only 57 (19%) families had a high income of above Rs. 5000 respectively. Among 300 families studied a total of 105 (35%), 174 (58%) and 21 (7%) families had 3 members, 3-5 members and above 5 members respectively. Higher number of families had only 3-5 members and the lowest number of families had above five members, which depicts that the medium family norms are being followed. With regard to religion and caste of the 300 families surveyed 263 (87.67%) were Hindus, 12 (4%) Christians and 25 (8.33%) were found to be Muslim community.

A total population of 300 studied 48 (16%) were vegetarian and 244 (81.33%) non-vegetarian and 8 (2.67 %) found to consume both vegetarian and non-vegetarian foods according to their availability. As far as the types of the family is concerned, of the total of 300 in district, only 29 (9.67%) is of joint family and 271 (90.33%) constitute the nuclear family system. All the 300 members surveyed are married. Of the total 247 families studied in Coimbatore district 61 (20.33%), 155 (51.67%), 16 (5.33%) and 15 (5%) had qualified up to primary, secondary, higher secondary and higher education respectively. With reference to the occupational pattern in a district a maximum of 241 (80.33%) work on daily wages followed by 5 (1.66%) on weekly wages, 10 (3.33%) on monthly wages and 19 (6.33%) work on regular basis. Business ranked first for other source of income 8 (2.66%) followed by building 1 (0.33%).

In Coimbatore District 14 families (4.66%) have a land holding of below 5 acres. Nearly 166 (55.33%) live in their own houses, whereas 134 (44.66%) live in rented houses. The house construction details of the 300 families surveyed, shows that 177 (59%) live in mud wall thatched, 87 (29%) in brick wall thatched, 32 (10.66%) in concrete house and 4 (1.66%) in double storyed concrete house. The mean expenditure for food is below 3000 for 278 families (92.66%) and clothing is spent below 1000 is 184 (61.33) families. People living in rented houses of below Rs. 1000 per month is 98 (32.33%) and 36 families (12%) live in houses with rent of above Rs. 1000 / month. The expenditure for medicine per year for below Rs. 1000 is met by 117 families (39%) and above Rs. 1000 by 17 families (5.66%). A total of 67 (22.33%) families utilize the facility of free education. 163 (54.33%) of the families had an expenditure of below Rs. 1000 for fuel and light and 20 (6.60%) families had the habit of spending for pan supari below Rs.500. With the reference to the expenditure on transport for 133 families (44.33%) had spent below Rs.1000 whereas 10 families (3.33%) had an expenditure of above Rs.1000. With regard to savings in Coimbatore district had 296 (98.67%) families for below Rs.1000 and only 4 (1.33%) families for above Rs.1000.

The details regarding expenditure pattern for cereal, pulses, roots, tubers, green leafy vegetables and other vegetables, fruits, milk and milk products, tea and coffee is given in Table 2 and 3. The expenditure pattern for cereals revealed that maximum number of 300 families purchase boiled rice followed by wheat 278 families, maida by 142 families and the least number of 68 families, raw rice. Under the millets group the expenditure is incurred in 65 numbers for ragi, followed by maize 21 members, bajra by 16 families and the least number of 8 for jowar. Among the green leafy vegetables maximum number of 164 families incurred high expenditure followed by the purchase of amaranthus by 155 families. A total number of 191 and 121 families incurred the expenditure on tea and coffee respectively.

Dietary surveys constitute an essential part of any complete study on nutritional status of individuals or householders, providing necessary information on food and nutrients, intake level, food habits and so on. Dietary survey was helpful to determine and evaluate intake levels of food and nutrients and special food practices that are to assess what people eat qualitatively and quantitatively and find out the inadequacies in the existing dietary pattern and habits. The details regarding dietary surveys are given in Table 4 and 5.

The meal planning is done only in 52 families (17%), those who don't plan the meal in Coimbatore with 248 (83%). The reason for not planning the menu was quoted as non-availability of raw materials by 118 (39%), no habit 60 (20%) and budget problem 70 (23%) families. The reason for planning the menu was stated to be they liked to have planned food items as quoted by 52 (17%) families. Among the 300 families studied for cooking of cereals boiling and steaming methods were followed by 58.80% and 37.30% families. For pulses also 46.5, 38.8 and 10.5% families adopted boiling/steaming and shallow fat frying techniques. For cooking of vegetables boiling and steaming were followed by 58.6% and 32%. For fish they followed boiling by 31%, steaming 21.6% shallow frying 25% and deep fat frying 17.4%.

The foods processed and preserved are only pickles by 76 families, mutton and chicken gravy by 25 families, tamarind rice 32 families and sweets by 10 families. The foods are preserved with salted oil, oil, oil and ghee and tamarind and practiced by 63, 31, 20 and 29 families respectively. This emphasis the need for the knowledge regarding awareness, training and marketing of processing and food preservation technologies. Weaning foods as supplements are introduced at the age of 8 months by 135 families and at one year by 165 families. The foods given are Kali and gruel by 85, 215 families and an amount of below and above two cups are given by 240, 60 respectively, with a frequency of below two times by 220 and above two times by 80 families, quoting the reason for feeding as healthy by 120 and easily digestible by 180 families. The food likes of the family members in the district reveal that Vegetable biriyani was preferred by a maximum of 48, tomato rice and chappathi with 30, chicken 26 and rice with sambar by 24 family members. The other items are liked by less number of people only. Maximum family members opted for rice with sambar followed by idli with chutney. The other items of preparations as given in the table are consumed once in a way as per the convenience of family members. The weaning foods are given as special foods apart from mother's milk which was given by all the 300 members, for the infants. The other supplementary foods given are ceralac, lactogen, nestle, junior horlicks, complan, and cow's milk.

Clinical Examination is the most essential part of all nutritional surveys, since the ultimate objective was to assess of health of individuals and population group as influenced by the diet they consume. Clinical examination should also aim

at eliciting reasons attributable to such diseases and should include for a suitable proportion of the sample with microscopic examination of stool specimens and of blood smears. The hemoglobin level of blood (Expressed as g/100 ml) was a reliable index of the overall state of nutrition, in addition to its diagnostic importance in anemia. The details regarding clinical examination are given in Table 6. Among the 300 studied 7.33%, 21.33% and 13.66% showed sparse, discolored and easily pluckable hair. It is encouraging to have 57.66% with normal hair. With reference to face, 96.33% had normal, 3.00% had moon face and only 0.66% with Nasolabial Dysebacea. The percentage for people with normal eyes is 75.33%, corneal opacity was also found with 24% people and exhibited no such symptoms of night blindness and corneal xerosis. Out of 300 members more than 97.66% had normal lips, Angular stomatitis was found in 1.33% and Cheilosis was exhibited by 1%. With regard to Gastro intestinal System, among the total of 300 checked, 11(3.66%) persons had enlargement of liver. Enlargement of Spleen was found to be present in 3 (1%) persons and 286 (95.33%) persons had normal gastro intestinal System. The respiratory system was tested for the symptom of upper or lower respiratory infection. Among the total 300 persons checked 292 (97.33%) persons had normal respiratory system without any infection. A number of 29 (9.66%) persons had mild anaemic and 26 (8.66%) persons had anaemic among the total of 300, this was present only in Coimbatore District.

Table 1: Socio economic status (300 families)

1	**Income of the head of the family**	**Low Income< 2500**	**Middle Income 2600-5000**	**High Income >5000**	**-**
		106	137	57	-
2	Composition of the family	< 3 Members	3 – 5 Members	> 5 Members	-
		105	174	21	-
3	Religion and Caste	Hindu	Christian	Muslims	-
		263	12	25	-
4	Types of food	Vegetarian	Non-Vegetarian	Both	-
		48	244	8	-
5	Types of the family and Marital status	Joint	Nuclear	Married	Single
		29	271	300	Nil
6	Education	Primary Education (1-5th)	Secondary Education (6-10th)	Higher Secondary (11-12th)	Higher Education (Degree)
		61	155	16	15
7	Occupation	Daily wages	Weekly wages	Monthly Wages	Regular Basis
		241	5	10	19
8	Other source of income	Business	Land	Building	-
		8	-	1	-
9	Land size and House	< 5 Acres	< 5 Acres	Own House	Rent
		14	Nil	166	134
10	House Construction Style	Mud wall Thatched	Brick wall Thatched	Concrete House	Concrete Double Storyed
		177	87	32	4

11. Monthly Expenditure Pattern							
Food		Clothing / Y		House rent		Medicine / Y	
<3000	>3000	<1000	>1000	<1000	>1000	<1000	>1000
278	22	184	72	98	36	117	17
Education / Y				Fuel & Light		Pan Supari	
Free	<1000	>1000	Loan	<1000	>1000	<500	>500
67	84	66	30	163	-	20	-
Durable Goods		Transport		Other Services		Remittance	
<1000	>1000	<1000	>1000	<1000	>1000	<1000	>1000
7	-	133	10	10	-	-	-
Savings		Recreation					
<1000	>1000	<1000	>1000				
296	4	49	-				

Qty- Quantity, T.C- Total cost, F. P- Frequency of purchase

Table 2: Details of expenditure (300 Families)

Cereals													
	Qty		**T.C**		**F. P**				**Qty**		**T.C**		**F. P**
Raw rice	<3	>3	<50	>50	<3	>3	Boiled rice		<30	>30	<500	>500	<3	>3
	53	15	54	14	68	-			280	20	159	141	300	-
Wheat	<10	>10	<50	>50	<3	>3	Maida		<30	>30	<30	>30	<3	>3
	278	-	170	108	270	8			142	-	134	8	142	-
Jowar	<10	>10	<50	>50	<3	>3	Bajra		<10	>10	<50	>50	<3	>3
	8	-	8	-	8	-			16	-	16	-	16	-
Maize	<10	>10	<100	>100	<3	>3	Ragi		<20	>20	<100	>100	<3	>3
	21	-	21	-	21	-			65	-	65	-	65	-
Sago	<2	>2	<50	>50	<3	>3	Tapioca		<2	>2	<30	>30	<2	>2
	12	-	11	1	12	-			26	24	26	24	50	-
Pulses														

Red Gram Dhal	<1	>1	<50	>50	<3	>3	Black `123Gram Dhal	<1	>1	<50	>50	<3	>3
	198	88	131	155	281	5		258	12	223	47	266	4
Bengal Gram Dhal	<1	>1	<50	>50	<3	>3	Green Gram Dhal	<1	>1	<50	>50	<3	>3
	128	-	128	-	128	-		213	2	189	26	210	5
Horse Gram Dhal	<1	>1	<50	>50	<3	>3	Cow Pea	<1	>1	<50	>50	<3	>3
	105	2	107	-	105	2		97	-	97	-	97	-

Roots and Tubers

Potato	<1	>1	<50	>50	<3	>3	Carrot	<1	>1	<50	>50	<3	>3
	154	105	235	24	183	76		139	67	132	74	123	83
Yam	<1	>1	<50	>50	<3	>3	Colocasia	<1	>1	<50	>50	<3	>3
	87	16	87	16	93	10		84	14	84	14	88	10

Green Leafy Vegetables

Amaranthus	<2	>2	<10	>10	<2	>2	Other green leafy vegetables	<2	>2	<10	>10	<2	>2
	71	84	67	88	93	62		101	63	94	70	95	69

Other Vegetables

	Qty		T.C		F.P			Qty		T.C		F.P	
Brinjal	<2	>2	<50	>50	<3	>3	Beans	<2	>2	<50	>50	<3	>3
	189	21	184	26	137	73		241	15	220	36	181	75
Pumpkin	<2	>2	<30	>30	<3	>3	Ladies Finger	<2	>2	<30	>30	<3	>3
	141	9	144	6	131	19		188	21	169	40	168	41
Tomato	<2	>2	<30	>30	<3	>3							
	130	113	117	126	118	125							

Table 3: Details of Expenditure (300 Families)

Fruits

Plantain (Pieces)	<50	>50	<50	>50	Daily		Guava	<1	>1	<50	>50	<5	>5
	153	15	113	55	168			106	19	108	17	123	2
Papaya	<1	>1	<30	>30	<3	>3	other fruits	<1	>1	<50	>50	<3	>3
	74	1	74	1	75	-		69	23	68	24	89	3

Nuts and Oils

Gingelly Oil (lit)	<1	>1	<50	>50	<3	>3	Groundnut Oil (lit)	<1	>1	<50	>50	<3	>3
	100	5	95	10	101	4		78	4	70	12	80	2
Coconut oil	<1	>1	<50	>50	<3	>3	Vanaspathy	<1	>1	<50	>50	<3	>3
	272	-	269	3	272	-		66	11	39	38	77	-
Others	<1	>1	<50	>50	<3	>3							
	80	133	49	164	200	13							

Fleshy Foods

Mutton	<1	>1	<100	>100	<2	>2	Fish (Fresh)	<1	>1	<100	>100	<2	>2
	159	74	36	197	156	77		134	2	105	31	134	2
Fish (Dried)	<1	>1	<100	>100	<2	>2	Chicken	<1	>1	<100	>100	<2	>2
	113	-	109	4	111	2		224	7	179	52	221	10
Egg	<10	>10	<30	>30	<3	>3	Beef	<1	>1	<50	>50	<2	>2
	28	170	20	178	154	44		-	-	-	-	-	-

Milk and Milk Products

Milk	<20	>20	<300	>300	Daily		Curds	<1	>1	<50	>50	<2	>2
	95	204	83	216	299			33	-	33	-	33	-
Butter Milk	<1	>1	<20	>20	<2	>2	Ghee	<200	>200	<30	>30	<2	>2
	53	-	53	-	53	-		22	12	20	14	34	-
Sugar	<2	>2	<30	>30	<3	>3	Jaggery	<1	>1	<30	>30	<3	>3
	129	128	78	179	205	52		55	18	46	27	57	16

Processed Foods

	Qty		T.C		F.P			Qty		T.C		F.P	
Biscuits	<500	>500	<50	>50	<3	>3	Pickles	<100	>100	<20	>20	<2	>2
	88	30	48	70	52	66		104	109	22	191	193	20
Papads	<100	>100	<20	>20	<2	>2	Sweets	<250	>250	<50	>50	<2	>2
	89	9	62	36	76	22		62	80	51	91	75	16

Beverages

Tea	<100	>100	<50	>50	<3	>3	Coffee	<100	>100	<50	>50	<3	>3
	47	144	102	89	123	68		12	109	58	63	63	58

Qty- Quantity, T.C- Total Cost, F. P- Frequency of Purchase

Table 4: Dietary Survey

1. Meal Planning – Done in advance? (300 families)					
Meal Planning		**If No - Reason**			**If, Yes**
Yes	No	Availability of raw materials	No Habits	Budget Problems	As like as
52	248	118	60	70	52

2. Methods of Cooking (300 families)						
Food Items	Boiling	Steaming	Frying		Stewing or Roasting	Others
			Shallow fat frying	Deep fat frying		
Cereals	180	120	-	-	-	-
Pulses	140	120	40	-	-	-
Greens	213	61	26	-	-	-
Vegetables	187	91	12	-	10	-
Egg	210	24	58	3	5	-
Meat	84	126	60	20	10	-
Fish	79	-	61	80	60	-

3. Food Preservation							
Name of the Preserved Foods				Methods of Processing and Preservation			
Pickles	Mutton and chicken gravy	Tamarind rice	Sweets	Salted oil	oil	Oil and ghee	Tamarind
76	25	32	10	63	31	20	29

4. Details regarding introduction of weaning supplements (300 families)								
Weaning foods starting age		Form in which given		Amount of foods / day		Frequency of feeding		Reason
8 Months	1 Yr	Kali	Gruel	< 2 Cups	> 2 Cups	< 2 Times	> 2 Times	Healthy / Easily Digestible
135	165	85	215	240	60	220	80	120 / 180

5. What food does he or she like very much? (300 families)			
Food Items	No. of families	Food Items	No. of families
Rice with dhal	17	Tamarind rice	13
Vegetable biriyani	48	Dosa	19
Chappathi	30	Potato gravy	7
Coconut rice	10	Rice with sambar	24
Tomato rice	30	Mutton biriyani	11
Fried rice	12	Poori	11
Mutton	20	Pani poori	9
Chicken	26	Rice with green gram dhal	8

Table 5: Dietary Survey

6. Daily Meal Pattern (300 families)					
Breakfast	**No.**	**Lunch**	**No.**	**Dinner**	**No.**
Rice with dhal	19	Rice with Dhal	21	Idli with Coconut Chutney	79
Upma	25	Rice with sambar	198	Curd rice	26
Rice with sambar	120	Ragi kanji	15	Tomato rice	19
Dosa with Coconut Chutney	16	Mutton Biriyani	11	Lemon rice	17
Chappathi	20	Lemon rice	6	Tamarind rice	20
Idli with chutney	37	Tamarind rice	8	Rice with sambar	63
Poori	10	Curd rice	6	Dosa with coriander chutney	13
Fried rice	29	Ragi Semiya	3	Chappathi	30
Chicken	8	Chicken Biriyani	13	Chicken biriyani	15
Rice with green gram	6	Chappathi	19	Parota	9
Mutton	10			Poori	9

7. Foods given under special conditions (300 families)				
Conditions	Special foods	No. of families	Reason	No. of families
Infants	Mothers milk	300	Healthy	100
			Immunity power	200
Weaning infants	Cerelac	168	Healthy food	125
	Lactogen	47	Easily digestible	175
	Complan	61		
	Cow's milk	24		
Preschool children	Milk& baby foods	137	Habit and comfortable	95
	Common foods	51	Easily digestible	120
	Biscuits & Baby foods	32	Healthy foods	85
	Complan	36		
	Liquid foods	21		
	Cerelac	23		
Adolescents	Normal foods	300	Energy and nutrients	300
Pregnancy	Tablets	150	Healthy foods	125
	Common foods	117	Cure the disease	85
	Low cost fruits	33	Low cost fruits	90

Old age	Common foods	72	Healthy and happy	165
	Liquid foods	85	Easy to eat	135
	Crushed foods	110		
	Without oil and sugar foods	33		

Table 6: Clinical Examination (300 Families)

1	**Hair**	**Sparse**	**Discolored**	**Easily Plucked**	**Normal**
		22 (7.33%)	64 (21.33%)	41 (13.66%)	173 (57.66%)
2	Face	Moon Face	Nasolabial Dysebacea	Normal	
		9 (3%)	2 (0.66%)	289 (96.33%)	
3	Eyes	Conjunctival xerosis	Bitot spots	Corneal xerosis & keratomalacia	
		6 (2%)	2 (0.66%)	0 (0 %)	
		Corneal opacity	Night blindness	Photo phobia	Normal
		72 (24%)	0 (0%)	1 (0.33%)	226 (75.33%)
4	Lips	Angular Stomatitis	Cheilosis	Normal	
		4 (1.33%)	3 (1%)	293 (97.66%)	
5	Tongue	Red and raw	Peptillae-atrophic	Papillae - hypertrophic	Normal
		14 (4.66%)	12 (4%)	0 (0%)	274 (91.33%)
6	Teeth	Caries	Mottled enamel	Normal	
		217 (72.33%)	11 (3.66%)	72 (24%)	
7	Gums	Spongy	Bleeding	Normal	
		32 (10.66%)	25 (8.33%)	243 (81.00%)	
8	Glands	Parotid Enlargement Bilateral., Painless		Normal	
		3 (1%)		297 (99%)	
9	Skin	Follicular Hyperkeratosis	Mosaic Dermatosis	Pellagrous Dermatosis	Crazy Pavemen Dermatosis
		6 (2%)	0 (0%)	4 (1.33%)	3 (1%)
		Pigmentation Kunckles	Pigmentation Fingers	Pigmentation Toes	Normal
		5 (1.66%)	3 (1%)	6 (2%)	273 (91%)
10	Nails	Koilonychla		Normal	
		63 (21%)		237 (79%)	
11	Subcutaneous Tissues	Oedema	Marasmus	Normal	
		16 (5.33%)	4 (1.33%)	280 (93.33%)	
12	Musculo Skeletal System	Epiphysis Enlargement	Beading of Ribs	Craniotabes	Frontal and Parietal Bossing
		3 (1%)	5 (1.66%)	9 (3%)	4 (5.33%)
		Knock-Knee & Bow Legs		Harrisons Sulcus Pigeon Chest	Normal
		2 (0.66%)		1 (0.33%)	276 (92%)
13	Gastro Intestinal System	Enlargement of liver		Enlargement of spleen	Normal
		11 (3.66%)		3 (1%)	286 (95.33%)
14	Respiratory System	Upper Respiratory Infection		Lower Respiratory Infection	Normal
		0 (0%)		8 (2.66%)	292 (97.33%)
15	Laboratory Investigation	Blood Haemoglobin (g / %)			
		Mild Anaemic	Anaemic	Normal	
		29 (9.66%)	26 (8.66%)	104 (34.66%)	

Summary and Conclusion
In Coimbatore district 106 (35%) of the families had the low income of less than Rs. 2500. A total population of 300 studied 48 (16%) were vegetarian and 244 (81.33%) non-vegetarian. Of the total 247 families studied in Coimbatore district 61 (20.33%), 155 (51.67%), 16 (5.33%) and 15 (5%) had qualified up to primary, secondary, higher secondary and higher education respectively. Nearly 166 (55.33%) live in their own houses, whereas 134 (44.66%) live in rented houses. The mean expenditure for food is below 3000 for 278 families (92.66%) and clothing is spent below 1000 is 184 (61.33) families. A total of 67 (22.33%) families utilize the facility of free education. The expenditure pattern for cereals revealed that maximum number of 300 families purchase boiled rice. Under the millets group the expenditure is incurred in 65 numbers for ragi, followed by maize 21 members, bajra by 16 families and the least number of 8 for jowar. A total number of 191 and 121 families incurred the expenditure on tea and coffee respectively. The meal planning is done only in 52 families (17%), those who don't plan the meal in Coimbatore with 248 (83%). Among the 300 families studied for cooking of cereals boiling and steaming methods were followed by 58.80% and 37.30% families. The foods processed and preserved are only pickles by 76 families, mutton and chicken gravy by 25 families, tamarind rice 32 families and sweets by 10 families. Weaning foods as supplements are introduced at the age of 8 months by 135 families and at one year by 165 families.

Among the 300 studied 7.33%, 21.33% and 13.66% showed sparse, discolored and easily pluckable hair. It is encouraging to have 57.66% with normal hair. With reference to face, 96.33% had normal, 3.00% had moon face and only 0.66% with Nasolabial Dysebacea. Out of 300 members more than 97.66% had normal lips, Angular stomatitis was found in 1.33% and Cheilosis was exhibited by 1%. Among the total 300 persons checked 292 (97.33%) persons had normal respiratory system without any infection. A number of 29 (9.66%) persons had mild anaemic and 26 (8.66%) persons

had anaemic among the total of 300, this was present only in Coimbatore District.

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