CHAPTER IV

FINDINGS AND DISCUSSION

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Findings of the investigation as obtained on the analysis of the data collected by the interview schedule are described and discussed in this chapter. Demographic characteristics of the sample are presented first.

Observations pertinent to the various resources of energy availed of by the family, main source of energy used by purpose, the most satisfying and dissatisfying characteristic in relation to each source of energy availed of and the cost incurred on energy consumption are summarised.

Desired and expected energy related goals, as well as fears and constraints to the realisation of those goals are briefed next. Past, present and future goal attainments and the accomplished (past) and anticipated (future) levels of goal attainments of the families are presented with relevant discussions. Ecoconsciousness of husbands and homemakers and extent of commitment of families to each of the goals are also described. Then extreme commitment scorers are profiled and hypotheses are tested and discussed.

1. Description of the Sample

Insight into the base line data of the sample was sought through personal interviews. Personal characteris-

tics of the homemakers and their husbands and demographic characteristics are summarised.

1.1 Age of Husbands and Homemakers

The range in the age of homemakers was observed to be 20 to 63 years while that of husbands was 24 to 65 years. Nearly 85 per cent and 91 per cent of husbands and homemakers respectively were found to belong to three age categories that encompassed ages 25 to 54. Less than 10 per cent of the female respondents belonged to either the first or the last age category (Table 1). Approximately 14.5 per cent of the husbands belonged to the age group of 55 years or more. The mean age of husbands was estimated to be 42.15 while that of homemakers was 37.61.

Table 1. Distribution of Husbands and Homemakers by Age.

Years of Age	Husbands		Homemakers	
	N	%	N	%
24 or under	1	0.45	15	6.82
25 - 34	67	30.45	77	35.00
35 - 44	66	30.00	69	31.36
45 - 54	54	24.55	54	24.55
55 or over	32	14.55	5	2.27
Total	220	100.00	220	100.00
Mean	42.15		37.61	
S.D.	10.59		9.67	

1.2 Education

On scrutiny of the education level of husbands and homemakers, it was seen that comparatively a small proportion of husbands and homemakers had very low or very high education, i.e., class 5 or less and the completion of doctorate degree respectively. 40 per cent of the husbands had completed bachelor's degree; only 15 per cent of the homemakers were bachelor's degree holders. Nearly one-third of the homemakers had completed education upto S.S.C. Approximately two third of the husbands had completed higher education at one of the three levels, viz., graduation, post-graduation, and doctorate levels. However only one-fourth of the homemakers were observed to have completed the same. Thus, by and large the husbands had better educational status than their wives.

Table 2. Distribution of Husbands and Homemakers by Education Level.

Educational Level	Husbands		Homemakers	
	N	%	N	%
Class 5 or less	1	0.45	15	6.82
Class 6-9	44	20.00	51	23.18
S.S.C. completed	16	7.27	68	30.91
Some college or undergraduate diploma	25	11.36	23	10.45
Completed Bachelor's degree	89	40.45	33	15.00
Completed Post-graduation	38	17.27	24	10.91
Completed Doctorate programme	7	3.18	6	2.73
Total	220	99.98	220	100.00

1.3 Years of Married Life

The sample comprised of intact families. The years of married life of the respondents and husbands was analysed. It was seen that the range of years married was less than one to forty. More or less the same proportion of families belonged to the first three categories of years of married life (Table 3).

Table 3. Distribution of Families by Years of Married Life.

Years	N	%
5 or less	36	16.36
6 - 10	39	17.73
11 - 15	39	17.73
16 - 20	26	11.82
21 - 25	25	11.36
26 - 30	30	13.64
31 or more	25	11.36
Total	220	100.00
Mean	17.00	
S.D.	10.61	

Years of married life in each of the categories of 16 to 20 years, 21 to 25 years and 31 years or more were

reported by 11 per cent of the respondents respectively. Approximately 14 per cent of homemakers and husbands were married for a period ranging from 26 to 30 years. The mean number of years of married life for the 220 families was 17 years.

1.4 Number of Children and Other Members

The number of children at home at the time of the study in each family ranged from zero to seven. Nearly one-third of the families had two children. Approximately one-fourth of the families had three children and one-fifth had one child (Table 4). A small proportion of families did not have children. The mean number of children per family at the time of the study was 2.20.

Table 4. Distribution of Families by Number of Children and other Members.

Number	Children		Other Members	
	N	%	N	%
0	12	5.45	145	65.91
1	50	22.73	34	15.45
2	75	34.09	16	7.27
3	54	24.55	13	5.91
4	26	11.82	8	3.64
5	1	0.45	1	0.45
6	1	0.45	2	0.90
7	1	0.45	-	-
8	-	-	1	0.45
Total	220	99.99	220	99.98
Mean	2.20		0.74	
S.D.	1.16		1.32	

In majority of the families, no other members other than the immediate family members, were present. However in 15 per cent of the families one relative was staying with them. Relatively smaller proportion of families had two to six relatives staying with them.

1.5 Size of the Household

The number of persons living in a household ranged from two to thirteen. Nearly 30 per cent of the families consisted of four members while 23 per cent of them had five members. Approximately 15 per cent of the families comprised of three and six members each. About 14 per cent of the sample was found to have seven members or more. The mean size of the household was 4.94 (Table 5).

Table 5. Distribution of Families by Size of the Household.

Number of Persons	N	%
2	7	3.18
3	34	15.45
4	62	28.18
5	50	22.73
6	35	15.91
7	14	6.36
8	10	4.55
9-13	8	3.63
Total	220	99.99
Mean	4.94	
S.D.	1.79	

1.6 Family Income

With reference to the majority of the families, husbands were the only breadwinners. However, approximately 15 per cent of the homemakers were also contributors to family income. In 9 per cent of the families studied either children or other members too, contributed to the family income (Appendix III : Table I). Husbands' income from primary occupations ranged from Rs.200.00 to Rs.5200.00 per month. Homemakers' and children's income ranged from Rs.125.00 to Rs.2000.00 and Rs.150.00 to Rs.1600.00 per month respectively. Nearly 81 per cent of husbands earned either Rs.2000.00 or less per month while the same was true in the case of all the contributing homemakers and children to family income (Appendix III : Table II).

In addition to primary income, supplementary income was also received by families studied and this ranged from Rs.50.00 to Rs.1000.00 per month. The secondary sources of income to the 27 per cent of families were mainly rent, farm and business earnings, interest and dividends.

Majority of the families earned Rs.2000.00 or less per month from all sources of income. One-fifth of the families secured an income of about Rs.2001.00 or more but less than Rs.3000.00 per month. Nearly 13 per cent of families earned more than Rs.3000.00 per month as income (Table 6).

The mean monthly family income from all sources for the entire sample was estimated to be Rs.2025.00.

Table 6. Distribution of Families by Monthly Income.

Monthly Income in Rs.	N	%
Rs.1000 or less	41	18.64
Rs.1001 - Rs.2000	106	48.18
Rs.2001 - Rs.3000	45	20.45
Rs.3001 - Rs.4000	14	6.36
Rs.4001 - Rs.5000	9	4.09
Rs.5001 or more	5	2.27
Total	220	99.99

2. Energy Resource Use

The findings pertinent to the sources of energy availed of by the families, the main purpose for which each was availed of, the most satisfying and dissatisfying characteristic in relation to each and the cost incurred on energy consumption are presented.

2.1 Sources of Energy Availed of

It was thought worthwhile to gain insight into the various energy sources availed of by the families at the time of the study. Families under investigation consumed fewer variety of fuels compared to their parental homes (Appendix III : Table III).

Table 7. Distribution of Families by Sources of Energy Availed of

Sources of Energy	N*	%
Electricity	220	100.00
Petrol and/or Diesel	134	60.91
Natural Gas	129	58.64
Kerosene	86	39.09
Liquified Petroleum Gas	72	32.73
Coal	11	5.00

*All respondents gave more than one source of energy as being availed of by their families.

All the families under investigation used electricity (Table 7). Nearly 60 per cent of the families availed of natural gas and petrol and/or diesel respectively. Nearly one-third of them used liquified petroleum gas while approximately 39 per cent were users of kerosene. However a very small proportion of families used coal as a source of energy. In contrast to the small proportions of maternal and paternal homes, majority of the respondents' families were users of natural gas. Another remarkable difference noticed between the two generations was in the proportion of families consuming petrol and/or diesel (Appendix III : Table III). The families in the present study were non-users of agricultural waste and wood as sources of energy.

The data on sources of energy was further analysed to get an idea as to the number of energy sources simultaneously availed of by the respondents' families. The largest proportion of families availed of three sources of energy simultaneously. More or less the same proportion of respondents reported that their families availed of either two or four energy sources simultaneously in the course of family living (Appendix III : Table IV).

2.2 Main Energy Source Utilized by Purpose

Information was sought through interview on the main source of energy used for specific purpose/s by the families under investigation. The electrical energy was the main energy source consumed for enhancing comfort and efficiency in living. For meal pre-preparation activities muscle energy was utilised by 79 per cent of families, though 21 per cent used electrical energy as the main source of energy for the same. Approximately 59 per cent of the families used natural gas mainly for meal preparation, while 32 per cent used liquified petroleum gas as the main energy source for the same. Less than 10 per cent used kerosene and coal as the main energy source for cooking (Table 8).

In the case of nearly 53 per cent of the families, the main source of energy used for heating water for non-meal purposes was natural gas. The popular use of this

Table 8. Distribution of Families by Main Sources of Energy used by Purpose.

Energy source / Purpose	Meal Preparation (Cooking)		Meal Pre-preparation		Comfort in Living		Transport		Heating Water for Non-Meal Purpose		Entertainment-Hobbies	
	N	%	N	%	N	%	N	%	N	%	N	%
Coal	2	0.91	-	-	-	-	-	-	5	2.27	-	-
Kerosene	18	8.18	-	-	-	-	-	-	80	36.36	-	-
Electricity	-	-	46	20.90	220	100.00	-	-	6	2.73	167	75.91
Liquified Petroleum Gas	71	32.27	-	-	-	-	-	-	12	5.45	-	-
Natural Gas	129	58.63	-	-	-	-	-	-	115	52.27	-	-
Petrol/Diesel	-	-	-	-	-	-	136	61.81	-	-	-	-
Muscle Energy	-	-	174	79.10	-	-	-	-	-	-	-	-
None	-	-	-	-	-	-	84	38.18	2	0.91	53	24.09
Total	220	99.99	220	100.00	220	100.00	220	99.99	220	99.99	220	100.00

energy source for this purpose reflects the cheap rate at which it is available to the families. A little over one-third of the families used mainly kerosene for this purpose. Liquified petroleum gas, coal and electricity were reported as the main source of energy used for heating water by only a small proportion of respondents. For transport, approximately 62 per cent had power run vehicles and they used mainly petrol for the same. For entertainment and hobbies electricity was the main energy source used by three-fourth of the families while the remaining families used none of the commercial sources of energy for the same.

2.3 Monthly Outlay on Energy Consumption

Monthly expenditure on the various sources of energy availed of was computed from the data collected. The range of monthly outlay for the families on energy consumption was seen to be Rs.39.00 to Rs.870.00. Majority of families spent amounts ranging from Rs.101.00 to Rs.550.00 per month on energy consumption. Approximately one-third of the families spent Rs.100 or less per month on energy source use. Negligible proportion of families spent more than Rs.550.00 per month on the same (Table 9). Mean monthly outlay on energy consumption for the 220 families amounted to Rs.196.32 while monthly per capita expenditure was observed to be Rs.39.74.

Table 9. Distribution of Families by Monthly Outlay on Energy Consumption.

Monthly Outlay in Rs.	N	%
Rs.100 or less	75	34.09
Rs.101 - Rs.250	87	39.55
Rs.251 - Rs.400	36	16.36
Rs.401 - Rs.550	17	7.73
Rs.551 - Rs.700	4	1.82
Rs.701 or more	1	0.45
Total	220	100.00

2.4 Characteristic of Satisfaction in Relation to Sources of Energy

The most satisfying and the most dissatisfying characteristic of each of the energy sources availed of by the families was reported by the homemakers (Tables 10 and 11). 'Convenience/ease of handling' was reported as the most satisfying characteristic in relation to electricity by the greatest proportion of respondents. Approximately one-third of the respondents stated 'multiple use' as the most satisfying characteristic of electricity. To 17 per cent of the respondents 'speed' was the most satisfactory feature of liquified petroleum gas, natural gas and electricity. 'Convenience' and 'economy' were reported as the most

Table 10. The Most Satisfying Characteristic of Sources of Energy Availed of by Families

Characteristics	Electricity		Liquified Petroleum Gas		Natural Gas		Petrol		Kerosene		Coal	
	N	%	N	%	N	%	N	%	N	%	N	%
Multiple use	67	30.45	-	-	-	-	-	-	-	-	-	-
Convenience and ease of handling	94	42.73	15	6.82	33	15.00	49	22.27	26	11.82	1	0.45
Safety	-	-	-	-	-	-	1	0.45	-	-	-	-
Speed	39	17.73	38	17.27	39	17.73	28	12.73	8	3.64	-	-
Regularity/Continuity in supply	-	-	-	-	28	12.73	-	-	-	-	-	-
Economy/Cost	1	0.45	-	-	29	13.18	-	-	14	6.36	3	1.36
Cleanliness	1	0.45	15	6.82	[illegible]	[illegible]	-	-	-	-	-	-
Freedom/Flexibility	-	-	-	-	-	-	44	20.00	-	-	-	-
None	18	8.18	4	1.82	-	-	12	5.45	38	17.28	7	3.18
Non-users	-	-	148	67.27	91	41.36	86	39.09	134	60.90	209	95.00
Total	220	99.99	220	100.00	220	100.00	220	99.99	220	100.00	220	99.99

satisfying characteristic of natural gas by about 15 and 13 per cent of respondents respectively. 'Convenience', 'freedom/flexibility' and 'speed' were reported as the most satisfactory characteristic of petrol by 22, 20 and 13 per cents of respondents respectively. 'Convenience', 'economy' and 'speed' were the most satisfying characteristic of kerosene reported by 12,6, and 4 per cents of respondents respectively. 'Economy' was associated with coal by a little over one per cent of them. Thus it could be seen that there was not total agreement on a particular characteristic as the most satisfying one in the case of all the various energy sources. Varying proportions of respondents, though small, reported their inability to point out the most satisfying characteristic in relation to all the energy sources except liquified petroleum gas and natural gas (Table 10).

The respondents were asked to report on the most dissatisfying characteristic in relation to the various energy sources availed of by their families. 'High cost' was cited most often as the most dissatisfactory characteristic of electricity. Slightly more than one-fourth of the respondents reported irregular supply as the most dissatisfying feature associated with electric energy. Frequently reported the most dissatisfying characteristic in relation to liquified petroleum gas was 'irregular/delayed supply' and the next most often quoted characteristic was

Table 11. The Most Dissatisfying Characteristic of Sources of Energy Availed of by Families

Characteristics	Electricity		Liquified Petroleum Gas		Natural Gas		Petrol		Kerosene		Coal	
	N	%	N	%	N	%	N	%	N	%	N	%
Inconvenience	-	-	-	-	-	-	-	-	1	0.45	2	0.90
Dangerous	33	15.00	2	0.90	30	13.64	11	5.00	1	0.45	-	-
Slow	-	-	1	0.45	-	-	-	-	7	3.18	3	1.36
Irregular Supply	58	26.36	33	15.00	16	7.27	16	7.27	1	0.45	-	-
High Cost	69	31.36	23	10.45	3	1.36	87	39.55	-	-	-	-
Dirty	-	-	-	-	-	-	2	0.90	67	30.45	4	1.81
None	60	27.27	13	5.91	80	36.36	18	8.18	9	4.09	2	0.91
Non-users	-	-	148	67.27	91	41.36	86	39.09	134	60.90	209	95.00
Total	220	99.99	220	99.98	220	99.99	220	99.99	220	99.98	220	99.98

'high cost'. 14 per cent reported 'danger' in relation to natural gas. 'High cost' was stated most often as the most dissatisfying feature of petrol. Kerosene was considered 'dirty to handle' by 30 per cent of the homemakers. Oft quoted most dissatisfying characteristic in relation to coal was also found to be 'dirty'. Some respondents, however, were unable to identify any dissatisfying characteristic in relation to all the sources of energy. Here again it was observed that the characteristic most often reported as the most dissatisfying differed for the energy sources (Table 11).

3. Energy Related Goals

The respondents furnished details regarding their families' energy related goals. The desired goals, expected goals, perceptions of past, present and future goal attainments, levels of goal attainments, fears and constraints on these goals, mode of goal attainments as well as goals pertaining to other areas of family living were expressed by the respondents.

3.1 Desired Goals

The most frequently reported goals related to energy conservation. Nearly all the families had 'minimise wastage of energy resource at the point of use' and 'minimise energy resource consumption' as their goals. 'Owning recreational

equipment run on electrical energy' was cited as their family goal by 77 per cent of homemakers. Approximately 86 per cent reported 'owning household electric equipment' as their family goal. 72 per cent of families held 'substitution of energy resources by muscle energy' as their goal. Varying proportions of families reported various energy related goals (Table 12). A little over half the families had the goal of 'owning power-run transport means' while 14 per cent desired to 'own a vehicle larger than the one family already has.

Table 12. Distribution of Families by their Desired Energy Related Goals.

Goals	Number	Percent
1. Own household electric equipment- refrigerator, washing machine, blender, grinder toaster, flour mill.	189	85.91
2. Own recreational equipment run on electrical energy - television-set, radio, record player, tape-recorder.	169	76.82
3. Own transport means- moped, scooter, motor-bike, car.	119	54.09
4. Maintain comfortable temperature in the house- air conditioner, air cooler.	88	40.00
5. Own non-electric equipment that consume power- stove, oven, gas burners, iron, gas cooking range.	79	35.91
6. Improve comfort and efficiency in living- addition of fans and lighting.	65	29.55
7. Install natural gas supply.	55	25.00
8. Install water-heating system.	48	21.82
9. Own a larger vehicle than the one family already has.	30	13.64

Table 12 (contd.)

Goals		Number	Percent
10.	Avoid wastage of energy resource at the point of use.	216	98.18
11.	Effect reduction in the energy consumption level.	213	96.82
12.	Substitute muscle energy for commercial energy resources.	159	72.27

Most respondents reported more than one goal.

The data were subjected to further analysis to get an idea as to the number of areas in which energy related goals were identified by families. Type I energy-related goals included items one to nine while Type II goals included items ten to twelve of Table 12. The largest proportion of families was observed to have energy goals in three areas each in both the types of goals. Approximately 27 and 24 per cent of families were observed to hold goals in four and five areas respectively in the case of Type I goals. Relatively small proportions of families held goals in two areas or less, or six areas or more of Type I goals. One-fourth of the families held goals in two out of three areas of Type II goals. The mean number of areas out of nine in which Type I goals were held was 3.83. The mean number of goal areas out of three held in relation to Type II goals was 2.68 (Appendix III : Table V).

The respondents were asked to state the order of

importance attached to energy goals like level of living oriented ones, reduction in superfluous energy consumption, avoidance of wastage of energy resource and substitution of commercial sources of energy by muscle energy wherever feasible. The most important place was given to the level of living oriented energy goals by 72 per cent of families while 62.73 per cent gave reduction in superfluous energy consumption the second place. The third rank was assigned to 'avoid wastage of energy resource at the point of use' by 80 per cent of the families. The last place was ascribed to 'substitution of muscle energy to commercial sources of energy' by nearly 93 per cent of families. The ranks assigned to each of the four goals were quantified by scores one through to four for fourth through to first ranks respectively. From the scores thus assigned, the mean score for each goal was computed. The mean scores on level of living oriented energy goals, reduction in superfluous energy consumption, avoiding energy wastage and substitution of muscle energy to commercial sources of energy were 3.66, 3.08, 2.19 and 1.07 respectively (Table 13). It means that in spite of price increases and shortage of power supply the families seemed to place a high value on the goals that bettered their level of living irrespective of the fact that it led to an increase in the energy consumption level; moreover the energy conservation goals were not seen to be of much importance to

Table 13. Distribution of Families by the Ranks Assigned to Goals and the Mean Score of Goals on the Basis of Ranking.

Goals / Ranks	First		Second		Third		Fourth		Mean Score	S.D.
	N	%	N	%	N	%	N	%		
Level of living oriented energy goals	159	72.27	49	22.27	10	4.55	2	0.90	3.66	0.61
Reduction in superfluous energy consumption	54	24.55	138	62.73	19	8.64	9	4.09	3.08	0.70
Avoid energy wastage	7	3.18	32	14.55	177	80.45	4	1.81	2.19	0.50
Substitute muscle energy to commercial energy	-	-	1	0.45	14	6.36	205	93.18	1.07	0.28
Total	220	100.00	220	100.00	220	100.00	220	99.98		

them. The families were not willing at all to substitute muscle energy to commercial sources of energy. This could be attributed to the fact that mechanisation is a boon of recent years and the families are getting accustomed to this and hence feel reluctant to give away the benefit of various gadgets. Moreover, if families are to hold the substitution goal then it should have the time, skill, interest and values to do most of the power-run work in the home manually.

3.2 Expected Goals

The respondents reported their families' expectations for attaining energy related goals in the next five years. A comparison of the proportion of families reporting desired goals and expectation of goal attainments in the next five years in corresponding areas revealed that the latter was relatively less in all the areas of energy goals, the difference being the most prominent in areas leading to energy conservation, especially in relation to substitution of muscle energy to commercial energy sources. Approximately 76 per cent expected to accomplish the goal of avoiding wastage in energy resource use. The frequently reported goal expectations in Type I goals were owning household electric equipment, electrically run recreational equipment, transport means, non-electric equipment that consume power and installation of devices to control room temperature (Table 14).

Table 14. Distribution of Families by Expectation for Attaining Energy Related Goals.

Goals	N	%
1. Own household electric equipment, refrigerator, washing machine, blender, grinder, toaster, flourmill.	170	77.27
2. Own recreational equipment run on electrical energy - television set, radio, record player, tape recorder	130	59.09
3. Own transport means- moped, scooter, motor-bike, car.	87	39.54
4. Own non-electric equipment that consume power- stove, iron, gas burner, oven, gas cooking range.	60	27.27
5. Maintain comfortable temperature in the house- air conditioner, air cooler.	58	26.36
6. Improve comfort and efficiency in living- addition of fans and lighting.	53	24.09
7. Install natural gas supply.	39	17.73
8. Install water heating system.	36	16.36
9. Own a larger vehicle than the one family already has.	16	7.27
10. Avoid wastage of energy resources at the point of use.	108	76.36
11. Effect reduction in the energy consumption level.	104	47.27
12. Substitute muscle energy for commercial energy resources.	17	7.72

Many families reported more than one goal.

The data were subjected to further scrutiny to gain insight into the number of goal areas where energy goals were expected to be attained in five years. By and large, the families expected to accomplish goals in two to three areas of their Type I goals and one to two areas of their Type II goals (Appendix III : Table VI). The mean number of areas in which families expected and desired to attain Type I goals were 2.95 and 3.83 respectively. The mean number of areas in which families expected to attain Type II goals was 1.32 as compared to the mean number of areas of desired Type II goals of 2.68. The smaller mean in goal expectations shows that though the families held various energy related goals, in five years' time they did not expect to attain all of them.

3.3 Fears Concerning Energy Goals

The respondents were asked to indicate fears, if their families had any, regarding their energy related goals. It was quite interesting to note that the families had a multiplicity of fears concerning their goals, of which, the most common one was related to finances, i.e. will the accumulated funds be enough to attain the goals due to inflation? 64 per cent responses were related to escalating cost of power resources. The families were apprehensive about some, if not all, of their Type I energy goals, due to the restrictions imposed on energy consumption through periodical

Table 15. Distribution of Families by Fears Concerning Energy Related Goals.

Fears	N	%
Lack of funds earmarked for the goal	187	85.00
High power cost	141	64.09
Habits	83	37.73
Drop in income	78	35.45
Nuisance	77	35.00
Non-availability of goods	68	30.90
Priority to other goals	46	20.90
Lack of determination	41	18.64
Lack of competence to select [illegible]	39	17.73
Risk	12	5.45
None	5	2.27

Most respondents gave more than one reply.

price hikes. Approximately 38 per cent responses were related to fear of habit; 35 per cent responses each were related to drop in income and nuisance that would be caused by the goals materialised respectively and 31 per cent expressed fears related to non-availability of the specific items in Type I energy related goals. It was further noticed that 65 per cent of families shared three to five fears while 23 per cent had one to two fears and 10 per cent had six to eight fears concerning their energy related

goals. However 2 per cent did not apprehend any fears regarding their energy goals (Table 15).

3.4 Constraints on Energy Related Goal Attainment

Constraints such as attitude of family members, lack of funds, cost of power resource, aspirations of family members, status needs, lack of awareness of the interdependence between man and natural resources, existing debts and chance of increase in debts were reported as blocks of obstruction to reaching family's energy related goals. 90 per cent reported attitude of family members, especially that of the husbands as an important constraint to reaching their goals (Table 16). This is very much true

Table 16. Distribution of Families by Constraints on Energy Related Goal.

Constraints	N	%
Attitude	198	90.00
Lack of funds	141	64.09
Cost of power	136	61.82
Aspirations	124	56.36
Lack of ecoconsciousness	91	41.36
Status needs	71	32.27
Existing debts	18	8.18
Increase in debts	3	1.36

Most respondents gave more than one reply.

in the Indian context where the male head of the family plays a key role in decision-making. Moreover the attitude of other members also acted as a deterrent to the realisation of family energy goals. This emphasises the fact that expeditious family goal attainment is dependent on the concentrated efforts of each and every family member. If there is lack of whole hearted cooperation and joint effort due to unfavourable attitude concerning any aspect of the goal on the part of any member, its accomplishment will be delayed. Hence the family's inability to attain all the goals. Approximately two-third of the families experienced constraints due to lack of funds, high cost of power and aspirations of family members on their energy related goals.

4. Other Major Goals

Respondents identified goals other than energy related ones that their families wished to attain (Appendix III: Table VII). Child-related goals like education and marriage of children were the most commonly cited goals. Nearly 71 per cent of the sample reported financial security as one of their goals. Other goals were related to acquiring landed property, owning house, enhancing income, travel and interior decoration. It was thought worthwhile to understand the relative position of energy related goals in the total complex of family goals. The respondents were requested to indicate the rank position their families

would assign to Type I energy goals and Type II energy goals in relation to other major goals. It was seen that almost 50 per cent placed Type I goals as the most important goal while 36 per cent and 14 per cent reported in between and least important place respectively to Type I goals in relation to other goals (Table 17). The mean score in

Table 17. Distribution of Families by Relative Ranking of Type I and Type II Energy Related Goals in the Family Goal Complex.

Relative Ranking	Energy Related Goals			
	Type I		Type II	
	N	%	N	%
Most important	109	49.55	46	20.90
In between	80	36.36	99	45.00
Least important	31	14.09	75	34.10
Total	220	100.00	220	100.00
Mean	2.35		1.87	
S.D.	0.71		0.73	

relation to ranks assigned to Type I goals was 2.35. Only one-fifth of the respondents assigned the most important position to Type II goals, while 45 per cent placed the same in between other goals and one-third placed them as the least important goal in relation to other major goals. Those who assigned the most important place to Type II goals were rather less educated and with low income. The mean score in relation to ranks assigned to Type II goals

was computed to be 1.87 thereby indicating the fact that families as a whole did not place much significance to this goal complex.

4.1 Mode of Family Goal Attainment

The interviewer read out the various modes of working towards family goals and solicited responses from the respondents regarding the particular mode of goal attainment in their families. Slightly more than half the respondents judged their families' mode of goal attainment as working toward few goals irrespective of the magnitude of the goals. Approximately 35 per cent stated that working toward one major and few minor goals simultaneously was their families' mode of goal attainment. However 5 per cent of the respondents identified their families' mode of goal attainment as

Table 18. Distribution of Families by Mode of Goal Attainment.

Mode of Goal Attainment	N	%
Work toward few goals at the same time.	122	55.45
Work toward one major goal and few minor goals.	76	34.55
Work toward many goals simultaneously.	12	5.45
No consistent pattern.	10	4.55
Total	220	100.00

working toward many goals at the same time. Another 5 per cent of the respondents reported that there was no consistent pattern in their families to work towards attaining their goals (Table 18).

5. Levels of Goal Attainment in Relation to Type I and Type II Energy Related Goals.

Families' level of goal attainment was assessed by requesting the respondents to indicate their families' position on a ladder symbolising Type I and Type II energy goals in relation to their past, current and future attainments. The ladder consisted of ten rungs and scores of one through to ten were assigned to each of the rungs from the lowest one to the top most rung of the ladder. If the families were not able to attain any of their goals then they would be standing at the bottom of the ladder and would be assigned a score of zero. Self assigned scores on the ladder for both Type I and Type II energy goals ranged from zero to ten (Table 19 and Figure 2). Scores for present attainment of Type I goals ranged from zero to eight with a mean of 3.56. Scores of attainment of Type I goals five years ago ranged from zero to five with a mean of 1.50. Scores for Type I goal attainment expectation ranged from zero to ten with a mean of 7.79. Out of 14 families that earned zero in relation to past goal attainment of Type I goals, 11 were able to make some progress while 2 families

Table 19. Distribution of Families by Scores for Self Perception of Energy Related Goal Attainments with Reference to Past, Present, and Future Time.

Scores	Self Perception of Goal Attainments: Type I						Type II					
	Past		Present		Future		Past		Present		Future	
	N	%	N	%	N	%	N	%	N	%	N	%
Zero	14	6.36	3	1.36	1	0.45	42	19.09	3	1.36	3	1.36
One	137	62.27	24	10.91	1	0.45	123	55.90	59	26.82	14	6.36
Two	34	15.45	27	12.27	-	-	34	15.45	37	16.82	19	8.63
Three	21	9.54	58	26.36	3	1.36	14	6.36	57	25.91	29	13.18
Four	8	3.64	46	20.91	3	1.36	5	2.27	39	17.72	36	16.36
Five	6	2.73	35	15.91	22	10.00	2	0.90	19	8.63	39	17.72
Six	-	-	18	8.18	20	9.09	-	-	5	2.27	44	20.00
Seven	-	-	7	3.18	27	12.27	-	-	-	-	20	9.09
Eight	-	-	2	0.90	64	29.09	-	-	-	-	9	4.09
Nine	-	-	-	-	29	13.18	-	-	1	0.45	4	1.82
Ten	-	-	-	-	50	22.73	-	-	-	-	3	1.36
Total	220	99.99	220	99.98	220	99.98	220	99.97	220	99.98	220	99.97
Mean	1.50		3.56		7.79		1.20		2.70		4.64	
S.D.	1.06		1.64		1.86		0.95		1.47		2.06	

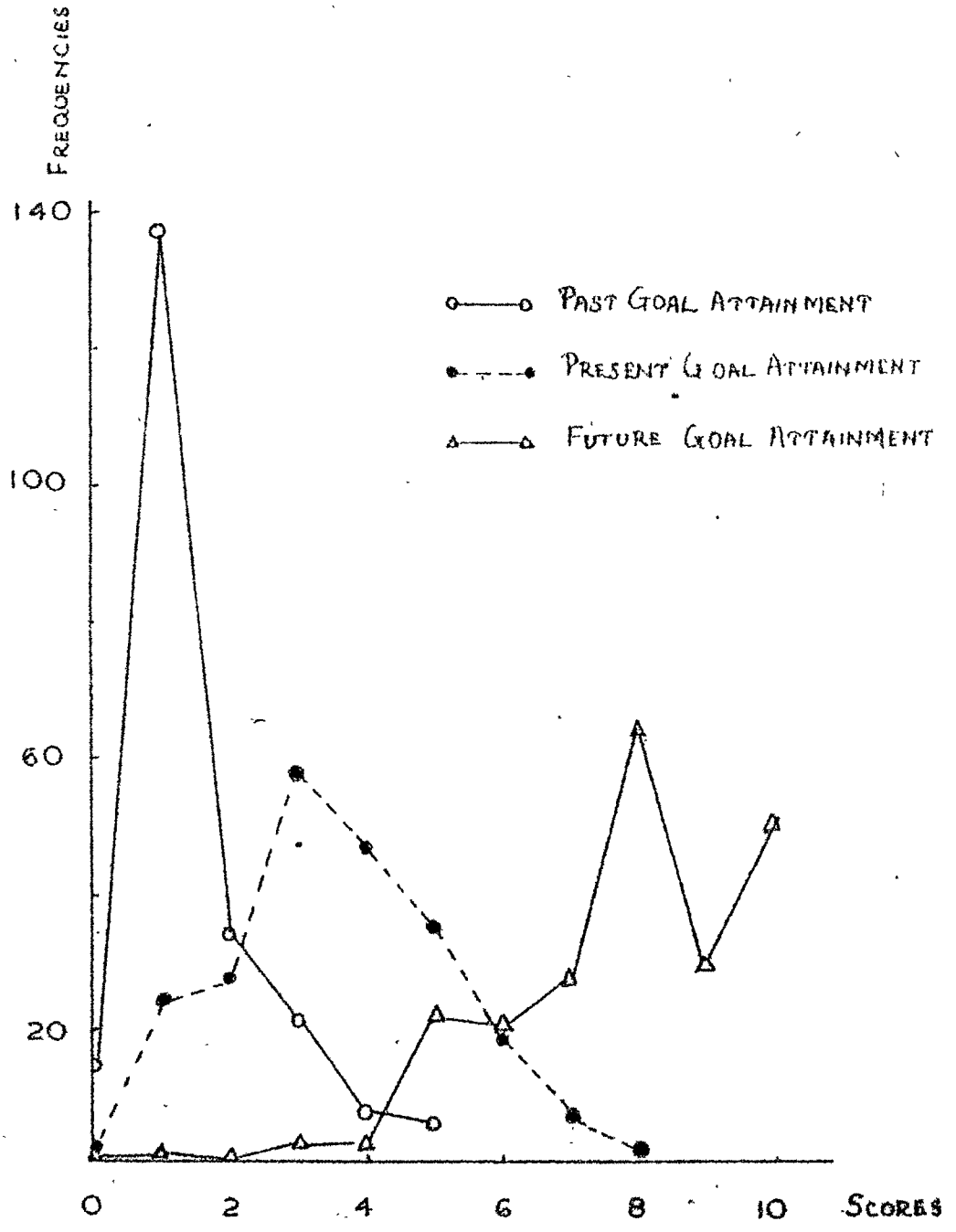

FIG. 2 DISTRIBUTION OF FAMILIES BY SCORES ON PAST, PRESENT AND FUTURE GOAL ATTAINMENTS OF TYPE I GOALS

expected to make some progress towards their goal attainment in the next five years.

The perceived past goal attainment position of Type I energy goals was observed to be very low in the case of majority of the families. The picture of perceived position of current attainment of Type I goals showed that largest proportion of families had a score of three. Then the proportion of families seemed to decrease as the perception of present goal attainment increased. With reference to future goal attainment, by and large, families had relatively more scores for perceived positions. Those expecting low goal attainment in future were rather less in number (Figure 2). This implies that the goal attainment initially is rather low and as time pass, families in general attain more of their established goals.

In relation to Type II energy goals the families' goal attainment scores ranged from zero to ten (Table 19 and Figure 3). The present goal attainment score was observed to lie between zero and nine with a mean of 2.70. Scores on Type II goal attainment five years ago was ranging from zero to five with a mean of 1.20. The Type II goal attainment expectation, on the other hand, ranged from zero to ten with a mean of 4.64. In contrast to 42 families who could not attain Type II goals at all five years ago, there were three families who could not attain any progress till date and the same families anticipated no progress five years hence.

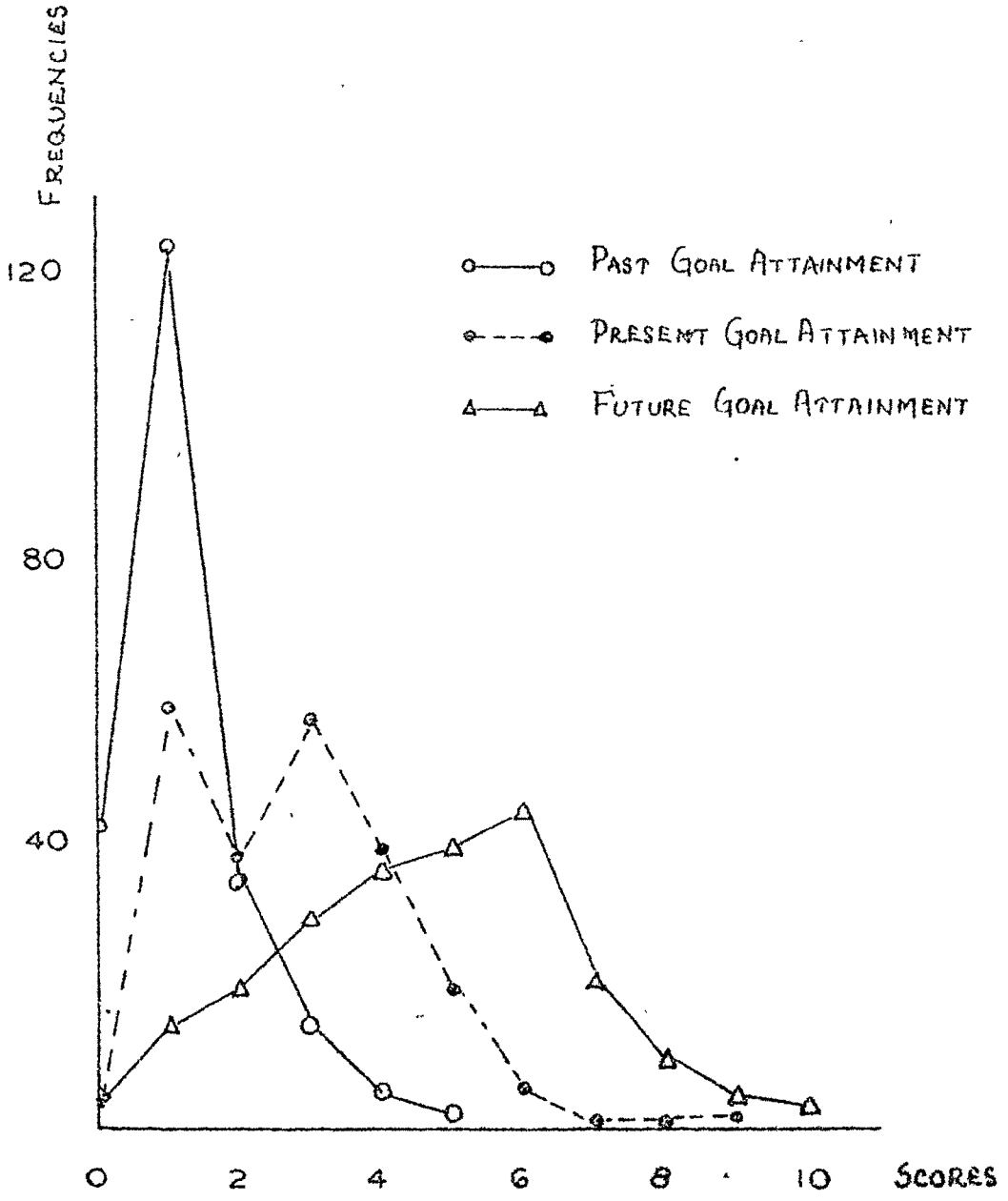

FIG.3 DISTRIBUTION OF FAMILIES BY SCORES ON PAST, PRESENT AND FUTURE GOAL ATTAINMENTS OF TYPE II GOALS

The perceived past goal attainment of Type II goals was also relatively very low for most of the families studied. However the observations made on present goal attainment of Type II goals showed that most of the families were able to attain their goals to some extent and the data on future goal attainments showed that families were hopeful of attaining their Type II goals to a greater extent. The proportion of families seemed to increase with an increase in perception of future goal attainments upto a certain level and then it revealed a tendency to decrease steadily as future goal attainments increased (Figure 3).

It would not be amiss to state here that the families' goal attainment position with reference to past, present and future was higher in relation to Type I energy goals rather than Type II energy goals. This could be accounted for, to some extent, by the greater importance the families placed to the former type of energy related goals and the tangible results of the former.

Level of past and future goal attainments were computed in relation to both Type I and Type II energy related goals. The level of past goal attainment of Type I goals - the difference between perceived past and present goal attainments- ranged from zero to seven points while that of Type II goals ranged from zero to four points. The mean score was 2.06 in the former while the latter had a mean of 1.50

(Table 20). This shows that the past level of attainment of Type I goals was relatively higher than that of Type II goals. The level of future goal attainment of Type I goals- the difference between perceived present and future goal attainments- ranged from zero to nine points whereas that of the Type II goals ranged from zero to five points. The former recorded a mean of 4.23 while the latter recorded a mean of 1.94. Here again, it was found that the families' anticipated level of goal attainment was much more in relation to Type I goals than to Type II goals. It was observed that the level of future goal attainment was more than the level of past goal attainment in relation to both the types of energy goals (Figures 4 and 5) though the difference in the mean scores of Type II goals was rather small. Paynter[90] found that the level of future goal attainment of her respondents was slower than the level of past goal attainment in relation to housing goals. However, the observation made by the investigator in relation to level of energy goal attainment agrees well with the findings of Cantril[22] and Wheeler[111] which suggested that the future levels of attainments are usually higher than past levels of goal attainments. The satisfaction the families realised in their past goal attainment could be a motivating factor to make faster progress in future towards their energy goals. The families made resource allocations along with these goals for other goals as well. The level of attainment was slower for Type II

Table 20. Distribution of Families by Level of Energy Related Goal Attainments.

Level of Goal Attainment (Scores)	Energy Related Goals							
	Type I				Type II			
	Level of Past Goal Attainment		Level of Future Goal Attainment		Level of Past Goal Attainment		Level of Future Goal Attainment	
	N	%	N	%	N	%	N	%
Zero	32	14.55	2	0.90	43	19.54	30	13.64
One	41	18.64	2	0.90	61	27.73	41	18.64
Two	75	34.09	19	8.64	81	36.82	83	37.73
Three	34	15.45	44	20.00	32	14.55	49	22.27
Four	31	14.09	63	28.64	3	1.36	13	5.91
Five	6	2.73	53	24.09	-	-	4	1.81
Six	-	-	24	10.91	-	-	-	-
Seven	1	0.45	8	3.64	-	-	-	-
Eight	-	-	3	1.36	-	-	-	-
Nine	-	-	2	0.90	-	-	-	-
Total	220	100.00	220	99.98	220	100.00	220	100.00
Mean	2.06		4.23		1.50		1.94	
S.D.	1.36		1.47		1.01		1.16	

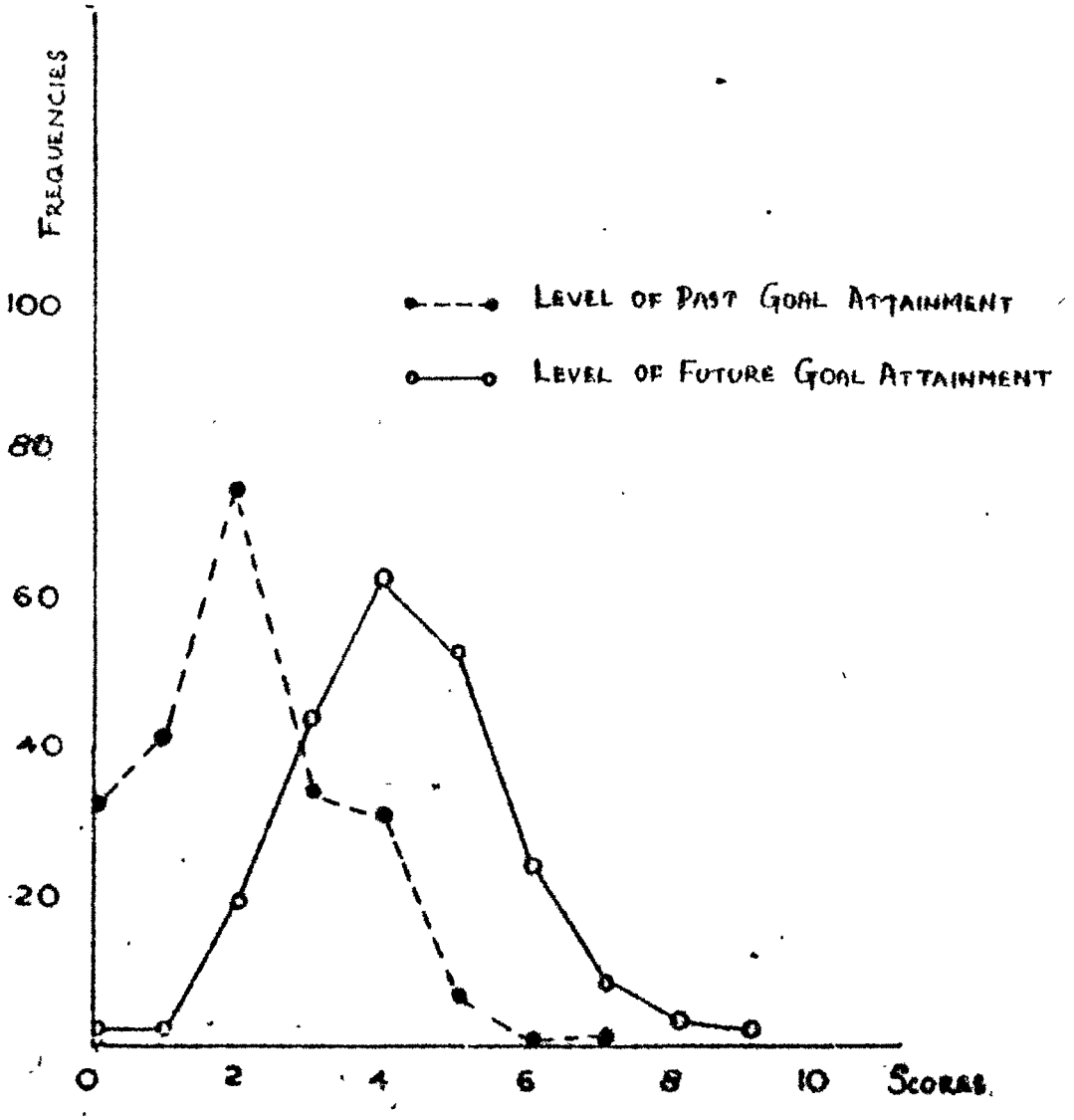

FIG. 4 DISTRIBUTION OF FAMILIES BY LEVEL OF PAST AND FUTURE GOAL ATTAINMENTS IN RELATION TO TYPE I GOALS

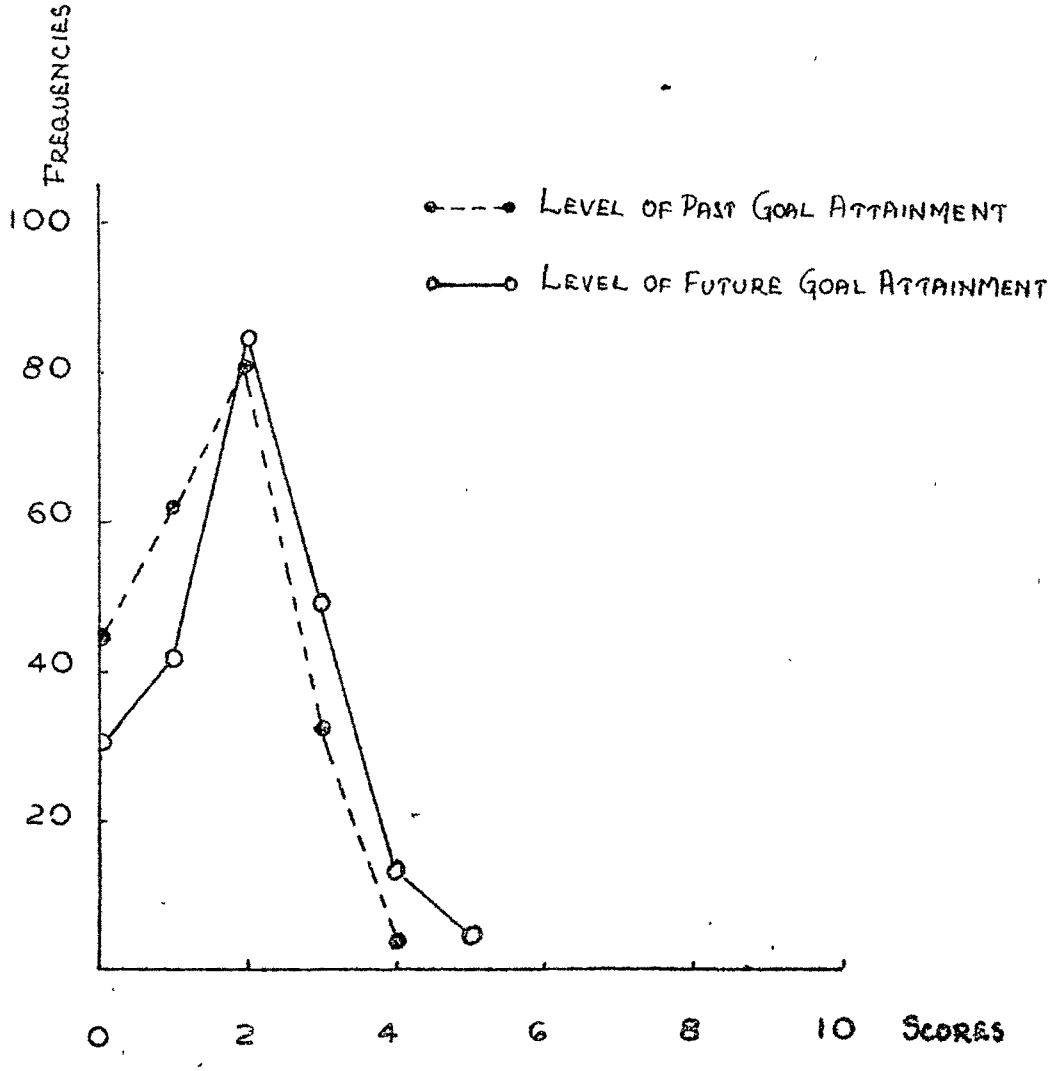

FIG. 5 DISTRIBUTION OF FAMILIES BY LEVEL OF PAST AND FUTURE GOAL ATTAINMENTS IN RELATION TO TYPE II GOALS

goals. Thus, it might be said that the place of the particular goal in the hierarchy of goals and the stage of its attainment exerted an influence on the families' level of future goal attainment.

6. Ecoconsciousness of Homemakers and Husbands

One of the objectives of the study was to assess the relationship between families' commitment to energy related goals and ecoconsciousness of (i) homemakers and (ii) their husbands. Therefore an instrument to measure the attitude of the respondents towards energy situation and family's social responsibility in the context of the current energy situation was developed. The ecoconsciousness score was derived from the total score on both the above aspects.

It was observed that relatively a smaller proportion of homemakers and husbands belonged to either of the extreme levels of ecoconsciousness and that the husbands' proportion in both the categories was higher than homemakers (Table 21).

Table 21. Distribution of Homemakers and Husbands by Ecoconsciousness.

Level of Ecoconsciousness	Homemakers		Husbands	
	N	%	N	%
High	39	17.73	47	21.36
Moderate	155	70.45	139	63.18
Low	26	11.82	34	15.45
Total	220	100.00	220	99.99
Mean	109.48		110.06	
S.D.	11.21		10.54	

Approximately 70 per cent of homemakers and 63 per cent of husbands belonged to the moderate category. Moreover, a greater proportion of husbands and homemakers exhibited high rather than low ecoconsciousness. Nevertheless more or less the same proportion of husbands and homemakers were observed to belong to high, moderate and low categories of level of ecoconsciousness.

7. Commitment of Families to Energy Related Goals

In order to measure the differential levels of commitment of families to energy goals Type I and Type II, two instruments were developed. Commitment Scale I (CS I) which comprised of thirty items that related to resource allocations in the areas of leisure, social life, welfare and security, and level of living measured the differential levels of commitment of families to Type I goals. On the other hand Commitment Scale II (CS II) had twenty-four items reflecting behaviours that aimed at conserving energy. These result in sacrifices in abundant living, level of living and traditional life style. CS II measured families' commitment to Type II goals.

7.1 Extent to Commitment to Type I Energy Related Goals

The reliability of CS I consisting of thirty items administered to 220 respondents was reestablished by split-half technique. The correlation coefficient of the two sub-scales was estimated to be .60; the reliability coe-

fficient computed by Spearman Brown Prophecy Formula was .75. Each of the areas of CS I also revealed satisfactory reliability.

The extent of sacrifices in leisure, social life, welfare and security and level of living are described first and then the overall extent of commitment to Type I goals (EOC I) is presented.

7.1.1 Sacrifices in Leisure

Seven items of CS I dealt with resource allocations pertinent to leisure (Appendix II). If a family is more committed to its Type I goals than to leisure then it would be willing and determined to make sacrifices in leisure to attain those goals. The families' obtained scores ranged from ten to thirty-three. About one-third of the families had commitment scores ranging from ten to nineteen while the rest showed willingness and determination to make sacrifices to a greater extent and thus earned higher commitment score (Appendix III : Table IX). Nearly one-fifth of the sample could be seen as revealing high commitment while one-tenth of them exhibited low commitment to their Type I energy related goals as far as resource allocations in the area of leisure were concerned (Table 22).

7.1.2 Sacrifices in Social Life

Six statements of CS I depicted resource allocation reflecting sacrifices related to social life (Appendix II).

Table 22. Distribution of Families by Extent of Commitment to Type I Goals as Depicted by Scores on Sacrifices in Leisure, Social Life, Welfare and Security, to Level of Living and Overall EOC I.

Extent of Commitment	Sacrifices									
	Leisure		Social Life		Welfare & Security		Level of Living		Overall EOC I	
	N	%	N	%	N	%	N	%	N	%
High	38	17.27	33	15.00	36	16.36	46	20.90	40	18.18
Moderate	160	72.73	173	78.64	153	69.55	154	70.00	153	69.55
Low	22	10.00	14	6.36	31	14.09	20	9.09	27	12.27
Total	220	100.00	220	100.00	220	100.00	220	99.99	220	100.00
Mean Score	20.91		15.01		19.20		33.26		88.39	
S.D.	4.06		4.12		5.02		6.28		14.76	

If families were more committed to Type I goals than social life, it would be willing and determined to make sacrifices in this area. The possible range of scores in this area was six to thirty. The mean score was found to be fifteen. More than half the families studied had less than fifteen scores while 46 per cent had fifteen or more scores (Appendix III : Table X). Majority of families showed moderate commitment while 15 and 6 per cents revealed high and low commitment respectively to Type I goals (Table 22). Thus one could say that the families were rather reluctant to make too much sacrifices in this area for the sake of their Type I goals.

7.1.3 Sacrifices in Welfare and Security

Seven items of CS I reflected sacrifices in welfare and security (Appendix II). The analysis of the data in relation to this area, showed that majority were categorised as showing moderate commitment levels. More or less the same proportion of families belonged to categories of high and low commitment level (Table 22). The families had a mean score of 19.20 on sacrifices in welfare and security. About 40 per cent families had scores of less than nineteen (Appendix III : Table XI). The relatively low mean implies that security and welfare values enjoyed a more important place than Type I energy goals in these families' value system.

7.1.4 Sacrifices in Level of Living

Ten items of CS I related to sacrifices in the area of level of living which families should make for the speedy attainment of their goals (Appendix II). A little over one-fifth of the families revealed high commitment to attain Type I goals, while only one-tenth of them showed low commitment through their willingness and determination to make sacrifices in level of living (Table 22). A close look at the data revealed that some families were willing to sacrifice almost each and every aspect of level of living included in CS I so as to reach their Type I energy goals. About 53 per cent of the families were observed to have commitment scores in this area less than thirty-three while the rest had thirty-three or more (Appendix III : Table XII). The mean commitment score as reflected in this area was relatively high. Therefore, it will not be amiss to point out the fact that the families exhibited greater willingness and determination to forgo resource allocations in level of living as compared to the other three areas of CS I so as to attain their Type I energy goals. This implies that families were more committed to attaining Type I goals than to maintaining their level of living in other aspects of living.

The overall EOC I based on the scores obtained on all the thirty items of CS I was studied. The mean score for

the entire sample on commitment to attain Type I energy goals was 88.39 (Table 22). Nearly 58 per cent had scores less than this while the rest exhibited comparatively higher levels of commitment to attain Type I energy related goals. Those earning 70 scores or less than that were relatively small in proportion (Appendix III : Table XIII).

In general it could be said that the families exhibited moderate level of commitment to attain their Type I goals. The proportion of families that revealed high commitment was greater than that of families that revealed low commitment to their Type I goals. Families thus were seen to be committed to their Type I goals in varying degrees.

The relationship between EOC I and each area of sacrifice was found to be significant at .01 level: sacrifices in leisure r = .60; sacrifices in social life r = .69; sacrifices in welfare and security r = .79 and sacrifices in level of living r = .86.

7.2 Extent of Commitment to Type II Energy Related Goals

The reliability of CS II consisting of twenty-four items administered to the 220 respondents was reestablished by split-half technique. The correlation coefficient was estimated to be .72; the reliability coefficient computed by Spearman Brown Prophecy Formula was .83. Moreover, it was observed that the reliability coefficients worked out for each area of CS II were also quite high.

The extent of sacrifices families were willing and determined to make in abundant living, level of living and traditional life style are briefed first and then the overall extent of commitment to Type II goals (EOC II) is described.

7.2.1 Sacrifices in Abundant Living

Twelve items of CS II reflected sacrifices in abundant living which when followed would help the families to attain their energy conservation oriented goals (Appendix II). Over the years man has built up his current life style on the premise that there is an abundance of energy resources on earth. Such a life style is energy intensive and involves much waste. The greater the strength of the families' willingness and determination to make sacrifices in abundant living, the more committed it would be to its Type II energy goals. More or less the same proportion of families belonged to either low or high categories in relation to scores on sacrifices in abundant living. By and large, the families belonged to the moderate category (Table 23).

Further scrutiny of data revealed that the mean score in relation to sacrifices in abundant living was 51.65. About 60 per cent of the families had scores above fifty while the rest had fifty or less. (Appendix III : Table XIV).

7.2.2 Sacrifices in Level of Living.

Six items of CS II (Appendix II) were related to

sacrifices in level of living a family would be willing and determined to make if it were committed to Type II goals. 14 per cents of families each belonged to high and low categories showing extent of commitment while 72 per cent of families belonged to the moderate category (Table 23). A little more than 50 per cent of the families revealed commendable willingness and determination to make sacrifices in their level of living whereby they could attain Type II goals (Appendix III : Table XV).

Table 23. Distribution of Families by Extent of Commitment to Type II Goals as Depicted by Scores on Sacrifices in Abundant Living, Level of Living and Traditional Life Style and Overall EOC II.

Extent of Commitment	Sacrifices							
	Abundant Living		Level of Living		Traditional Life Style		Overall EOC II	
	N	%	N	%	N	%	N	%
High	31	14.09	31	14.09	40	18.18	30	13.64
Moderate	156	70.90	158	71.82	151	68.64	154	70.00
Low	33	15.00	31	14.09	29	13.18	36	16.36
Total	220	99.99	220	100.00	220	100.00	220	100.00
Mean Score	51.65		25.09		22.53		99.25	
S.D.	5.07		3.60		3.29		10.13	

7.2.3 Sacrifices in Traditional Life Style

Six statements of CS II were related to sacrifices in traditional life style (Appendix II) which a family would

be willing and determined to make if it were more committed to Type II goals than to traditional life style. Majority of the families belonged to moderate category while 18 and 13 per cents fell in the categories of high and low respectively (Table 23). One-fourth of the families earned relatively low scores with reference to sacrifices in traditional life style (Appendix III : Table XVI).

The overall EOC II of families was scrutinized. It was observed to range between 66 and 120. The mean score of commitment to Type II goals was computed to be 99.25. Nearly three-fourth of the sample studied belonged to the category of moderate extent of commitment while 16 and 13 per cents belonged to low and high commitment categories (Table 23). Slightly over half the sample studied had scores on EOC II above the mean (Appendix III : Table XVII). Thus it could be stated that, by and large, families indicated quite a commendable degree of willingness and determination to observe certain resource allocations so that their energy conservation oriented goals might ultimately be attained. In spite of the fact that the families were highly committed to Type II energy goals the levels of past or expected (future) goal attainments were rather low (Table 20). This could, then, be attributed to the fact that though side-bets were there, they were not strong enough or lacked staying power to sustain commitment on the part of the families. This further implies the need

for drastic change in the values of the family. Then only, will the family be in a position to overcome its age-old, deeprooted habits that inhibit its commitment to Type II energy goals. It also leads one to conclude that very stringent measures would have to be adopted by the administrative bodies at all levels if remarkable conservation of energy resources at the domestic unit level is to be attained.

The relationship between EOC II and areas of sacrifices were as follows: sacrifices in abundant living r = .91; sacrifices in level of living r = .83 and sacrifices in traditional life style r = .75, thereby indicating significant relationship at .01 level.

8. Profiles of High and Low Commitment Scorers

Data from 60 respondents each who had scored low and high respectively with reference to CS I and CS II were examined to have an understanding about their family characteristics. The profiles of high and low scores on CS I are dealt with first and then those of high and low scores on CS II are presented.

8.1 Profiles of High and Low Scores on CS I

Families who scored high on CS I in contrast to those who scored low were characterised by younger husbands and

homemakers, smaller families, higher education levels of husbands and homemakers, lower family income, fewer years married, higher ecoconsciousness scores of both husbands and homemakers, lower present, past and future goal attainments and lower levels of past and future goal attainments. In brief, they appeared to have attained only some of their goals and they were still striving hard to attain their remaining goals as fast as they could.

On the other hand, those families who were low commitment scorers, in comparison to high scorers, were characterised by larger family size, older husbands and homemakers, lower level of education of husband and wife, higher family income, more number of years married, lower ecoconsciousness of both husbands and homemakers, higher perceptions of goal attainments in all the three time references, and slightly higher level of goal attainment in the past five years. They perceived more rapid level of future goal attainment and their perception regarding their degree of attainment of goals in the future especially was quite high. Moreover they had attained higher level of goal attainment in the present compared to high scorers (Table 24 and Figure 6). It seemed that in spite of their low commitment, they were perceiving greater levels of attainment. This could be so since they had relatively higher family income and therefore they were not required to make much sacrifices in various aspects of living to materialise their goals.

Table 24. Comparison of Mean of Family Characteristics in Relation to Commitment Scores on CS I.

Variables	Mean		
	Total Sample N = 220	High Scorers N = 60	Low Scorers N = 60
Extent of commitment	88.39	108.47	72.73
Family size	4.94	4.73	5.07
Age of husband	42.15	35.88	45.32
Age of wife	37.67	32.23	40.45
Education of husband (4 = some college)	4.36	4.38	4.26
Education of wife (3 = S.S.C. completed)	3.47	3.73	3.66
Family income (Rs)	2025.00	1437.60	2565.50
Years married	17.02	11.16	19.20
Ecoconsciousness (attitude) of husband	110.06	115.42	107.52
Ecoconsciousness (attitude) of wife	109.48	116.02	105.38
Present goal attainment	3.56	3.22	3.65
Past goal attainment	1.50	1.22	1.57
Future goal attainment	7.79	6.97	8.32
Level of past goal attainment	2.06	2.00	2.08
Level of future goal attainment	4.23	3.77	4.67
Monthly energy outlay (Rs)	196.32	127.97	265.05
Per capita energy outlay (Rs)	39.74	31.55	54.78

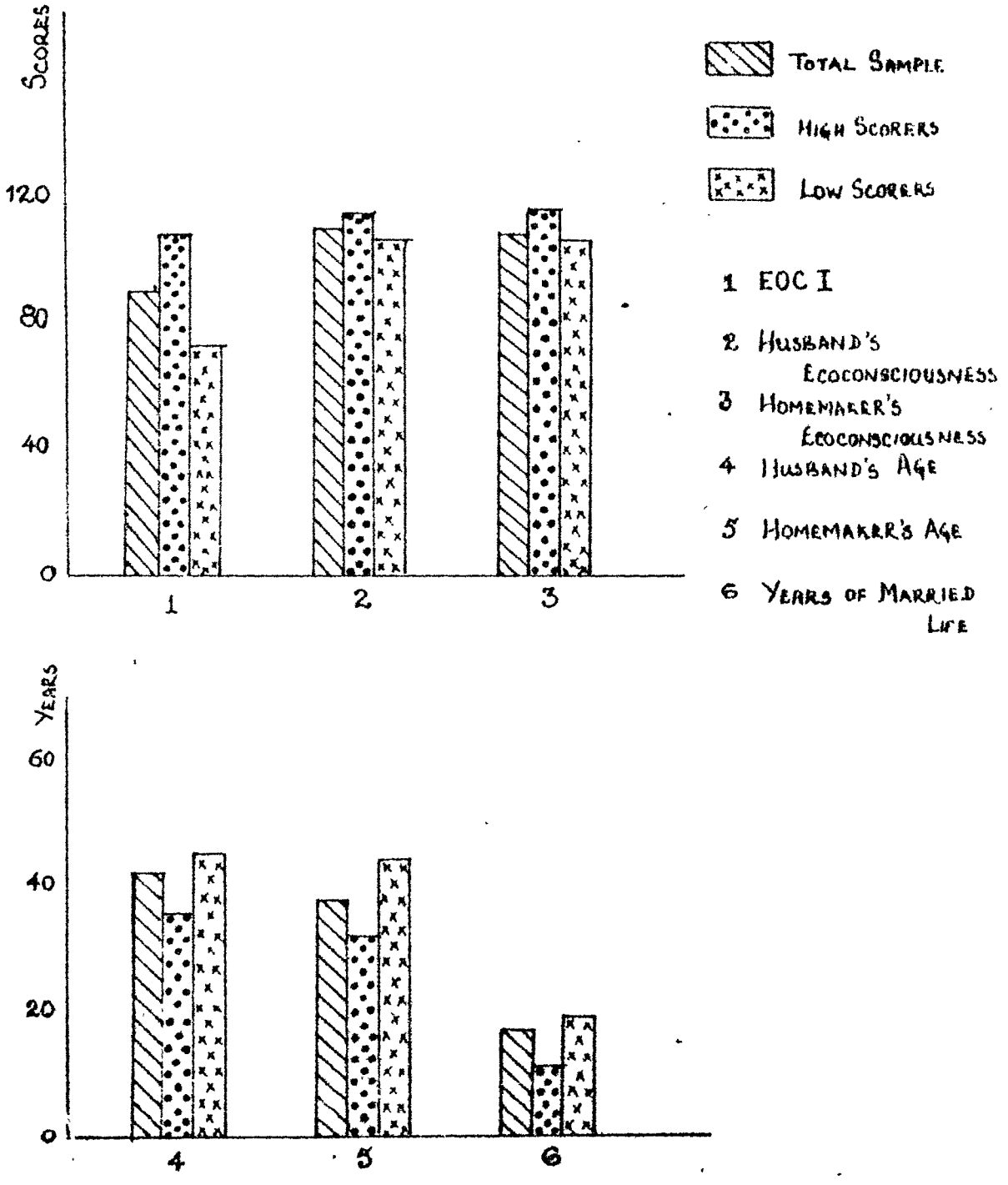

FIG. 6 MEAN OF FAMILY CHARACTERISTICS IN RELATION TO COMMITMENT SCORES ON C S I

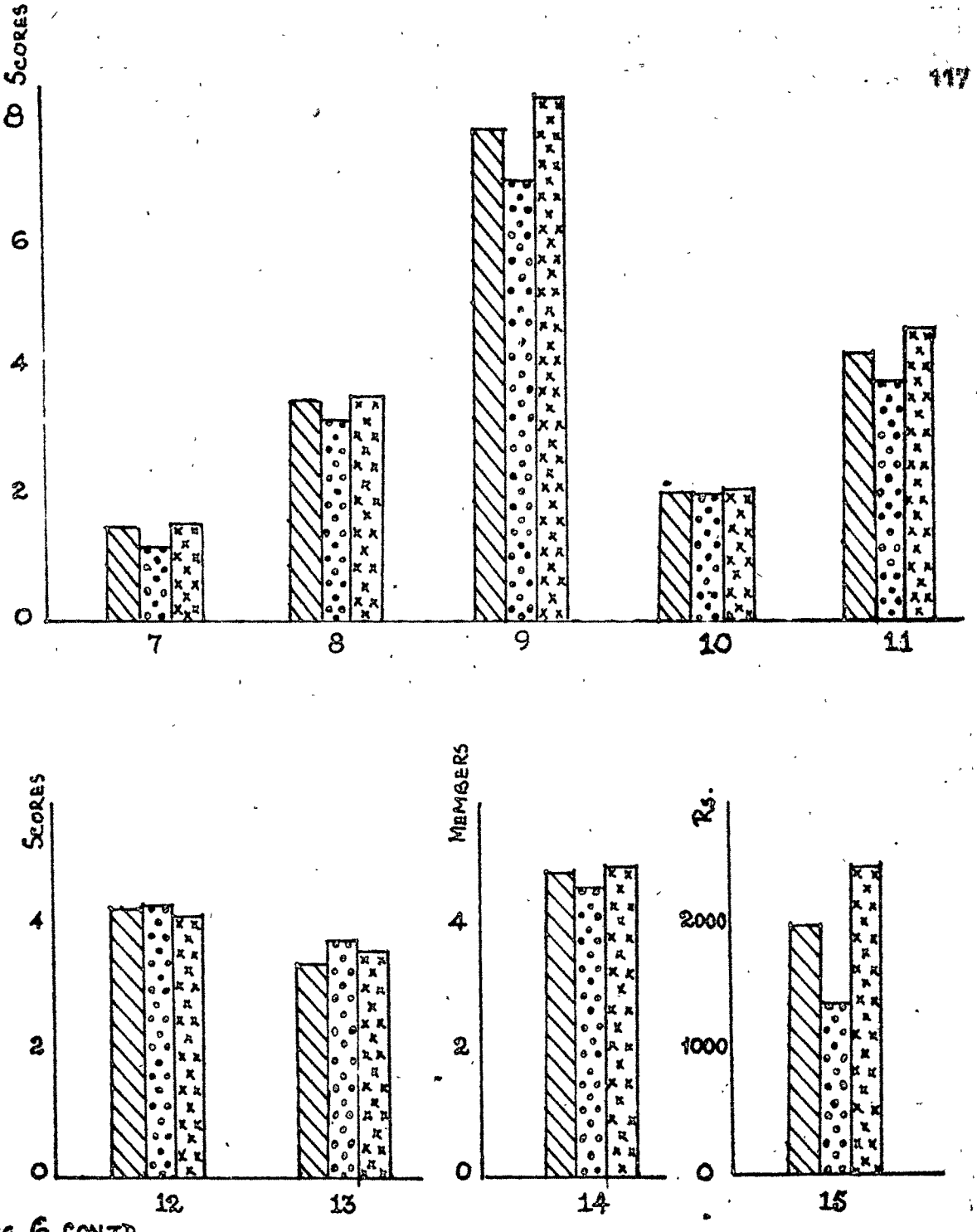

FIG. 6 CONTD.

7 PAST GOAL ATTAINMENT

8 PRESENT GOAL ATTAINMENT

9 FUTURE GOAL ATTAINMENT

10 LOPGA

11 LOFGA

12 HUSBAND'S EDUCATION (4. SOME COLLEGE)

13 HOMEMAKER'S EDUCATION (3. S.S.C. COMPLETED)

14 FAMILY SIZE

15 FAMILY INCOME

8.2 Profiles of High and Low Commitment Scorers on CS II

The mean family characteristics of high and low commitment scorers, were examined in relation to scores on CS II. The high scorers, in comparison to low scorers, were characterised by larger family size, older husbands and homemakers, lower levels of education of husbands and homemakers, lower family income and had been married longer. Their families had higher perceptions of past, present and future goal attainments. Their perceived levels of past and future goal attainments were also higher than low scoring families. Their total fuel cost and per capita fuel cost was only slightly less than those of low scores. These families seemed to have husbands and homemakers with higher ecoconsciousness that facilitated higher commitment levels to energy conservation oriented goals. Moreover, it appeared that these families, though were committed highly to their goals, did not expect to attain to their full satisfaction those goals. This could be due to the paradox in their goals and aspirations and status needs, and energy intensive life style.

In contrast to the high scorers, those who received low scores on CS II were characterised by smaller family size, younger husbands and homemakers, higher levels of education, higher family income, fewer years married, less ecoconscious husbands and homemakers; lower perceptions of

Table 25. Comparison of Mean of Family Characteristics in Relation to Commitment Scores on CS II.

Variables	Mean		
	Total Sample N = 220	High Scorers N = 60	Low Scorers N = 60
Extent of commitment	99.29	110.43	86.90
Family size	4.94	4.92	4.87
Age of husband	42.15	44.70	38.95
Age of wife	37.67	40.25	34.85
Education of husband	4.36	4.05	4.90
Education of wife	3.47	3.26	4.03
Family income (Rs)	2025.00	1920.70	2233.50
Years married	17.02	19.20	14.35
Ecoconsciousness (attitude) of husband	110.06	114.02	108.35
Ecoconsciousness (attitude) of wife	109.48	115.07	104.70
Present goal attainment	2.70	2.85	2.35
Past goal attainment	1.19	1.35	1.00
Future goal attainment	4.64	4.90	4.15
Level of past goal attainment	1.50	1.50	1.35
Level of future goal attainment	1.94	2.05	1.80
Monthly energy outlay (Rs)	196.32	191.77	208.60
Per capita energy outlay (Rs)	39.74	41.58	44.51

past, present and future goal attainments and lower levels of past and future goal attainments (Table 25 and Figure 7). These families were not committed much to their Type II goals. This could be so, due to their higher incomes and education levels and the resultant desire for higher standard of living.

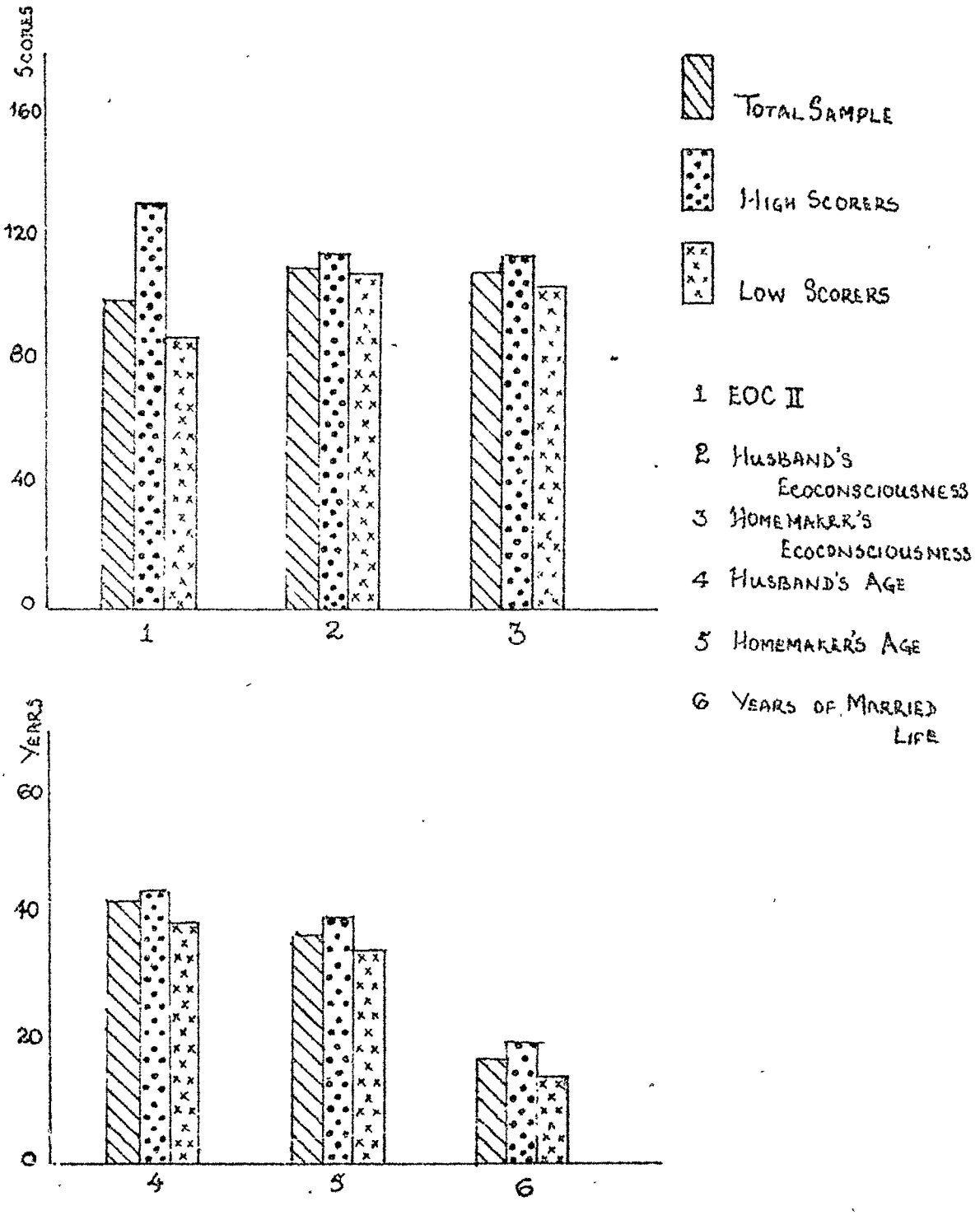

Fig. 7 Mean of Family Characteristics in Relation to Commitment Scores on C S II

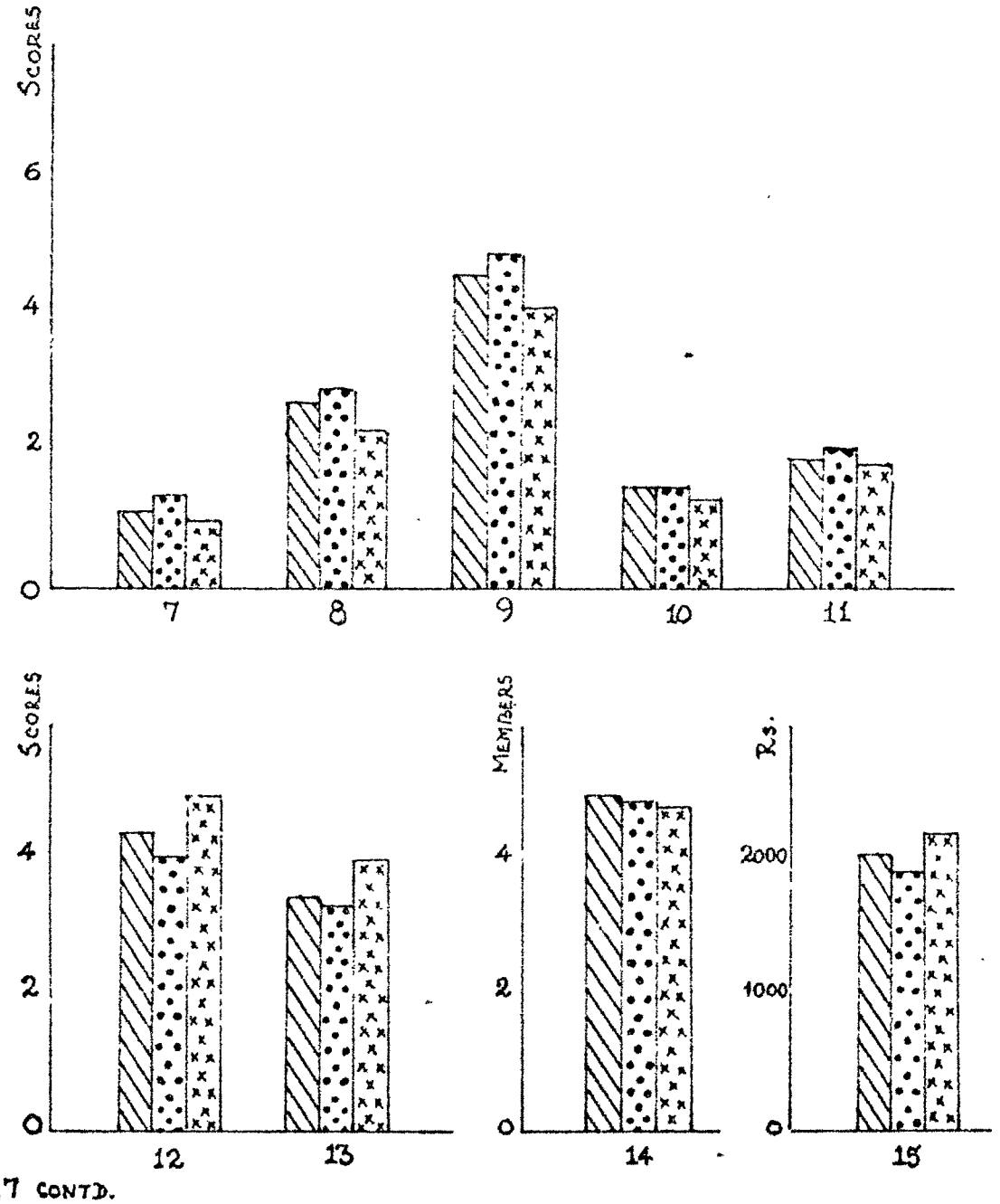

FIG.7 CONTD.

7 PAST GOAL ATTAINMENT

8 PRESENT GOAL ATTAINMENT

9 FUTURE GOAL ATTAINMENT

10 LOPGA

11 LOFGA

12 HUSBAND'S EDUCATION (4- SOME COLLEGE)

13 HOMEMAKER'S EDUCATION (3= S.S.C. COMPLETED)

14 FAMILY SIZE

15 FAMILY INCOME

9. Hypotheses Testing

To test the hypotheses statistically, null hypotheses were formulated. Correlation coefficients were computed for variables using data on the entire sample. Product moment correlations and analyses of variance were also computed for the various areas or components covered in the Commitment Scales I and II, and the respective eleven variables. Wherever significant F values were found, t-test was applied. To ascertain the order in the influence of the variables on the commitment of families to Type I and Type II goals, step-wise regression analysis was carried out separately for each type of goals. In this section, the observations made in relation to testing of hypotheses are presented. First, the findings pertinent to Hypothesis A are summarised. Then the findings related to Hypothesis B are given.

9.1 Findings in Relation to Hypothesis A

For the purpose of testing the hypotheses formulated null hypotheses were framed. With reference to Hypothesis A which states that there exists a relationship between family commitment to energy related goals and selected situational, personal and family variables, two main null hypotheses with sub-hypotheses as presented below were formulated.

H_{oAI}: There exists no relationship between commitment to Type I energy related goals and the selected situational, personal and family variables:

Situational variables:

$H_{oAI}.1$ level of past goal attainment I (LOPGA I)

$H_{oAI}.2$ level of future goal attainment I (LOFGA I)

Personal variables:

$H_{oAI}.3$ ecoconsciousness of husbands

$H_{oAI}.4$ ecoconsciousness of homemakers

$H_{oAI}.5$ age of husbands

$H_{oAI}.6$ age of homemakers

$H_{oAI}.7$ education level of husbands

$H_{oAI}.8$ education level of homemakers

Family variables

$H_{oAI}.9$ family income

$H_{oAI}.10$ family size

$H_{oAI}.11$ years of married life

H_{oAII} : There exists no relationship between commitment to Type II energy related goals and the selected situational, personal and family variables.

Situational variables:

$H_{oAII}.1$ level of past goal attainment II (LOPGA II)

$H_{oAII}.2$ level of future goal attainment II (LOFGA II)

Personal variables:

H_{oAII}.3 ecoconsciousness of husbands

H_{oAII}.4 ecoconsciousness of homemakers

H_{oAII}.5 age of husbands

H_{oAII}.6 age of homemakers

H_{oAII}.7 education level of husbands

H_{oAII}.8 education level of homemakers

Family variables:

H_{oAII}.9 family income

H_{oAII}.10 family size

H_{oAII}.11 years of married life.

H_{oAI}.1 : There is no relationship between commitment to Type I energy related goals and Level of Past Goal Attainment I (LOPGA I).

The mean score for past goal attainment of Type I goal was 1.50, for present goal attainment was 3.56 (Table 19) and the mean level of past goal attainment was 2.06 (Table 20). The EOC I ranged from 58 to 136 with a mean score of 88.39. To test the above hypothesis product moment correlations were computed between (i) LOPGA I and EOC I and (ii) LOPGA I and extent of sacrifices families were willing and determined to make in each area of living covered in

Table 26. Coefficients of Correlation for Twelve Variables Including EOC I.

Variables	2	3	4	5	6	7	8	9	10	11	12
1. Family size	.155	.184	-.128	-.228*	.215*	.211*	-.002	.067	-.139	-.066	-.033
2. Age of husband		.961**	-.225*	-.477**	.201*	.928**	-.116	.094	-.040	-.017	-.370**
3. Age of homemaker			-.215*	-.462**	.210*	.933**	-.088	.064	-.018	-.031	-.343**
4. Education of husband				.441**	.106	-.233*	.061	-.057	-.039	.024	-.027
5. Education of homemaker					.054	-.533**	.123	-.077	.096	.132	.070
6. Family income						.163	.033	.087	-.157	-.002	-.428**
7. Years married							-.056	.077	-.040	-.056	-.320**
8. LOPGA I								-.125	-.030	-.047	.002
9. LOFGA I									-.213*	-.135	-.237*
10. Ecoconsciousness of homemaker										.478**	.360**
11. Ecoconsciousness of husband											.302**
12. Extent of commitment I											-

*Significant at .05 level, **Significant at .01 level

Table 27. Coefficients of Correlation for Eleven Variables and Four Areas or Components of Sacrifices of CS I.

	2	3	4	5	6	7	8	9	10	11
1. Family size	.155	.184	-.128	-.228*	.215*	.211*	-.002	.067	-.139	-.066
2. Age of husband		.961**	-.225*	-.477**	.201*	.928**	-.116	.094	-.040	-.017
3. Age of homemaker			-.215*	-.462**	.210*	.933**	-.088	.064	-.018	-.031
4. Education of husband				.441**	.106	-.233*	.061	-.057	-.039	.024
5. Education of homemaker					.054	-.533**	.123	-.077	.096	.132
6. Family income						.163	.033	.087	-.157	-.022
7. Years married							-.056	.077	-.040	-.056
8. LOPGA I								-.125	-.030	-.047
9. LOFGA II									-.213**	-.135
10. Ecoconsciousness of homemaker										.478**
11. Ecoconsciousness of husband										
12. Sacrifices in leisure.										

CS I. No significant correlation was observed between LOP GA I and (i) overall EOC I (Table 26) and (ii) extent of sacrifices in each area of living of CS I viz. leisure, social life, welfare and security, and level of living (Table 27).

Families with high LOP GA I were significantly different (at .05 level) from those with (i) low, (ii) fair, and (iii) moderate LOP GA I in relation to 'sacrifices in leisure' to attain Type I goals (Table 28).

Table 28. Difference Between Mean Scores on Sacrifices in Leisure of CS I by LOP GA I.

Group	LOP GA I	N	Mean
1.	Low	32	21.16
2.	Fair	116	20.89
3.	Moderate	65	21.17
4.	High	7	17.14

Mean Contrast		Difference	't' value	Level of Significance
1.	2	0.27	0.29	n.s.
2.	3	0.28	0.45	n.s.
3.	4	4.03	2.25	.05
1.	3	0.01	0.01	n.s.
2.	4	3.75	2.14	.05
1.	4	4.02	2.10	.05

The null hypothesis was partially rejected.

H_{oAI}.2 : There is no relationship between commitment to Type I energy related goals and Level of Future Goal Attainment I (LOFGA I).

The mean score for present goal attainment was 3.56, future goal attainment was 7.79 (Table 19) and mean LOFGA I was 4.23 (Table 20) in relation to Type I goals. A negative correlation was observed between LOFGA I and overall EOC I at .05 level of significance (Table 26) and between LOFGA I and extent of sacrifices in welfare and security, and level of living of CS I at .01 levels of significance (Table 27). Thus it was evident that there existed a definite relationship between LOFGA I and overall EOC I and also between LOFGA I and the extent of sacrifices the families were willing and determined to undergo in welfare and security, and level of living. Comparison of mean scores revealed that families with high LOFGA I were significantly different than those with (i) fair (.01 level) and (ii) moderate (.05 level) LOFGA I in their overall EOC I. Mean scores on sacrifices in welfare and security of families with high LOFGA I were different significantly than those with (i) fair (.05 level), (ii) moderate and (iii) low LOFGA I (.01 level). Those families with low LOFGA I differed significantly from those with moderate LOFGA I (,05 level) in their sacrifices in welfare and security (Table 29).

Table 29. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Welfare and Security, and Level of Living of CS I by LOFGA I.

Group	LOFGA I	EOC I		Sacrifices in Welfare and Security		Sacrifices in Level of Living	
		N	Mean	N	Mean	N	Mean
1.	Low	2	89.00	2	21.50	2	38.00
2.	Fair	21	94.95	21	20.95	21	37.05
3.	Moderate	107	89.96	107	19.92	107	33.81
4.	High	90	84.97	90	17.89	90	31.62

Mean Contrast		Mean Diff-erence	't' value	Mean Diff-erence	't' value	Mean Diff-erence	't' value
1	2	5.95	0.53	0.55	0.42	0.95	0.21
2	3	4.99	1.33	1.03	0.77	3.24	1.93
3	4	4.99	2.47*	2.03	2.99**	2.19	2.59*
1	3	0.96	0.08	1.58	2.56*	4.19	0.98
2	4	9.98	2.66**	3.06	2.32*	5.43	3.21**
1	4	4.03	0.38	3.61	6.26**	6.38	1.49

*Significant at .05 level, **Significant at .01 level.

Families with high LOFGA I differed significantly from those with (i) fair (.01 level), and (ii) moderate (.05 level) LOFGA I in relation to sacrifices in level of living (Table 29).

The null hypothesis was rejected.

$H_{oAI \cdot 3}$: There exists no relationship between family commitment to Type I energy related goals and ecoconsciousness of husbands.

The mean ecoconsciousness score of husbands was 110 (Table 24) and the mean commitment level to Type I goal was 88.39 (Table 24). The attitude of husbands correlated positively (.01 level) with the overall commitment of families to Type I goals (Table 26). Moreover it was also positively correlated with sacrifices in welfare and security, and level of living of CS I at .01 level of significance (Table 27). The t-test was applied in order to ascertain the influence of the attitude of husbands on commitment

Table 30. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Welfare and Security, and Level of Living of CS I by Ecoconsciousness of Husbands.

Group	Ecocon-scious-ness	EOC I		Sacrifices in Welfare and Security		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means
1	Low	34	81.91	34	16.94	34	30.74
2	Moderate	139	187.49	139	18.38	139	33.00
3	High	47	95.70	47	23.28	47	35.85

Mean Contrast		Mean Diff-erences	't' value	Mean diffe-rence	't' value	Mean Diffe-rence	't' value
1	2	5.58	2.46*	1.44	2.10*	2.26	2.51*
2	3	8.21	2.93**	4.90	5.19**	2.85	2.23*
1	3	13.79	4.27**	6.34	6.03**	5.11	3.63**

*.05 level of Significance, **.01 level of Significance.

of families to energy related goals. The 't' values revealed that the overall commitment of families to Type I goals as well as sacrifices in welfare and security, and level of living were significantly different by the attitude of husbands (Table 30).

The null hypothesis was rejected.

H_{oAI}·4 : There is no relationship between commitment to Type I energy related goals and ecoconsciousness of homemakers.

A positive correlation at .01 level of significance was found between ecoconsciousness of homemakers and overall EOC I (Table 26). Further computations of correlation coefficient revealed that the attitude of homemakers had positive relationship at .01 level of significance with sacrifices in (i) welfare and security and (ii) level of living of CS I (Table 27). Families of homemakers with high ecoconsciousness were different significantly (.01 level) than those of (i) low and (ii) moderate ecoconsciousness in regard to overall EOC I, sacrifices in welfare and security, and level of living. Families of homemakers with low and moderate ecoconsciousness differed significantly (.05 level) from each other in relation to sacrifices in level of living (Table 31).

Table 31. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Welfare and Security, and Level of Living of CS I by Ecoconsciousness of Homemakers.

Group	Ecocon-sciousness	EOC I		Sacrifices in Welfare and Security		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means
1	Low	26	82.27	26	17.85	26	29.92
2	Moderate	155	86.28	155	17.95	155	32.52
3	High	39	100.85	39	25.10	39	38.44

Mean contrast		Mean Difference	't' value	Mean Difference	't' value	Mean Difference	't' Value
1	2	4.01	1.48	0.10	0.13	2.60	2.26*
2	3	14.57	5.43**	7.15	7.69**	5.92	4.72**
1	3	18.58	5.29**	7.25	6.30**	8.52	5.35**

*.05 level of Significance, **.01 level of Significance.

The null hypothesis was rejected.

$H_{oAI}.5$: There exists no relationship between commitment of families to Type I energy goals and age of husbands.

The age of husbands was negatively correlated with overall EOC I of families at .01 level of significance (Table 26). Moreover negative correlation significant at .01 levels were observed between husbands' age and sacrifices

Table 32. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Leisure, Social Life, Welfare and Security, and Level of Living of CS I by Husbands' Age.

Group	Age	EOC I		Sacrifices in Leisure		Sacrifices in Social Life		Sacrifices in Welfare & Security		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means	N	Means	N	Means
1	Young	68	94.49	68	21.97	68	17.12	68	20.28	68	35.03
2	Middle Aged	84	89.01	84	20.60	84	14.89	84	19.81	84	33.67
3	Old	68	81.51	68	20.18	68	12.96	68	17.38	68	31.00

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	5.48	2.19*	1.37	1.94	2.23	3.18**	0.47	0.55	1.36	1.27
2	3	7.50	3.65**	0.42	0.69	1.93	3.70**	2.43	3.20**	2.67	2.93**
1	3	12.98	5.88**	1.79	2.77**	4.16	6.47**	2.90	3.72**	4.03	3.95**

*Significant at .05 level

**Significant at .01 level

in (i) social life (ii) welfare and security, (iii) level of living (Table 27). Families of old husbands differed significantly (.01 level) from families of (i) middle aged and (ii) young husbands while families of young husbands were significantly different (.05 level) than those of middle aged husbands in relation to overall EOC I. Families of old husbands were significantly different at .01 level from those of young husbands in regard to sacrifices in (i) leisure, (ii) social life, (iii) welfare and security, and (iv) level of living while the families of old husbands were different from those of middle aged husbands at .01 level of significance in regard to sacrifices in (i) social life, (ii) welfare and security, and (iii) level of living. Significant difference (.01 level) was also observed between families of young and middle aged husbands with reference to sacrifices in social life (Table 32).

The null hypothesis was rejected.

$H_{oAI}.6$: There is no significant relationship between family commitment to Type I energy related goals and age of homemakers.

Product moment correlation computed between overall commitment of families to Type I energy related goals and homemakers' age revealed a significant (.01 level) negative relationship between the two variables (Table 26). Similarly significant negative relationships were found

Table 33. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Leisure, Social Life, Welfare and Security, and Level of Living of CS I by Homemakers' Age.

Group	Age	EOC I		Sacrifices in Leisure		Sacrifices in Social Life		Sacrifices in Welfare and Security		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means	N	Means	N	Means
1	Young	92	94.16	92	22.06	92	16.76	92	20.54	92	34.72
2	Middle Age	89	86.02	89	19.95	89	14.08	89	19.03	89	32.91
3	Old	39	80.15	39	20.28	39	12.82	39	16.43	39	30.61

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	8.14	3.708**	2.11	3.381**	2.68	4.383**	1.51	1.998*	1.81	1.867
2	3	5.87	3.167**	0.33	0.580	1.26	2.606*	2.60	3.550**	2.30	2.776**
1	3	14.01	6.928**	1.78	2.86**	3.94	7.200**	4.11	5.435**	4.11	4.619**

*Significant at .05 level

**Significant at .01 level

between age of homemakers and sacrifices in (i) social life (.01 level), (ii) welfare and security (.01 level), and (iii) level of living (.05 level) to seek Type I goals (Table 27). Significant difference (.01 level) was observed in the overall EOC I of the various groups when compared by homemakers' age (Table 33). Families of young homemakers differed significantly (.01 level) from those of old homemakers in regard to sacrifices in (i) leisure, (ii) social life, (iii) welfare and security, and (iv) level of living, Significant difference was seen between families of old and middle aged homemakers in relation to sacrifices in social life (.05 level), and sacrifices in welfare and security, and level of living (.01 level) to attain Type I goals. Moreover, families of young homemakers were different than those of middle aged homemakers at .01 level of significance in relation to sacrifices in (i) leisure and (ii) social life, and at .05 level of significance in relation to sacrifices in (iii) welfare and security (Table 33).

The null hypothesis was rejected.

$H_{oAI}.7$: There is no relationship between commitment of families to Type I energy related goals and education level of husbands.

No definite relationship was found to exist between overall EOC I of families and education level of husbands (Table 26) or between sacrifices on each area of CS I and

Table 34. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Level of Living of CS I by Education Level of Husbands.

Group	Education Level	EOC I		Sacrifices in Level of Living	
		N	Means	N	Means
1	Low	45	85.09	45	32.00
2	Medium	41	94.54	41	36.39
3	High	134	87.61	134	32.73
Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value
1	2	9.45	2.89**	4.39	3.47**
2	3	6.93	2.64**	3.66	3.39**
1	3	2.52	0.97	0.73	0.73

*Significant at .05 level

**Significant at .01 level

education level of husbands (Table 27). The computed t values indicated that overall EOC I of families of husbands with medium education was significantly different at .01 level from families of husbands with (i) low and (ii) high education. Significant difference (.01 level) was also observed between families where husbands had medium and (i) low and (ii) high levels of education in relation to sacrifices in the area of level of living to attain Type I goals (Table 34).

Therefore the null hypothesis was rejected.

$H_{oAI}.8$: There is no relationship between family commitment to Type I goals and education level of homemakers.

The coefficients of correlation computed between education level of homemakers and (i) overall EOC I (Table 26) and (ii) extent of sacrifices families were willing and determined to make in each area of living such as leisure, social life, and welfare and security, and level of living of CS I were not significant (Table 27).

The null hypothesis was not rejected.

$H_{oAI}.9$: There exists no relationship between commitment of families to Type I goals and family income.

A negative correlation significant at .01 level existed between overall commitment to Type I goals and family income (Table 26). Further it was also seen that family income correlated negatively at .01 level of significance with each of the areas of CS I where families should make sacrifices in order to reach its Type I goals (Table 27). Families were found to differ significantly (.01 level) in their overall EOC I when compared on the basis of income. Similar observations were made in relation to sacrifices in level of living. In addition families with high income differed significantly (.01 level) from those with low income and families with low income were significantly different

Table 35. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Leisure, Social Life, Welfare and Security, and Level of Living by Family Income.

Group	Family Income	EOC I		Sacrifices in Leisure		Sacrifices in Social Life		Sacrifices in Welfare and Security		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means	N	Means	N	Means
1	Low	51	96.90	51	22.39	51	16.76	51	21.02	51	36.72
2	Middle	121	88.94	121	20.83	121	15.07	121	19.31	121	33.48
3	High	48	78.44	48	19.48	48	12.85	48	17.00	48	29.04

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	8.16	3.30**	1.56	2.28*	1.69	2.50*	1.71	1.98*	3.24	3.04**
2	3	10.30	5.70**	1.35	2.11*	2.22	3.47**	2.31	3.15**	4.44	5.19**
1	3	18.46	7.50**	2.91	3.72**	3.91	4.98**	4.02	4.29**	7.68	6.62**

*Significant at .05 level, **Significant at .01 level.

(.05 level) than those with middle income in regard to sacrifices in (i) leisure, (ii) social life, and (iii) welfare and security. Families with middle income differed from those with high income at .05 level of significance in relation to sacrifices in (i) leisure and at .01 level of significance in regard to sacrifices in (i) social life, and (ii) welfare and security (Table 35).

The null hypothesis was rejected.

$H_{oAI}.10$: There is no relationship between commitment of families to Type I energy related goals and family size.

Product moment correlation coefficients were computed between family size and (i) overall EOC I and (ii) sacrifices families were willing and determined to make in each area of CS I to attain Type I goals. However, the 'r' values were observed to be not significant either between family size and overall EOC I (Table 26) or between family size and scores on each area of sacrifices of CS I (Table 27). Thus it was found that there is no relationship between EOC I and family size.

The null hypothesis was not rejected.

$H_{oAI}.11$: There is no relationship between commitment of families to Type I energy related goals and years of married life.

The mean number of years married was 17.02 and the mean score on overall EOC I was 88.39. A significant negative correlation (.01 level) was found between years of married life and the families' overall EOC I (Table 26). Moreover, negative correlation significant at .01 level was observed between years of married life and families' willingness and determination to make sacrifices in social life and also between years married and sacrifices in welfare and security. Families' willingness and determination to make sacrifices in level of living was negatively correlated at .05 level with years of married life (Table 27). Families in latter years of married life were different significantly from those in early years (.01 level) and middle years (.05 level) in relation to overall EOC I. Moreover, significant difference (.01 level) was observed between families in later and early years of married life in regard to sacrifices in (i) leisure, (ii) social life, and (iii) welfare and security. Families in later years differed from those in middle years with reference to sacrifices in (i) social life, and (ii) welfare and security at .05 level and .01 level of significance respectively. Families in early years were found to be significantly different (.05 level) than those in middle years in relation to sacrifices in (i) leisure and (ii) social life (Table 36).

The null hypothesis was rejected.

Table 36. Differences Between Mean Scores on Overall EOC I and on Sacrifices in Leisure, Social Life, and Welfare and Security of CS I by Years of Married Life.

Group	Years of Married Life	EOC I		Sacrifices in Leisure		Sacrifices in Social Life		Sacrifices in Welfare & Security	
		N	Mean	N	Mean	N	Mean	N	Mean
1	Early Years	75	92.96	75	22.07	75	16.48	75	20.16
2	Middle Years	65	89.20	65	20.32	65	14.98	65	20.06
3	Later Years	80	83.44	80	20.26	80	13.58	80	17.61

Mean Contrast		Mean-Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	3.76	1.42	1.75	2.37*	1.5	2.07*	0.10	0.10
2	3	5.76	2.53*	0.06	0.09	1.4	2.39*	2.45	2.98**
1	3	9.52	4.28**	1.81	2.83**	2.9	4.48**	2.55	3.44**

*Significant at .05 level, **Significant at .01 level.

Table 37. Coefficients of Correlation for Twelve Variables Including EOC II.

Variables	2	3	4	5	6	7	8	9	10	11	12
1. Family size	.155	.184	-.128	-.228*	.215*	.211*	.077	.015	-.139	-.066	.007
2. Age of husband		.961**	-.225*	-.477**	.201*	.928**	.165	.049	-.040	-.017	.137
3. Age of homemaker			-.215*	-.462**	.210*	.933**	-.088	.064	-.018	-.031	.161
4. Education of husband				.441**	.106	-.233*	.029	-.013	-.039	.024	-.190
5. Education of homemaker					.054	-.533**	-.084	-.00	.096	.132	-.216*
6. Family income						.163	.092	.063	-.157	-.002	-.218*
7. Years married							.182	.072	-.040	-.056	.127
8. LOPGA II								.335**	-.179	-.137	-.010
9. LOFGA II									.036	.074	.053
10. Ecoconsciousness of homemaker										.478**	.372**
11. Ecoconsciousness of husband											.157
12. Extent of commitment II											-

*Significant at .05 level, **Significant at .01 level.

Table 38. Coefficients of Correlation for Eleven Variables and three Areas or Components of Sacrifices of CS II.

	2	3	4	5	6	7	8	9	10	11
1. Family size	.155	.184	-.128	-.228*	.215*	.211*	.077	.015	-.139	-.
2. Age of husband		.961**	-.225*	-.477**	.201*	.928**	.165	.049	-.040	-.
3. Age of homemaker			-.215*	-.462**	.210*	.933**	-.088	.064	-.018	-.
4. Education of husband				.441**	.106	-.233*	.029	-.013	-.039	.
5. Education of homemaker					.054	-.533**	-.084	.00	.096	.
6. Family income						.163	.092	.063	-.157	-.
7. Years married							.182	.072	-.040	-.
8. LOPGA II								.335**	-.179	-.
9. LOFGA II									.036	.
10. Ecoconsciousness of homemaker										.
11. Ecoconsciousness of husband										
12. Sacrifices in abundant living										
13. Sacrifices in level of living										
14. Sacrifices in										

H_{oAII}·1 : There exists no relationship between family commitment to Type II energy related goals and Level of Past Goal Attainment II (LOPGA II).

The mean score in relation to past goal attainment of Type II goals was 1.20, present goal attainment was 2.70 (Table 19) and the mean level of past goal attainment was 1.50 (Table 20). Coefficients of correlation between LOPGA II and overall EOC II and also between LOPGA II and each area of sacrifice of CS II viz. abundant living, level of living and traditional life style were computed using Pearson product moment formula. No significant correlation was observed between LOPGA II and (i) EOC II (Table 37) or (ii) each area of sacrifice of CS II (Table 38).

Therefore, the null hypothesis was not rejected.

H_{oAII}·2 : There is no relationship between commitment of families to Type II energy related goals and Level of Future Goal Attainment II (LOFGA II).

The mean scores for present, future and mean level of future goal attainment in relation to Type II goals were 2.70, 4.64 and 1.94 respectively (Tables 19 and 20). No significant correlation was observed between LOFGA II and overall EOC II (Table 37) as well as between LOFGA II and scores on various areas of sacrifices of CS II (Table 38). Families with fair LOFGA II differed significantly (.05 level) from those with moderate LOFGA II in relation to

sacrifices in the area of level of living of CS II (Table 39) to attain Type II goals. In addition, significant difference

Table 39. Differences Between Means Scores on Sacrifices in Level of Living and Traditional Life Style of CS II by LOFGA II.

Group	LOFGA II	Sacrifices in Level of Living		Sacrifices in Traditional Life Style	
		N	Mean	N	Mean
1	Low	30	24.27	30	21.27
2	Fair	124	25.69	124	22.94
3	Moderate	62	24.48	62	21.98
4	High	4	22.25	4	26.50
Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value
1	2	1.42	1.79	1.67	3.26**
2	3	1.21	2.17*	0.96	1.77
3	4	2.23	0.87	4.52	3.82**
1	3	0.21	0.24	0.71	1.14
2	4	3.44	1.35	3.56	3.17**
1	4	2.02	0.76	5.23	4.47**

*.05 level of Significance

**.01 level of Significance

at .01 level was observed between families with (i) low and fair, (ii) low and high, (iii) moderate and high, and (iv) fair and high LOFGA II in relation to sacrifices in

traditional life style to fulfill Type II goals.

Therefore the null hypothesis was partially rejected.

$H_{oAII}.3$: There exists no relationship between commitment of families to Type II energy related goals and ecoconsciousness of husbands.

The computed 'r' values revealed no significant relationship between overall EOC II and ecoconsciousness of husbands (Table 37). However the attitude of husbands correlated positively (.01 level) with the extent of sacrifices families were willing and determined to make in traditional life style to attain Type II energy related goals (Table 38). The overall commitment to Type II goals differed significantly at .01 and .05 level between families where husbands had (i) moderate and high, as well as (ii) low and high ecoconsciousness respectively. Moreover, families of husbands with moderate level of ecoconsciousness were different significantly (.05 level) than those families of husbands with high ecoconsciousness in relation to sacrifices in abundant living of CS II. In relation to sacrifices in traditional life style families of husbands with high ecoconsciousness were found to differ at .01 level of significance from those with (i) low, and (ii) moderate ecoconsciousness (Table 40).

Table 40. Differences Between Mean Scores on Overall EOC II and Sacrifices in Abundant Living and Traditional Life Style of CS II by Ecoconsciousness of Husbands.

Group	Ecoconsciousness	EOC II		Sacrifices in Abundant Living		Sacrifices in Traditional Life Style	
		N	Means	N	Means	N	Means
1	Low	34	98.06	34	51.41	34	21.82
2	Moderate	139	98.09	139	51.12	139	21.87
3	High	47	103.77	47	53.36	47	24.87

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	0.03	0.02	0.29	0.33	0.05	0.11
2	3	5.68	2.81**	2.24	2.40*	3.00	4.41**
1	3	5.71	2.48*	1.95	1.71	3.05	4.12**

*.05 level of Significance
**.01 level of Significance

The null hypothesis was rejected.

H_{oAII}·4 : There is no significant relationship between commitment of families to Type II energy related goals and ecoconsciousness of homemakers.

The ecoconsciousness of homemakers was positively correlated at .01 level with overall EOC II of their families (Table 37). Further analysis revealed a significant positive relationship (.01 level) between homemakers'

ecoconsciousness and sacrifices in abundant living and traditional life style. A significant (.05 level) positive relationship was also observed between ecoconsciousness of homemakers and sacrifices in level of living (Table 38). Families differed significantly (.01 level) in their overall EOC II, the difference being the most prominent between families of homemakers with high and (i) moderate, and (ii) low ecoconsciousness. Further analysis was undertaken to see the significance of mean differences between families in relation to sacrifices in various areas of CS II, viz. abundant living, level of living and traditional life style by the attitude of homemakers. The t-values revealed that the families differed significantly in each of these areas by homemakers' ecoconsciousness. Differences at .01 and .05 levels existed between (i) families of homemakers with moderate and high ecoconsciousness, and (ii) families of those with low and high ecoconsciousness respectively, in relation to sacrifices in abundant living. The mean difference in the extent of willingness and determination of families to make sacrifices in level of living of CS II were seen to be significant at .05 level between families of homemakers with low and (i) moderate, and (ii) high ecoconsciousness. Families of homemakers with high ecoconsciousness were different than those with (i) low and (ii) moderate ecoconsciousness at .01 level of significance in relation to sacrifices in traditional life style (Table 41).

Table 41. Differences Between Mean Scores on Overall EOC II and on Sacrifices in Abundant Living, Level of Living, and Traditional Life Style of CS II by Ecoconsciousness of Homemakers.

Group	Ecocon-sciousness	EOC II		Sacrifices in Abundant Living		Sacrifices in Level of Living		Sacrifices in Traditional Life Style	
		N	Means	N	Means	N	Means	N	Means
1	Low	26	95.27	26	50.88	26	23.27	26	21.27
2	Moderate	155	98.22	155	51.12	155	25.21	155	21.83
3	High	39	106.26	39	54.23	39	25.85	39	26.03

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	2.95	1.35	0.24	0.20	1.94	2.23*	0.56	0.92
2	3	8.04	4.37**	3.11	3.81**	0.64	0.89	4.20	6.68**
1	3	10.99	4.13**	3.35	2.58*	2.58	2.41*	4.76	5.77**

*Significant at .05 level, **Significant at .01 level.

The null hypothesis was rejected.

$H_{oAII}.5$: There is no relationship between commitment of families to Type II energy related goals and age of husbands.

Age of husband was observed to have no significant relationship with the overall family commitment to Type II goals (Table 37). However a positive correlation at .05 level existed between husbands' age and the willingness and determination of families to make sacrifices in abundant living (Table 38). Families with young husbands were different than those with old husbands at .05 level of significance in relation to sacrifices in abundant living (Table 42).

Table 42. Differences Between Mean Scores on Sacrifices in Abundant Living of CS II by Husbands' Age.

Group	Age	Sacrifices in Abundant Living N	Means
1	Young	68	50.62
2	Middle aged	84	51.50
3	Old	68	52.85

Mean Contrast		Mean Difference	't' Value
1	2	0.88	1.09
2	3	1.35	1.64
1	3	2.23	2.59*

*Significant at .05 level

The null hypothesis was partially rejected.

H_{oAII}·6 : There exists no relationship between commitment of families to Type II energy related goals and age of the homemakers.

No significant relationship was found between overall commitment to Type II goals and homemaker's age (Table 37). However a significant positive correlation (.05 level) was computed between homemaker's age and the willingness and determination of the families to make sacrifices in abundant living to attain Type II energy related goals (Table 38). Families of old homemakers were significantly diff-

Table 43. Differences Between Mean Scores on Overall Eoc II and on Sacrifices in Abundant Living and Level of Living of CS II by Homemaker's Age.

Group	Age	EOC II		Sacrifices in Abundant Living		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means
1	Young	92	97.86	92	50.66	92	24.58
2	Middle Age	89	99.28	89	51.75	89	25.05
3	Old	39	102.69	39	53.71	39	26.35

Mean Contrast		Mean Difference	't' Values	Mean Difference	't' Values	Mean Difference	't' Values
1	2	1.42	0.903	1.09	1.425	0.47	0.949
2	3	3.41	2.093*	1.96	2.274**	1.30	2.306*
1	3	4.83	3.008**	3.05	3.712**	1.77	3.089**

*Significant at .05 level.

**Significant at .01 level.

erent (.01 level) from those of (i) middle aged and (ii) young homemakers in relation to sacrifices in abundant living. Moreover, families of old homemakers differed significantly from those of (i) middle aged homemakers (.05 level) and (ii) young homemakers (.01 level) in regard to sacrifices in level of living (Table 43).

The null hypothesis was rejected.

H_{oAII}·7 : There exists no relationship between family commitment to Type II energy related goals and education level of husbands.

The computed r values showed only a trend towards a negative relationship between education level of husbands and overall EOC II (Table 37). However the education level of husbands correlated negatively with sacrifices in abundant living (Table 38). The mean scores depicting extent of commitment of families to Type II goals were found to be decreasing as the education level of husbands increased. The t values computed revealed significant difference (.05 level) in the overall EOC II in the case of families of husbands with low and high levels of education (Table 44). Further scrutiny revealed that significant differences (at .01 level) existed between families of husbands with high and low education in regard to sacrifices in abundant living of CS II (Table 44).

Table 44. Differences Between Mean Scores on Overall EOC II and on Sacrifices in Abundant Living of CS II by Education Level of Husbands.

Group	Education Level	EOC II		Sacrifices in Abundant Living	
		N	Means	N	Means
1	Low	45	102.09	45	53.27
2	Medium	41	100.85	41	52.29
3	High	134	97.88	134	50.90
Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value
1	2	1.24	0.60	0.98	0.96
2	3	2.97	1.76	1.39	1.63
1	3	4.21	2.45*	2.37	2.82**

*Significant at .05 level

**Significant at .01 level

The null hypothesis was therefore rejected.

$H_{oAII}.8$: There exists no relationship between family commitment to Type II energy related goals and homemakers' education level.

A negative correlation (at .05 level) was seen to exist between overall EOC II and education level of homemakers (Table 37). Further it was seen that the 'r' values computed between education level of homemakers and sacrifices

in (i) abundant living, and (ii) level of living were negatively significant at .05 and .01 level, respectively (Table 38). The computed t values were found to be significant at .01 level when the overall commitment to Type II goals of families of homemakers with low and (i) medium education level, as well as (ii) high education level were compared (Table 45).

Table 45. Differences Between Mean Scores on Overall EOC II and on Sacrifices in Abundant Living and Level of Living of CS II by Education Level of Homemakers.

Group	Education Level	EOC II		Sacrifices in Abundant Living		Sacrifices in Level of Living	
		N	Mean	N	Mean	N	Mean
1	Low	66	103.52	66	53.98	66	26.32
2	Medium	91	98.31	91	50.96	91	25.32
3	High	63	96.30	63	50.19	63	23.48

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	5.21	3.79**	3.02	4.40**	1.00	2.24*
2	3	2.01	1.12	0.77	0.87	1.84	2.80**
1	3	7.22	3.76**	3.79	4.18**	2.84	4.14**

*Significant at .05 level, **Significant at .01 level.

Families of homemakers with low education level were observed to differ significantly (.01 level) from those of homemakers with (i) medium and (ii) high education level in relation to

sacrifices in abundant living. Families of homemakers with high education were significantly different from those of homemakers with (i) medium and (ii) low education (.01 level) and families of homemakers with low education were significantly different from those of homemakers with medium education (.05 level) in regard to sacrifices in level of living to attain Type II goals (Table 45).

The null hypothesis was rejected.

H_{oAII}.9 : There is no relationship between family commitment to Type II energy related goals and family income.

A negative correlation (.05 level) was observed between family income and overall EOC II (Table 37). The willingness and determination to make sacrifices in abundant living and level of living respectively of CS II were correlated negatively (.05 level) with family income (Table 38). The families differed significantly in their overall commitment to Type II goals as evidenced by the significant calculated t values between EOC II of families with middle and high monthly incomes (.05 level) as well as between those with low and high monthly incomes (.01 level). Families with middle and high as well as those with low and high monthly incomes were different significantly at .05 and .01 levels respectively in their willingness and determination to make sacrifices in abundant living. Moreover, families were found to differ with respect to sacrifices in level of

living as well in order to fulfill their Type II goals, the difference being significant (.05 level) between families with middle and high monthly incomes and between families with low and high monthly incomes (Table 46).

Hence the null hypothesis was rejected.

Table 46. Differences Between Mean Scores on Overall EOC II and Sacrifices in Abundant Living and Level of Living of CS II by Family Income.

Group	Family income in Rs.	EOC II		Sacrifices in Abundant Living		Sacrifices in Level of Living	
		N	Means	N	Means	N	Means
1	Low	51	101.14	51	52.41	51	25.65
2	Middle	121	100.06	121	52.09	121	25.36
3	High	48	95.42	48	49.69	48	23.81

Mean Contrast		Mean Difference	't' Value	Mean Difference	't' Value	Mean Difference	't' Value
1	2	1.08	0.69	0.32	0.41	0.29	0.54
2	3	4.64	2.50*	2.40	2.54*	1.55	2.24*
1	3	5.72	2.75**	2.72	2.61**	1.84	2.43*

*Significant at .05 level, **Significant at .01 level.

$H_{oAII \cdot 10}$: There exists no relationship between family commitment to Type II energy related goals and family size.

The computed 'r' values were not significant either between overall EOC II and family size (Table 37) or between family size and each area of sacrifices of CS II (Table 38).

The null hypothesis was not rejected.

$H_{oAII}.11$: There exists no relationship between commitment of families to Type II energy related goals and the years of married life.

Pearson product moment correlations resulted in a positive relationship which was not significant (Table 37). The coefficient of correlation between years of married life and sacrifices in abundant living showed a trend toward positive relationship (Table 38). Families in middle and later years, and early and later years of married life were different from each other at .05 level in relation to sacrifices in abundant living to attain Type II goals (Table 47).

The null hypothesis was partially rejected.

9.2 Findings in Relation to Hypothesis B

With reference to Hypothesis B which states that there exists a difference in the influence exerted by the selected situational, personal and family variables on family commitment to energy related goals, two main null hypotheses as given below were framed.

Table 47. Differences between Mean Scores on Sacrifices in Abundant Living of CS II by Years of Married Life.

Group	Years of Married Life	Sacrifices in Abundant Living	
		N	Means
1	Early years	75	51.20
2	Middle years	65	50.80
3	Later	80	52.75

Mean Contrast		Mean Difference	't' Value
1	2	0.40	0.45
2	3	1.95	2.27*
1	3	1.55	2.02*

*Significant at .05 level.

$H_{oB}{}^{I}$: There exists no difference in the influence exerted by the selected situational, personal and family variables viz., LOPGA I, LOFGA I, ecoconsciousness, age and education level of husbands and homemakers, family income, family size and years of married life on family commitment to Type I energy related goals.

Stepwise regression analysis was computed to test the above hypothesis. The ordered list of factors (Table 48) reveals the order of the variables by their influence on EOC I. Family income, ecoconsciousness of husbands, age of husbands, ecoconsciousness of homemakers, family size and

Table 48. The Table of F-to-enter and the Variables Entered in the Regression Equation in Stepwise Multiple Regression Analysis Conducted in Relation to Overall EOC I.

Step Number	Variables Entered	F-to enter
1.	Family income	34.210**
2.	Ecoconsciousness of husbands	12.103**
3.	Age of husbands	5.499**
4.	Ecoconsciousness of homemakers	8.916**
5.	Family size	3.916*
6.	LOFGA I	4.848*
7.	Education level of homemakers	1.863
8.	Age of homemakers	0.370
9.	LOPGA I	0.090
10.	Education level of husbands	0.081
11.	Years of married life	0.016

*Significant at .05 level, **Significant at .01 level.

LOFGA I emerged out as significant variables while the remaining variables were observed to be not significant in the presence of the former set of variables in influencing EOC I. On the basis of these observations it was concluded that there existed a difference in the influence exerted by the variables on EOC I.

The null hypothesis was rejected.

H_{oB}^{II} : There exists no difference in the influence exerted by the selected situational, personal and family variables viz., LOPGA II, LOFGA II, ecoconsciousness, age and education level of husbands and homemakers, family income, family size and years of married life on family commitment to Type II energy related goals.

Table 49. The Table of F-to-enter and the Variables Entered in the Regression Equation in Stepwise Multiple Regression Analysis Conducted in Relation to Overall EOC II.

Step Number	Variable Entered	F-to-enter
1.	Ecoconsciousness of homemakers	25.120**
2.	Education level of homemakers	6.548*
3.	Family income	8.323*
4.	Age of homemakers	3.904*
5.	Years of married life	3.236
6.	Education level of husbands	0.685
7.	LOFGA II	0.277
8.	Family size	0.330
9.	LOPGA II	0.274
10.	Age of husbands	0.121
11.	Ecoconsciousness of husbands	0.039

*Significant at .05 level, **Significant at .01 level.

Stepwise regression analysis was computed to test the above hypothesis. The list of factors presented (Table 49)

shows the order of the variables by their influence on EOC II. Ecoconsciousness of homemakers, education level of homemakers, family income and age of homemakers emerged out as significant variables while variables such as years of married life, education, age and ecoconsciousness of husbands, LOFGA II, LOPGA II and family size were seen to be not significant in the presence of the former set of variables in influencing EOC II. On the strength of these observations it was concluded that there existed a difference in the influence exerted by the variables on EOC II.

The null hypothesis was rejected.

10. Discussion of Findings in Relation to Hypotheses Testing

To what extent were families committed to their energy related goals? Was there any difference amongst families in their commitment to energy related goals? Could the differential level of commitment, if any, be explained by situational variables like levels of past and future goal attainments? Was there any relationship between commitment of families to their goals and their personal and family characteristics? These were some of the questions that formed the basis of analysis of the data gathered in the present study. It may be recalled here that Type I energy related goals referred to level of living oriented energy goals and Type II

energy related goals referred to energy conservation oriented goals. In addition to the situational variables cited above, personal and family variables like ecoconsciousness, age and education level of husbands and homemakers, family income, family size and years of married life were chosen to understand family goal commitment behaviour in relation to each type of energy related goals.

Findings in relation to interrelationships of situational, personal and family variables with EOC I and EOC II respectively, are reported in sequence.

10.1 Situational Variables

10.1.1 EOC I in Relation to Levels of Goal Attainments

Families were observed to have relatively low mean score on past goal attainment (1.50) and relatively high mean score on future goal attainment (7.79) in relation to Type I energy related goals. The present goal attainment mean score was 3.56 on Type I goals. The level of future goal attainment of Type I goals-LOFGA I- (4.23) was also comparatively more than the level of past goal attainment of Type I goals-LOPGA I- (2.60). This observation is in line with those of Cantril[22] and Wheeler[111] though it is in contrast with that of Paynter[90] wherein she reported higher past rates than future rates of goal attainment in relation to housing goals. No significant relationship was observed between

LOPGA I and overall EOC I of families. However families with high LOPGA I were significantly different than those with (i) low, (ii) fair and (iii) moderate LOPGA I in relation to sacrifices in leisure to attain Type I goals.

Overall, a negative association was found between perceived LOFGA I and family commitment to Type I goals ($r = -.237^{*}$). In addition, negative relationship existed between LOFGA I and sacrifices in welfare and security ($r = -.258^{**}$) and sacrifices in level of living ($r = -.272^{**}$). Moreover families with high LOFGA I were significantly different from those with (i) fair and (ii) moderate LOFGA I in relation to their overall EOC I. Further analysis revealed that families with high LOFGA I differed from those with (i) low, (ii) fair, and (iii) moderate LOFGA I and families with moderate LOFGA I differed from those with low LOFGA I in their willingness and determination to risk resource allocations in welfare and security to attain Type I goals. Difference in commitment in terms of sacrifices in level of living was observed between families with high and (i) fair as well as (ii) moderate LOFGA I. In general families appeared to be less committed to their Type I goals as their perceived LOFGA I increased especially in relation to resource allocations in the areas of welfare and security, and level of living. LOPGA I or LOFGA I did not reveal any significant association with the selected demographic characteristics.

Apparently when anticipated level of goal attainment was rapid and the families had bright hopes of fulfilling their goals, their willingness to make sacrifices in the areas of welfare and security, and level of living diminished. It, then, seems that these families had attained considerable progress in the accumulation of resources through resource allocations that they were not required to make too much sacrifices any longer to attain their expected goals. Therefore, as they moved closer and closer to the accomplishment of their goals they revealed less commitment. Moreover, majority of the families investigated had indicated working towards very few goals as their mode of goal attainment and also that they held many other major goals in addition to energy related goals for which resource allocations were being made side by side. Then it implies that, once the efforts towards one set of goals were about to culminate in its attainment, families turned to resource allocations in relation to other competing goals.

10.1.2 EOC II in Relation to Levels of Goal Attainment

The mean score computed in relation to past goal attainment of Type II energy related goal was 1.20 while that of future goal attainment of the same was 4.64. The present goal attainment mean score was 2.70 on Type II goals. However both past and future goal attainment were less than the midway mark on the scale used to perceive relative

positions of goal attainment. The level of future goal attainment of Type II goals-LOFGA II-was 1.94, whereas the level of past goal attainment of Type II goals-LOPGA II-was 1.50. This implies that the respondents perceived only a slight increase to the fulfilment of Type II energy related goals.

No definite relationship existed between overall EOC II and (i) LOPGA II and (ii) LOFGA II. However, families exhibited difference in their willingness and determination to make sacrifices in level of living and traditional life-style to attain Type II energy related goals when compared by their perceived LOFGA II. Families with fair and moderate LOFGA II differed from each other in regard to sacrifices in level of living to attain Type II goals. Families with fair LOFGA II were different from those with (i) low, and (ii) high LOFGA II in relation to sacrifices in traditional life style. Families with high LOFGA II differed from those with (i) low and (ii) moderate LOFGA II in their willingness and determination to make sacrifices in traditional life style to reach Type II goals.

Families, by and large, showed that their perceived past, present and future goal attainments in relation to Type II goals were comparatively low. The LOPGA II and LOFGA II appeared to be independent of the variables like age and education of husbands and homemakers, family income, years married and family size.

The mean LOPGA II was slightly less than that of LOFGA II which was only 1.94. Apparently families' perceived level of goal attainments were showing no definite association with their commitment to Type II goals. It was evident that, though these families were striving to attain the expected Type II goals they were not hopeful of making much progress. There were ebbs and flows in their commitment. The failure to perceive much progress in goal attainment could be attributed to the constraints like attitude, aspirations, status needs and so on, because of which families were inconsistent at times in their effort to attain Type II goals. Moreover this implies the value of concentrated and continuous group effort or commitment of the group to the realisation of family goals.

In general the respondents perceived high levels of attainment in relation to their families' Type I goals. They were also able to make more concrete judgements with reference to Type I goals. The perceived LOFGA was higher than that of LOPGA in relation to both the types of goals, the same being much higher in the Type I goals than in the Type II goals. The respondents projected that their families' LOFGA I would commensurate somewhat with their families' EOC I and that their families' LOFGA II would not be so with their EOC II. This could be so since families appeared to be consistent in their commitment behaviour in relation to Type I goals. Probably there was more at

stake and to lose if they did not remain committed to Type I goals. Though EOC II was quite high LOFGA II was very low. This could be so since the desire for higher level of living and energy intensive life style as well as values like freedom, independence, leisure, comfort, material wellbeing and the like might be so strong that it could have an adverse effect on families' commitment to Type II goals. Hence their inability to make much progress to the same. Type I goals were held as more important than Type II goals in general and therefore it could be that families worked more rapidly to attain the former than the latter. In addition, the results are also tangible, explicit and more immediate with reference to Type I goals as compared to Type II goals and this could also be the motivation behind rapid progress in the former.

LOFGA I was found to be an important factor influencing overall EOC I though LOPGA I did not exert any significant influence on overall EOC I in the presence of other variables. Neither LOPGA II nor LOFGA II emerged out as significant variables influencing overall EOC II of families.

10.2 Personal Variables

10.2.1 EOC I in Relation to Ecoconsciousness of Husbands and Homemakers

Ecoconsciousness of husbands and homemakers were seen

to be positively correlated (r = .302** and r = .360** respectively) to the EOC I of their families. In addition, ecoconsciousness was positively correlated with families' willingness and determination to undergo sacrifices in welfare and security (husbands: r = .371** and homemakers : r = .364**), and sacrifices in level of living (husbands: r = .279** and homemakers: r = .376**).

Families where husbands had high, moderate and low levels of ecoconsciousness were different from each other in their overall EOC I and also in their willingness and determination to make sacrifices in welfare and security as well as level of living to fulfill Type I energy related goals. Families showed significant difference in their overall EOC I by the homemaker's ecoconsciousness as well, the difference being marked between families of homemakers with high and low as well as high and moderate levels of ecoconsciousness. Similar differences among families in relation to sacrifices in resource allocations in the area of welfare and security for accomplishing Type I goals were found. In relation to sacrifices in level of living, families where homemakers had high, moderate and low levels of ecoconsciousness differed from each other.

Families where the husbands or the homemakers were more ecoconscious, were more committed to Type I energy related goals. They were more concerned with their level of living

than the energy problem. Apparently, they wanted to enjoy higher levels of living before it became impossible for them to fulfill their desire to attain goals like 'buying power-run household equipment', 'getting natural gas supply to their houses', 'buying automobile' and so on, due to severe scarcity of energy resources, high cost of power or legislation restricting certain goods or energy consumption beyond certain levels. However ecoconsciousness of husbands and homemakers seemed to have no significant relationship with personal or family variables. Husbands and homemakers receive information on energy mainly from sources like news paper, news-broadcasts, magazines, cinema and so on.[38,39,71] Conflicting information from various sources probably inhibited their understanding of the energy problem. Hence high ecoconsciousness did not help to control aspirations that raise energy consumption in any way. Moreover, families witness increased production of power-run commodities and extravagant use of energy around them side by side the call for conservation of energy resources. The confusion created by such a paradox could also be the contributory factor along with families' values for such an association between ecoconsciousness and EOC I. This implies the need to develop technology to manufacture the most energy efficient goods.

10.2.2 EOC II in Relation to Ecoconsciousness of Husbands and Homemakers

The ecoconsciousness of homemakers was positively

correlated to overall EOC II of families (r = .372**) whereas husbands' ecoconsciousness revealed no significant relationship with overall EOC II of families. The ecoconsciousness of homemakers correlated positively with commitment as reflected by scores on sacrifices in each component or area of CS II: sacrifices in abundant living (r = .303**), sacrifices in level of living (r = .238*) and sacrifices in traditional life style (r = .415**); while that of husbands correlated only with the sacrifices in traditional life style (r = .280**). High commitment to Type II goals implies willingness and determination to follow conservation measures to a great extent.

Families of husbands with high ecoconsciousness were different than those with (i) moderate and (ii) low ecoconsciousness in their overall EOC II. Moreover, significant difference was evident in families' willingness and determination to forgo abundant living when comparison was made between families of husbands with moderate and high ecoconsciousness. In addition, families differed in their willingness to make sacrifices in traditional life style by the ecoconsciousness of husbands. In this case the difference was remarkable between families of husbands with moderate and high as well as between families of husbands with high and low ecoconsciousness. Families were observed to differ in overall EOC II by homemakers' ecoconsciousness also, the difference being marked between families of home-

makers with high ecoconsciousness and those with (i) low as well as (ii) moderate ecoconsciousness. Difference in families' willingness and determination to make sacrifices in abundant living and traditional life style to attain Type II goals was pronounced between families of homemakers with (i) moderate and high ecoconsciousness and (ii) high and low ecoconsciousness. The families of homemakers with high and low ecoconsciousness and families of homemakers with moderate and low ecoconsciousness were different in their willingness and determination to take risks in level of living for the sake of Type II goals.

Ecoconsciousness of homemakers as well as husbands affected family goal commitment behaviour in relation to Type II goals. However homemakers exerted a greater impact on overall EOC II. Homemakers' ecoconsciousness had a direct relationship with each of the components of CS II while that of husbands had the same relationship with sacrifices in traditional life style only. This implies that homemakers enjoyed a key position in motivating these families to make resource allocations that resulted in sacrifices in various aspects of living to attain Type II goals. Their ecoconsciousness seemed to motivate their families to be alert to avoid as far as possible abundant living, to adjust their level of living to be more labour intensive and to deviate from traditional life style which were energy intensive so that they could attain Type II goals to a

greater extent. Apparently the families' desire for higher level of living was greater than the desire for conserving energy that the ecoconsciousness of husbands and homemakers did not prove to be of much value in achieving Type II goals. This implies that families should be made aware of the need to develop proper hierarchy of goals not only in relation to the resources at their disposal but also in its relation to the larger system on which it depends for its survival and existence. Hungerford[56] reported that the family's ecoconsciousness was linked with their energy conservation practices. The observation of the present study in relation to ecoconsciousness and family commitment to energy conservation oriented goals is comparable to that of Hogan,[54] Morrison et al.[77] and Newitt[82] wherein it was reported that those who valued man and nature's interdependence and those who had more positive attitude to energy conservation were practising more energy conservation at home.

Homemakers' ecoconsciousness emerged out as the most important factor influencing overall EOC II while it was one of the important factors that influenced overall EOC I of families. Husbands' ecoconsciousness was an important factor that affected commitment to Type I goals but it proved to be the least influential factor in relation to Type II goals. Families' level of goal attainment was more rapid in relation to Type I goals. This throws light on

the impact of husbands' attitude and values on family behaviour. It was evident that the husbands were more concerned with raising standard of living of the family than with the conservation of energy resources in spite of their being ecoconscious. On the contrary, if appeared that homemakers gave more importance to energy conservation and thus exerted a greater impact on EOC II of families.

10.2.3 EOC I in Relation to Age of Husbands and Homemakers

Husbands' age correlated negatively with overall EOC I ($r = -.370^{**}$). It was also negatively associated with willingness and determination of families to make sacrifices in social life ($r = -.395^{**}$), sacrifices in welfare and security ($r = -.262^{**}$), and sacrifices in level of living ($r = -.277^{**}$). Families were different in their EOC I when compared by the age of husbands. This was also true in relation to risks families were willing to make in social life to attain Type I goals. Families of young husbands differed significantly from those of old ones in their commitment as indicated by the scores on sacrifices in leisure. With reference to the willingness and determination of families to take risks in welfare and security, it was seen that families of old husbands were different from those of (i) young as well as (ii) middle aged ones. Similar observations were made in relation to sacrifices

in level of living and age of husbands.

The coefficient of correlation worked out between homemakers' age and overall EOC I showed negative correlation ($r = -.343^{**}$). Further analysis revealed that homemakers' age was correlated with the willingness and determination of families to make sacrifices in social life ($r = -.353^{**}$), sacrifices in welfare and security ($r = -.264^{**}$) and sacrifices in level of living ($r = -.250^{*}$). Families exhibited difference in their overall commitment to Type I goals when compared by the age of the homemakers. Moreover, families of young and middle aged, and young and old homemakers differed from each other in the extent of commitment as measured by sacrifices in leisure to attain Type I goals. Homemakers' age seemed to influence significantly families' commitment to Type I goals in the areas of sacrifices in social life, welfare and security, and level of living, the mean commitment score being observed to decrease in each of these components of CS I as the homemakers' age increased.

By and large, families headed by younger husbands and homemakers were more committed to Type I energy related goals than those of older husbands and homemakers as evidenced by the former's willingness and determination to undertake greater amounts of risks for the same. Probably these young men and women have had an opportunity to enjoy the goals for which they strived for, at some time earlier

in their life. Therefore ~~that~~ they wanted to maintain the same standard as soon as possible or perhaps they saw someone else enjoying the same and thus developed a strong desire for these goods. It could also be that since there were not other goals competing with these Type I goals they were able to make adequate resource allocations for these and hence their higher commitment. On the contrary, the older men and homemakers and their families might be having a different hierarchy of values. Moreover, their families were in the launching and financial recovery stage of life cycle and so they had other goals which were probably more competing and more important than the energy related goals and therefore they were more committed to those goals than the ones under investigation. Or it could also be that these families had acquired most of their energy related goals and therefore they exhibited low commitment to the few specific energy related goals they held. The observation of the present study that the age of husbands correlated negatively with family commitment to Type I goals is in line with that of Paynters'[90] wherein she reported similar relationship between age of husbands and family commitment to housing goals.

10.2.4 EOC II in Relation to Age of Husbands and Homemakers.

No significant relationship was observed between husbands' age and overall EOC II. However when age was

correlated with individual components of CS II it reflected certain significant relationship. Husbands' age and the families' willingness and determination to make sacrifices in abundant living correlated positively (r = .195*). Families of old husbands differed significantly from those of young husbands in their willingness and determination to forgo certain behaviour patterns reflecting abundant living to attain Type II energy related goals.

Age of the homemakers did not reveal any definite relationship with overall EOC II. However there existed a positive correlation between homemakers' age and families' commitment to Type II goals as indicated by sacrifices in abundant living (r = .219*). Families of old homemakers were different significantly from those of (i) middle aged and (ii) young homemakers in their overall commitment to Type II goals as well as in their willingness and determination to make sacrifices in abundant living and level of living to attain Type II goals.

Families headed by young husbands and homemakers were not as committed as those headed by old husbands and homemakers to their Type II goals. This could be due to the fact that these young men and women might have grown up in a relatively energy intensive and mechanised society and they might have formed their life style on the premise that nature's bounty of energy is limitless. Moreover, their energy intensive habits could be so deep-rooted that

they found it difficult to be consistent in their commitment behaviour to Type II goals. This implies the need to effect drastic change in the values of these husbands and homemakers. In addition, they might not have found anything at stake if they were not committed to those goals and therefore their commitment was low. On the other hand, the old husbands and homemakers might have spent a labour-intensive life in their early part of life that they did not find it difficult to guide and motivate their families to be committed to Type II goals. Moreover, these individuals could also have lived through energy crisis earlier and therefore knew the limitations of energy resources. Or it could also be that their families wanted to economise on energy outlay through energy conservation so that the money thus saved could be diverted to other goals that were held as worth striving for. Hence higher commitment to Type II energy goals on their part.

Families of young husbands and homemakers were more committed to Type I goals than those of old husbands and homemakers. Families of old husbands and homemakers were more committed to Type II goals through sacrificing abundant living and level of living than those of young husbands and homemakers. Age of husbands was an important factor influencing EOC I while age of homemakers emerged out as a significant factor influencing EOC II.

10.2.5 EOC I in Relation to Education Level of Husbands and Homemakers

Education level of husbands influenced overall EOC I of families. The EOC I of families where husbands had medium education was different from those where they had low or high education level. It was also observed that families showed similar difference with reference to their willingness and determination to make sacrifices in level of living in order to attain Type I goals when compared by the education level of husbands.

Families of husbands with medium level of education revealed greater commitment to Type I goals through their willingness to allocate resources to the same than those with high or low education. Apparently these families did not have as much finance as those with high education level. Further these families utilized education as a resource to expand the alternatives for resource allocation and their education also enabled them to take greater risks to fulfill Type I goals. On the other hand, families of husbands with high education level were bestowed with more income that it allowed them probably to fulfill those goals without sacrificing too much. Or perhaps it could also be that these families by virtue of the education level of husbands were able to exercise proper management to its resources, thereby, moving steadily to their goals

without making much sacrifices in the various components included in CS I. The less educated probably might not be very keen on Type I goals or they had very few goals which did not involve much outlay and hence did not show much willingness to make sacrifices to attain the same.

10.2.6 EOC II in Relation to Education Level of Husbands and Homemakers

Negative relationship was found between education of husbands and sacrifices the families were willing to make in abundant living ($r = -.206^{*}$). There existed a negative relationship between education level of homemakers and families' overall commitment to Type II goals ($r = -.216^{*}$), and also between homemakers' education and sacrifices in abundant living ($r = -.230^{*}$), and sacrifices in level of living ($r = -.292^{**}$).

Families where husbands had low education differed from those where they had high education in their commitment behaviour to attain Type II goals. In relation to willingness and determination of families to make sacrifices in abundant living too, similar observations were made. Families of homemakers who had low education level differed from those who had medium education as well as high education in their overall EOC II, the more educated being less committed. Similar observations were made when families' willingness and determination to make sacrifices in abundant

living was compared by the education level of homemakers. With reference to sacrifices in level of living to attain Type II energy related goals, families of homemakers with low, medium and high education differed from each other.

As the education level of husbands and homemakers increased, willingness and determination on the part of their families to make sacrifices to attain Type II goals decreased. The more educated families thus were less inclined to forgo their comforts and easy life style for Type II goals than the less educated families. Apparently the well-educated families had varied interests, wider social contacts and were exposed to more comforts that they did not give much importance to Type II goals. Moreover, they were perhaps more aware of technological advances and hence wanted to raise their level of living at the cost of Type II goals. In addition, these families might not have perceived these goals as worth striving for at the cost of a life style based on the abundance of energy resources and they might be holding such values that made them energy intensive rather than labour intensive.

Families were not affected in their commitment to Type I goals by homemakers' education level. Husbands' education level affected EOC I to the extent that the families of medium educated husbands were more willing to sacrifice level of living to achieve Type I goals and it

influenced family commitment to Type II goals to the extent that the families of husbands with low education were more willing to make sacrifices in abundant living. Education level of homemakers had an inverse association with Type II goal commitment though it was not associated significantly with Type I family goal commitment. The less educated the homemakers, the more willing their families were to sacrifice abundant living and level of living to attain Type II goals. Education level of husbands and homemakers proved to be of no significance in the presence of factors like family income, attitude of husbands and homemakers, family size and LOFGA I in influencing EOC I. However education level of homemakers exerted a significant impact on EOC II.

10.3 Family Variables

10.3.1 EOC I in Relation to Family Income

Family income correlated negatively with EOC I ($r = -.428^{**}$) and also with sacrifices in leisure ($r = -.267^{**}$), social life ($r = -.322^{**}$), welfare and security ($r = -.268^{**}$), and level of living ($r = -.407^{**}$). In other words the higher the income the lower the EOC I of families and their willingness and determination to make sacrifices in the various components or areas of CS I.

Families differed in the extent of commitment to attain Type I goals according to their family income. They exhibited difference in their willingness and determination to

take risks in each of the components viz. sacrifices in leisure, sacrifices in social life, sacrifices in welfare and security, and sacrifices in level of living of CS I, by family income.

Apparently families with higher incomes were in such a financial position that they were able to attain their Type I goals without taking much risks in other aspects of living. Or perhaps they could accumulate enough without undue sacrifices in resource allocations in other areas of living like social life, welfare and security, level of living or leisure. It could also be that as income increased families perceived all or most of the Type I energy related goals as necessities, and part and parcel of daily living and so they did not have to develop specific goals to fulfill those needs. Family income was observed to be an important determinant in commitment of families to the realisation of the goals.

10.3.2 EOC II in Relation to Family Income

With an increase in family income overall EOC II of families decreased ($r = -.218^*$). This was true in relation to families' willingness and determination to make sacrifices in abundant living ($r = -.201^*$) and sacrifices in level of living aspects ($r = -.200^*$) of CS II.

Families revealed difference in their overall EOC II

when compared on the basis of their income. However the difference was not pronounced between the two lower income groups. In the same manner, only families of low and middle income groups were not different in their willingness and determination to make sacrifices in abundant living, and level of living components of CS II to attain Type II goals. In other words the high income families differed from (i) low and (ii) middle income families in overall EOC II and in terms of sacrifices in abundant living and level of living.

The high income families were not as committed to Type II goals as low income families. Apparently these families had the means to meet the energy bill and therefore did not find it highly necessary to be committed to Type II goals. Moreover the desire to continue energy intensive life style was probably greater as families' financial position improved and therefore they lacked the motivation to attain Type II goals. Further, the families were not much concerned about collective good, or the impact of their energy consumption behaviour on generations to come, or on the future of mankind. Though perceived levels of commitment were high in general, the families were not hopeful of attaining any remarkable progress to the realisation of Type II goals in the near future. This could be attributed to the conflicting values and the relatively low position ascribed to these goals in the hierarchy of

goal complex. Moreover, the 'side-bets' probably were not strong enough to sustain their commitment.

Family income was inversely related to family goal commitment with reference to Type I and Type II goals. With higher incomes, families could attain their Type I goals which were held probably more as necessities without making much sacrifices. On the other hand, with higher incomes, families found no need to remain committed to Type II goals as they found nothing of value attached to the same to sustain their commitment. Thus family income was an important variable that affected family commitment to their energy related goals but the relative importance of the same varied from Type I to Type II goals in the presence of other variables.

10.3.3 EOC I in Relation to Years of Married Life

An overall negative relationship was observed between commitment of families to Type I goals and years married ($r = .-.320^{**}$). The correlation coefficients computed between years of married life and willingness and determination of families to make sacrifices in each of the components except leisure of CS I revealed negative relationships: sacrifices in social life ($r = -.338^{**}$), sacrifices in welfare and security ($r = -.257^{**}$), and sacrifices in level of living ($r = -.216^{*}$).

Families in later years of married life were different from families in (i) middle as well as (ii) early years of married life in their overall EOC I. Families in early years differed from those in (i) middle years as well as in (ii) later years in their willingness and determination to make sacrifices in leisure to attain Type I goals. In relation to sacrifices in social life families in early, middle and later years were different from each other. Willingness and determination to make sacrifices in welfare and security was seen to be different in the case of families in the later years and (i) early and (ii) middle years of married life.

As families became older their commitment to Type I goals decreased. These families in later years were probably more concerned with other goals than Type I goals and to those they were more committed. This implies that the hierarchical order of goals change as families progress in its life cycle. The 'side-bets' old families would be loosing because of lack of commitment to Type I goals probably were not of substantial nature. Moreover these families showed no inclination to risk social life, welfare and security and level of living in other areas of life for the sake of their Type I goals. They appeared not to value Type I goals much.

10.3.4 EOC II in Relation to Years of Married Life

Difference was evident in families' willingness to make sacrifices in abundant living to attain Type II goals when compared by the years of married life. The difference was marked between families in the middle and later years of married life and also between families in the early and later years.

There existed no consistent pattern in the extent of commitment of families to Type II goals when compared by the years married. However families in early and later years showed higher commitment than families in middle years of life as far as sacrifices in abundant living was concerned. The young families probably were not as much motivated to be committed to those goals as old families and probably they were not alert to avoid wasteful energy behaviour. On the other hand, old families were more committed. These families through years of experience might have developed values like economy in all walks of life. Families in middle years of life were in the prime period when their children's need for energy was also high and they had the means too probably at their disposal to meet the energy requirements and so exhibited less commitment.

Family commitment behaviour to Type I and Type II energy related goals depended on the years of married life.

The families in early years were more committed to attain Type I goals while those in later years were more committed than families in early years to Type II goals. Families in later years probably had attained some or most of the Type I goals earlier, and so they were not having too many Type I goals for which they had to make too much sacrifices. Years of married life was observed to be not a significant factor influencing overall EOC I or EOC II in the presence of other variables.

Family income, ecoconsciousness of husbands and homemakers, age of husbands, family size and level of future goal attainment were seen to be the major predictors of family commitment to Type I energy related goals while ecoconsciousness and education level of homemakers, family income and age of homemakers emerged out as the major predictors of family commitment to Type II energy related goals.