

APPENDIX VII

CORRELATION VALUES (r) OF ITEMS IN THE PERCEPTION
SCALE

345

Item Number	Correlation Values	Item Number	Correlation Values
1	.4138 **	19	.4115 **
x 2	.1244	20	.5364 **
x 3	.2471	21	.4164 **
4	.3895 **	x 22	.2603
5	.9920 **	23	.3108 *
6	.3456 *	24	.5047 **
7	-.3693 **	25	.4200 **
x 8	.2669	26	.6764 **
x 9	.2677	27	.3972 **
10	.3339 *	28	.3329 *
x 11	.1974	x 29	-.3375 *
12	.6012 **	30	.5845 **
13	.6229 **	31	.6571 **
14	.5267 **	32	.5008 **
15	.4809 **	33	.3421 *
16	.6263 **	34	.3891 **
17	.6015 **	x 35	.0982
18	.3996 **	36	.4097 **
-	-	37	.5165 **

** Significant at 0.01 level

* Significant at 0.05 level

x These items were eliminated.

Instruction

Please read the following questions and provide the desired information. Kindly do not leave out any question unanswered.

Background Information : SECTION I

1. Name and Address : _____
2. Age of the Respondent : _____
3. Type of Family : (1) Joint _____
(2) Nuclear _____
4. Number of people staying in the house including yourself : _____
Children below 10 years _____
Adults _____
5. Educational level of your husband and yourself.

	Husband	Wife
1. School or College examination passed	_____	_____
2. Technical or professional examination passed	_____	_____
6. Are you employed outside the home ? Yes ___ No ___
7. If Yes, How much time do you remain out of home ?
Less than 4 hours _____
6 - 8 hours _____
More than 8 hours _____
- 8a. What is the occupation of your husband ? (Specify) : _____
- 8b. What is his designation ? _____
- 8c. What is the nature of work ? _____
9. What is your family income ? (Net disposable income)
Please include income from all sources.
Rs. 100 and below _____ Between Rs.750 and Rs.999 _____
Between Rs.101 & Rs.299 _____ Between Rs.1000 and 1,999 _____
Between Rs.300 and Rs.499 _____ Between Rs.2000 & Rs.2499 _____
Between Rs.500 & Rs.749 _____ Between Rs.2500 & Rs.2999 _____
Between Rs.3000 & Rs.3499 _____
Between Rs.3500 and above _____

(Continued...)

10. What is your family's general value pattern? Please rank these in order of importance. (Value means what one considers important in life. Values give directions to one's life and one's behaviour).

1. Health ()
2. Social Status ()
3. Comfort and Convenience ()
4. Economy ()
5. Education and Knowledge ()

SECTION II

CONSUMPTION PATTERN OF ENERGY

1. What are the various ^{energy} forms used by your family, quantity consumed / month, monthly expenditure per month and the purposes for which they are used.

Types of Energy Forms	Using/ not using	Quantity consumed per month	Expense per month	Purposes for which the energy is used														
				Cooking	Heating water	Lighting	Entertainment	Cooling & Heating Homes	Transportation	Fire	Lighting	Any other						
1. Gas (L.P.G.)																		
2. Kerosene																		
3. Coal																		
4. Soft coal (Charcoal)																		
5. Firewood																		
6. Cowdung cakes																		
7. Agro-wastes																		
8. Solar energy																		
9. Electricity																		
10. Petrol																		
11. Any other																		

2. If you use firewood and cowdung cakes, how much time do you spend in collecting them ? _____
3. Are you engaged in income-generating activity at home which requires additional energy ? Yes _____ No _____
4. If yes, specify the type of activity. _____
5. What type and number of fuel-energy driven vehicles does the family possess and what is its frequency of use ?

Type of Vehicles	Number possessed	Frequency of Use		
		Daily	Frequently	Occasionally
1. Car				
2. Scooter				
3. Motor cycle				
4. Moped				
5. Any other				

6. For what purposes is the vehicle generally used ?
 1. Office going _____
 2. Taking children to school _____
 3. Shopping _____
 4. Recreational outing _____
 5. For long tours _____
 6. Any other (Specify) _____
7. Does the family possess cycle ? Yes _____ No _____
8. Is your house well-ventilated ? Yes _____ No _____
9. Number of rooms, light points, fans and outlets in the house.

Rooms	No. of rooms	No. of Light points in use		No. of fans in use		No. of outlets	Watts of bulbs used
		Tube-lights	Bulbs	Ceiling fans	Table fans		
Bedrooms							
Drawingroom							
Dining room							
Kitchen							
Bathroom							
Verandah							
Storeroom							
Corridor							
staircase							

10. Which of the following recreational items do you possess and how frequently are they used ?

Items	Possess/ Do not possess	Frequency of use		Not in use
		Approx. hrs/ day	Approx. /Hrs per week	
1. Radio				
2. T.V.				
3. Tape Recorder				
4. Record Player				
5. Transistor				
6. Any other (Specify)				

11. Do you possess a pressure cooker ? Yes _____ No _____

12. Do you get enough fuel to meet your family energy demands ?
Yes _____ No _____

13. If no, how do you meet your energy needs ? _____

14. Which of the following appliances do you possess and how frequently are they used ?

Type of Appliances	Possess/ Do not possess	Frequency in use			Not in use
		Daily	Frequ- ently	Occasio- nally	
1. Mixy					
2. Toaster					
3. Oven					
4. Iron					
5. Washing machine					
6. Refrigerator					
7. Immersion heating rod					
8. Geyser/ water heater					
9. Room heater					
10. Cooler					
11. Any other (Specify)					

15. What type of stoves do you use ?
1. Gas stove with one big and one small burner _____
 2. Pressure type kerosene stove _____
 3. Wick type stove _____
 4. Ordinary chula _____
 5. Angithi _____
 6. Tandoor _____
 7. Smokeless chula _____
 8. Solar cooker _____
 9. Any other (Specify) _____
16. Have you faced problems in getting the different fuels you use during the past 5 years ? Yes ___ No ___
17. If yes, then specify the problem. _____
18. Is your family a vegetarian ___ Non-vegetarian _____
19. What type of meals do you have daily ?
- (1) Simple meals (One or two dishes) _____
 - (2) Elaborate meals (More than two dishes) _____
20. What is the approximate time spent in food preparation per day ? _____
21. Do all the family members have meals together to avoid reheating of food ?
- Breakfast : Yes ___ No ___ Evening Tea : Yes ___ No ___
- Lunch : Yes ___ No ___ Dinner : Yes ___ No ___
22. Do you know what is solar cooker and solar water heater ?
- Yes ___ No ___
23. Will you use solar cooker and solar water heater if provided to you at subsidised rates? Yes ___ No ___
24. If no, give reasons : _____
25. Do you know what is biogas energy ? Yes ___ No ___
26. Will you use biogas if it is made available to you? Yes ___ No ___
27. If no, give reasons : _____

SECTION III
PERCEPTION SCALE

'Energy crisis is explained as 'the situation when the families experience household energy shortage and/or price rise which calls for new decisions and actions related to energy resources.'

Keeping in view the above definition, please read each statement carefully and give your response by encircling any one of the following categories against each statement :

SA = Strongly agree D = Disagree
A = Agree DK = Don't know

Sr. No.	Statements	SA	A	D	DK
1.	There is energy crisis in our country.	SA	A	D	DK
2.	Conserving energy is the social responsibility of every citizen.	SA	A	D	DK
3.	Price of fuels may increase in near future.	SA	A	D	DK
4.	The oil reserve of the world is limited.	SA	A	D	DK
5.	Our country does not have enough oil of its own.	SA	A	D	DK
6.	Large amount of oil is imported from other oil rich countries to meet the nation's requirements.	SA	A	D	DK
7.	It is very expensive for our country to buy oil from other nations.	SA	A	D	DK
8.	India's population is too large as compared to its fuel resources.	SA	A	D	DK
9.	High price of different forms of fuels is because of its scarcity.	SA	A	D	DK
10.	Coal, gas, petrol and kerosene are natural resources limited in supply.	SA	A	D	DK
11.	Energy crisis affects our standard of living.	SA	A	D	DK

Sr. No.	Statements	SA	A	D	DK
12.	We need to change our lifestyle to cope up with the energy crisis.	SA	A	D	DK
13.	One of the reasons of energy crisis is increasing population.	SA	A	D	DK
14.	Energy crisis is due to excessive use of energy by people.	SA	A	D	DK
15.	Wastage of energy at household level will accelerate the crisis.	SA	A	D	DK
16.	Energy crisis is due to increased industrialisation.	SA	A	D	DK
17.	Urbanization is one of the reasons for energy crisis.	SA	A	D	DK
18.	Rate of consumption of fuel wood is more than the rate of its production.	SA	A	D	DK
19.	Oil is a very important resource which must be conserved.	SA	A	D	DK
20.	Immediate conservation measures needs to be adopted by every one for controlling the energy crisis in the future.	SA	A	D	DK
21.	Families can contribute a great deal towards energy conservation.	SA	A	D	DK
22.	Government is making efforts to popularise biogas, solar energy and other alternative energy sources to reduce the energy crisis.	SA	A	D	DK

SECTION IV
STRESS SCALE

Given below are the statements which express the strain or tension felt by families when there is energy shortage and/or price increase of energy. Please read each statement carefully and indicate how strongly do you feel under given situations by putting a Check Mark (✓) under the appropriate column against each statement.

N = Not at all Q = Quite a bit
S = Somewhat V = Very much so
NA = Not applicable

Sr. No.	Statements	N	S	Q	V	NA
<u>Economic Stress</u>						
	I feel tense when					
	1. price of energy forms increases as meeting the family energy expenses becomes a problem.	()	()	()	()	()
	2. I have to buy fuel from black market as maintaining the budget becomes a problem.	()	()	()	()	()
<u>Household work stress</u>						
	3. I am unable to complete my day's work because of long hours of power cut.	()	()	()	()	()
	4. I am unable to make maximum use of my electrical equipment due to power cut.	()	()	()	()	()
	5. I have to change my daily work schedule due to energy shortage.	()	()	()	()	()
	6. there is gas/kerosene shortage as getting this fuel is a big problem.	()	()	()	()	()

Sr. No.	Statements	N	S	Q	V	NA
7.	there is gas/kerosene shortage as I generally do not keep a substitute fuel	()	()	()	()	()
8.	there is fuel shortage as frequent visits to the shop has to be made to enquire about its availability.	()	()	()	()	()
9.	we cannot get kerosene even after standing in a line for long hours.	()	()	()	()	()
<u>Stress due to obstructions in comfortable living</u>						
10.	there is energy shortage as I have to get up earlier than usual to complete my morning's routine work.	()	()	()	()	()
<u>I feel tense when</u>						
11.	there is gas/kerosene shortage as I have to use coal/wood.	()	()	()	()	()
12.	there is gas/kerosene shortage as I do not get much free time for relaxing.	()	()	()	()	()
13.	I have to use coal/wood during gas/kerosene shortage as the smoke affects my health.	()	()	()	()	()
14.	I have to use coal/wood/cowdung during fuel shortage as it requires additional space for storage.	()	()	()	()	()
15½	I have to use coal/firewood as it blackens the utensils which require more time for cleaning.	()	()	()	()	()
16.	I am unable to use the fan/cooler/room heater due to long hours of power cut.	()	()	()	()	()
17.	I have to restrict the use of our vehicle because of high cost of petrol.	()	()	()	()	()

Sr. No.	Statements	N	S	Q	V	NA
	<u>I feel tense when . . .</u>					
18.	I am unable to use the refrigerator as a fuel saving aid due to power cut.	()	()	()	()	()
19.	I have to cook dinner in candle light due to power cut. <u>Stress due to inability to meet family demands</u>	()	()	()	()	()
20.	children have to complete their studies immediately after coming from school due to uncertainty of electricity at night.	()	()	()	()	()
21.	children are not able to enjoy the TV/Tape Recorder/Radio due to power cut.	()	()	()	()	()
22.	I am not able to satisfy my children's demands for special food because of energy shortage.	()	()	()	()	()
23.	I am not able to entertain friends frequently at home due to energy shortage which affects our social life.	()	()	()	()	()
24.	I am unable to pursue all my interests in order to save on fuel consumption.	()	()	()	()	()
25.	I have to decrease outdoor entertainments due to high cost of petrol.	()	()	()	()	()

SECTION V
COPING MEASURES INSTRUMENT

Given below are various energy crisis situations which families face. Under such situations, families need to make certain adjustments. Please tick mark from the given coping measures which you adopt when faced with such crisis situations.

Situation I :

The main fuel used by the family is in short supply and its price has also increased. In such situations, how do you manage to meet the fuel requirements of the family.

NA = NOT APPLICABLE

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	

I substitute by :

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| 1. Using another fuel which is available along with the scarce fuel. | () | () | () | () | () |
| 2. Using electric heaters for specific purposes. | () | () | () | () | () |
| 3. Keeping two gas connections. | () | () | () | () | () |
| 4. Managing to get the scarce fuel from black market. | () | () | () | () | () |
| 5. Making use of solar cookers and solar water heaters. | () | () | () | () | () |

I adjust to fuel crisis by :

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| 6. Having at least one meal outside the home. | () | () | () | () | () |
| 7. Having simple meals. | () | () | () | () | () |
| 8. Decreasing the number of meals i.e. avoiding breakfast. | () | () | () | () | () |
| 9. Decreasing frequency of social gatherings at home. | () | () | () | () | () |

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	
10.	Having meals together.	()	()	()	()	()
11.	Using more of pre-prepared tinned foods.	()	()	()	()	()
	<u>I save fuel energy by :</u>					
12.	Cooking foods that require less time and fuel.	()	()	()	()	()
13.	Cooking two meals at a time.	()	()	()	()	()
14.	Cooking in large quantities at a time and storing in the refrigerator.	()	()	()	()	()
15.	Using funnel and pump to pour kerosene in the stove.	()	()	()	()	()
16.	Regularly cleaning the gas burners to maintain efficiency.	()	()	()	()	()
17.	Trimming wicks and maintaining proper length of wicks for efficiency.	()	()	()	()	()
18.	Adopting efficient cooking practices such as :					
	(a) Making maximum use of pressure cooker.	()	()	()	()	()
	(b) Cooking 2-3 items at a time in the pressure cooker.	()	()	()	()	()
	(c) Organising tools and utensils before starting to cook.	()	()	()	()	()
	(d) Doing pre-preparation of food i.e. cutting vegetables, washing dal, rice etc. before lighting the fire.	()	()	()	()	()
	(e) Cooking food in vessels by covering with a lid.	()	()	()	()	()

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	
	(f) Using vessels of correct size and shape for the quantity to be cooked.	()	()	()	()	()
	(g) Drying utensils before keeping on fire.	()	()	()	()	()
	(h) Reducing the flame once the food reaches the boiling point.	()	()	()	()	()
	(i) Allowing refrigerated food to reach room temperature.	()	()	()	()	()
	(j) Soaking pulses and legumes before cooking.	()	()	()	()	()
	(k) Making more use of small burner of gas stove.	()	()	()	()	()
	(l) Any other than the above.	()	()	()	()	()

Situation 2 :

The price of petrol increases almost every year. It is also in short supply. In this situation of increased price and scarcity, how do you manage your expenditure on petrol and cope with the shortage of petrol ?

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	
	<u>I substitute by :</u>					
1.	Using more of cycle than scooter/ car.	()	()	()	()	()
2.	Going on foot for short distance.	()	()	()	()	()

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	
3.	<u>I adjust to petrol crisis</u> <u>by :</u>					
3.	Decreasing social visits.	()	()	()	()	()
4.	Decreasing outdoor recrea- tions.	()	()	()	()	()
5.	Using more of public tran- sport.	()	()	()	()	()
6.	Using own vehicle in emer- gency only.	()	()	()	()	()
	<u>I save petrol by :</u>					
7.	Making large quantity purchase at a time to save trips.	()	()	()	()	()
8.	Making a list of things to be done and purchased and plan the route accordingly.	()	()	()	()	()
9.	Avoiding going out in own vehicle during crowded hours.	()	()	()	()	()
10.	Planning shopping and recreational outings to- gether.	()	()	()	()	()
11.	Sharing vehicle with frie- nds to save fuel.	()	()	()	()	()
12.	Avoiding traffic lights.	()	()	()	()	()
13.	Getting the vehicle engine checked regularly for efficiency.	()	()	()	()	()
14.	Cleaning the air filter regularly	()	()	()	()	()

Sr. No.	Coping Measures	During				NA
		Scarcity		Price Rise		
		Yes	No	Yes	No	
15.	Developing good driving habits such as :					
	(a) Preventing clutch stops and break binding.	()	()	()	()	()
	(b) Driving in correct gear always.	()	()	()	()	()
	(c) Avoiding use of the choke longer than necessary.	()	()	()	()	()
	(d) Driving at a steady speed.	()	()	()	()	()
	(e) Driving between 40-50 Kmph	()	()	()	()	()
	(f) Using clutch only when changing gears.	()	()	()	()	()
	(g) Closing the engine when stopping the vehicle.	()	()	()	()	()

Situation 3 :

There is a heavy cut on power supply because of shortage. The electricity bill consumes a large share of your monthly income due to increased rate and consumption. How do you manage your demands for electricity in both these situations ?

Sr. No.	Coping Measures	During				NA
		Power cut		Price Rise		
		Yes	No	Yes	No	
	<u>I substitute by :</u>					
1.	Using wood/coal/kerosene/gas for heating water instead of electricity.	()	()	()	()	()
2.	Having cold water bath.	()	()	()	()	()
3.	Using more of transistor than radio.	()	()	()	()	()

Sr. No.	Coping Measures	During				NA
		Power Cut		Price Rise		
		Yes	No	Yes	No	
4.	Using coal angithi to keep warm in winter.	()	()	()	()	()
5.	Getting clothes ironed from 'Dhobi'.	()	()	()	()	()
6.	Cooking in candle light or kerosene lamp.	()	()	()	()	()
	<u>I adjust to power crisis by :</u>					
7.	Wearing unironed clothes.	()	()	()	()	()
8.	Sleeping in open during summer to save on electricity.	()	()	()	()	()
9.	Making the children study before dark.	()	()	()	()	()
10.	Making dinner before dark.	()	()	()	()	()
	<u>I save electricity by :</u>					
11.	Working together in one or two rooms to decrease consumption.	()	()	()	()	()
12.	Reducing light intensities where possible.	()	()	()	()	()
13.	Switching off lights and fans before leaving the room.	()	()	()	()	()
14.	Decreasing the use of electrical equipments.	()	()	()	()	()
15.	Storing the ice set in the fridge in ice box for the day.	()	()	()	()	()
16.	Using more of tube lights than bulbs.	()	()	()	()	()
17.	Checking appliances for maintaining efficiency.	()	()	()	()	()

Sr. No.	Coping Measures	During				NA
		Power Cut		Price Rise		
		Yes	No	Yes	No	
18.	Checking the meter occasionally whether it gives proper reading or not and which appliances consume more energy.	()	()	()	()	()
19.	Doing maximum work during the day time.	()	()	()	()	()

Besides the above measures, what other measures do you take to meet the increased cost of energy when the price of the energy forms you use increases ?

Sr. No.	Coping Measures	Price increase of Energy Forms		NA
		Yes	No	
	<u>Do you ..</u>			
1.	Cut down expenses on other items to pay for the increased cost of energy.	()	()	()
2.	Take up a job/start income generating activity at home to meet the increased expenditure.	()	()	()
3.	Use savings for meeting the expenditure.	()	()	()
4.	Use another cheap fuel along-with the main fuel.	()	()	()
5.	Use more fuel which is available at no cost.	()	()	()

What are some of the present decisions taken by your family to avoid long term consequences in relation to energy use ?

Sr.No.	Decisions in relation to energy use	Yes	No	NA
1.	Making more use of cycle than scooter/car.	()	()	()
2.	Planning to use solar energy.	()	()	()

Sr.No.	Decisions in relation to energy use	Yes	No	NA
3.	Planning to use gobar/biogas energy.	()	()	()
4.	Making more use of public transport.	()	()	()
5.	Planning for a small family norm.	()	()	()
6.	Making less use of coolers and electrical equipments.	()	()	()
7.	Deciding to construct a small compact house with good ventilation.	()	()	()
8.	Planning house construction with optimum use of insulation.	()	()	()
