CHAPTER V

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1. Summary

This study was designed to ascertain and measure families' differential commitment to the attainment of energy related goals. The analysis of the measures of commitment behaviour centred upon its relationship with selected independent variables of the study. Two categories of energy related goals were identified for the purpose of the study: the first is concerned with the acquisition of such material goods, to raise level of living, which when attained lead to an increase in energy consumption, i.e. level of living oriented energy goals, and the second is associated with the objectives of conserving energy resources i.e. energy conservation oriented goals. The former was referred to as Type I goals and the latter as Type II goals.

Energy related goal area was chosen to explore family commitment behaviour to goals. Families are concerned with raising their level of living. Therefore they establish goals related to the acquisition of goods some of which increase the energy consumption level of families. Moreover, energy is required to power many activities in family living. At the same time families are concerned about conserving energy resources as well. Families follow certain

lines of action for attaining these objectives.

The concept of commitment has drawn the attention of researchers in recent years. Commitment manifests in behaviour. For the present study, the term commitment was defined as the feeling of willingness and determination on the part of the family to attain particular goals through following certain lines of action that reflected resource allocation behaviours. These might put constraints on family resource use for other ends.

1.1 Objectives of the Study

The specific objectives drawn for the study were to:

(1) Ascertain the energy related goals held by families.

(2) Develop instruments that would appropriately measure the extent of family commitment to energy related goals.

(3) Construct an instrument that would appropriately measure ecoconsciousness of the respondents and their husbands.

(4) Determine interrelationships between the extent of commitment to energy related goals and the selected situational, personal and family variables of the study.

1.2 Method of Procedure

Two instruments were developed to measure differential commitments to energy related goals. These instruments -

Commitment Scales I and II (CS I and CS II)-focused on resource allocation behaviour as a measure of commitment. The homemakers were to report on the families' energy related goals and families' commitment to those goals. The extent to which family members were willing and determined to follow certain lines of action consistently so that the family can materialise its energy related goals, was called the extent of commitment. An instrument to ascertain ecoconsciousness was also developed. The instruments were validated prior to its use in the pilot study. After the pilot study the reliability of these instruments were established. All the instruments had commendable degree of reliability. CS I thus prepared comprised of thirty items that were chosen after item analysis. CS II had twenty-four items which were also selected on the basis of the reliability data of item analysis. The former was employed in relation to Type I goals and the latter was used for Type II goals. The attitude scale to measure ecoconsciousness contained thirty-two statements.

The sample of the study comprised of families that were intact and who held at least one goal each in either types of goals. Thus data were collected from a purposive sample of 220 families of which 80 were from Fatehgunj, and 70 each were from Karelibaug and Pratapnagar residential areas of Baroda city. In addition to furnishing base-line data, the respondents (homemakers) reported on sources of

energy consumed, main source of energy used for specific purpose, and its related aspects as well as energy related goals - desired and expected - and its related data like perceptions of goal attainments with reference to past, present and future in Type I and II goals using an adaptation of Cantril's Self Anchoring Striving Scale administered to them, Families' mode of goal attainment and commitment to Type I and Type II energy related goals. Attitude Scale was administered to homemakers and their husbands separately.

1.3 Major Findings of the Study

1.3.1 Baseline Data

The mean age of homemakers was 37.61 years and that of husbands was 42.15 years. By and large husbands had relatively higher levels of education than homemakers. The mean number of children at home at the time of the study was 2.20 and the mean family size was 4.94. The mean monthly income of the sample was Rs.2025.00 of which Rs.196.32 per month i.e. 9.69 per cent, was spent on energy resource consumption.

1.3.2 Sources of Energy Availed of and Main Source Used by Purpose

All the families used electricity and it was used mainly for providing comfort, entertainment and efficiency in living. Natural gas was the main fuel used for cooking and heating water for non-meal purposes while liquified

petroleum gas (LPG) was used by nearly one-third of the sample mainly for cooking. Nearly 62 per cent were consumers of petrol. All of the families were satisfied with the energy resources used by them. But they differed in terms of the most satisfying and dissatisfying characteristic of each.

1.3.3 Energy Related Goals

Families held many and varied energy related goals. Almost all the families expressed the desire to reduce consumption level of energy resource and avoid wastage of energy. Almost 86 per cent of families desired to own household equipment like refrigerator, washing machine, blender, toaster, and flour mill. Nearly 77 per cent families studied desired to own recreational equipment like television set, record player or tape recorder.

Slightly over three-fourth of the sample expected to attain the goal of avoiding wastage of energy resource at the point of use and owning of household electric equipment while nearly 60 per cent expected to attain the goal of owning power-run recreational equipment in the span of five years. Lack of funds, rising power costs and habits were the oft quoted fears in relation to energy related goals. The constraints to attain the goals held were mainly attitude, lack of funds, cost of power and aspirations of the family.

The families studied held other major goals as well, the most reported ones of which were child related i.e., education and marriage, and financial security during the various stages of life cycle, especially retirement stage. By and large, the mode of goal attainment of families was found to be working towards very few goals at a time. Families exhibited higher levels of future goal attainment than that of past goal attainment in relation to both the types of goals studied and the same was higher in the case of Type I than Type II goals.

1.3.4 Profiles of High and Low Scoring Families on CS I

A comparison of 60 high scoring families with 60 low scoring families on CS I revealed that the high scoring families were headed by younger husbands and homemakers with higher levels of education, smaller family size, lower family income and had been married for shorter periods of time. The husbands and homemakers had higher levels of ecoconsciousness. Their perceptions of energy related Type I goal attainment in relation to the past, present, and future were lower than their counterparts, on the ladder depicting goal attainment. Their levels of past and future goal attainments were lower than low scoring families. The family income of high scoring families was found to be less. Moreover the monthly energy bill of high scoring families was much less than that of low scoring families. Therefore

it seems appropriate to depict high scorers as those who had many energy related goals yet to attain and as those who were still striving hard to attain those goals as fast as possible. On the other hand, the low scoring families showed higher levels of future goal attainment and they seemed to be the ones who had larger monthly income and so could attain their Type I goals without making too much sacrifices. The low scoring families appeared to have attained most of their Type I goals.

1.3.5 Profiles of High and Low Scoring Families on CS II

When 60 high scoring and 60 low scoring families on CS II were compared it was observed that the high scoring families were headed by older husbands and homemakers with lower levels of education, larger family size, lower family income and had been married longer. These families had higher perceptions of past, present and future goal attainment on the ladder used for expressing perceived positions of goal attainment. They were also characterised by higher levels of past and future goal attainments. Their total fuel cost was only slightly less than the low scoring families'. These families seemed to have husbands and homemakers with high ecoconsciousness which facilitated higher commitment to Type II energy related goals. In spite of higher commitment they did not anticipate high level of

future goal attainment which could be accounted for, by the families' desire to raise its level of living and its energy intensive life style. This is evidenced by their relatively high expenditure on energy resources in comparison to their commitment. This showed that though they were high scorers on CS II probably they were not remarkably different in their conservation oriented behaviour from those who were found to be low scorers on CS II or they were not consistent in their commitment behaviour.

1.3.6 Extent of Commitment of Families to Energy Related Goals in Relation to the Variables Under Study

EOC I was negatively correlated with LOFGA I ($r = -.237^{*}$), age of husbands ($r = -.370^{**}$), homemakers ($r = -.343^{**}$), family income ($r = -.428^{**}$) and years of married life ($r = -.320^{**}$); it was positively correlated to ecoconsciousness of husbands ($r = .302^{**}$) and homemakers ($r = .360^{**}$). Apparently as LOFGA I, age of husbands and homemakers, family income and years of married life increased EOC I decreased. However, the higher the ecoconsciousness of husbands and homemakers, the higher the family commitment to Type I goals. The families of husbands with medium level of education showed greater overall commitment to attain Type I goals than with low or high education level.

Sacrifices in leisure, one of the components of CS I was correlated negatively to family income ($r = -.267^{**}$).

Those families with high income did not have to make sacrifices in relation to their leisure, either to earn more or to contribute to families' real income through their services so that the additional income or money saved can be utilized for fulfilling their Type I goals. In addition, LOPGA I, age of husbands and homemakers, and years of married life seemed to influence families' willingness to make sacrifices in leisure.

Sacrifices in social life was observed to be negatively correlated with age of husbands ($r = -.395^{**}$) and homemakers ($r = -.353^{**}$), family income ($r = -.322^{**}$) and years of married life ($r = -.338^{**}$). Apparently families characterised by old husbands and homemakers, high family income and in later years of married life were not willing much to cut down resource allocations in relation to their social and kinship contacts and the location of residence to attain Type I goals.

Sacrifices in welfare and security correlated negatively with LOFGA I ($r = -.258^{**}$), age of husbands ($r = -.262^{**}$) and homemakers ($r = -.264^{**}$) family income ($r = -.268^{**}$), and years of married life ($r = -.257^{**}$), and positively with ecoconsciousness of husbands ($r = .371^{**}$) and homemakers ($r = .364^{**}$). Sacrifices by family in relation to welfare and security were perceived to decrease with age of husbands and homemakers, family income, years of married life and

LOFGA I and increase with ecoconsciousness of husbands and homemakers.

Sacrifices in level of living was negatively correlated with LOFGA I (r = -.272**), age of husbands (r = -.277**) and homemakers (r = -.250*); family income (r = -.407**) and years of married life (r = -.216*) while it was positively correlated with ecoconsciousness of husbands (r = .279**) and homemakers (r = .376**). It was also found to be dependent on the education level of husbands - those with medium level of education showing greater willingness and determination to make sacrifices in level of living than those with low or high education level in order to fulfill Type I goals.

Overall family commitment to Type I goals was the most influenced by family income. Husbands' ecoconsciousness emerged out as the second most important variable influencing families' EOC I. Age of husbands and ecoconsciousness of homemakers, family size and LOFGA I influenced EOC I in declining order. Age and education of homemakers, LOFGA I, education of husbands and years of married life seemed to be exerting no significant influence on overall EOC I of families in the presence of other variables.

Family commitment to Type II goals was correlated negatively with education of homemakers (r = -.216*) and family income (r = -.218*), but correlated positively with ecocon-

sciousness of homemakers (r = .372**). As education of homemakers and family income increased the families were less inclined to be committed to Type II goals. Commitment to Type II goals was seen to increase with increase in ecoconsciousness of homemakers. In addition to these variables, age of homemakers and ecoconsciousness of husbands were also found to influence family commitment behaviour with reference to Type II goals.

Sacrifices in abundant living correlated negatively with education level of husbands (r = -.206*), education level of homemakers (r = -.230*) and family income (r = -.201*); and positively with age of husbands (r = .195*), age of homemakers (r = .219) and ecoconsciousness of homemakers (r = .303**). Sacrifices in abundant living were seen to decrease with education level of husbands and homemakers and family income. As age of husbands and homemakers, and ecoconsciousness of homemakers increased, sacrifices in abundant living also increased. Over and above these factors, ecoconsciousness of husbands, and years of married life were observed to influence sacrifices in abundant living.

Sacrifices in level of living was correlated negatively with the education level of homemakers (r = -.292**) and family income (r = -.200*) and positively with ecoconsciousness of homemakers (r = .238*). Families' willingness and

determination to make sacrifices in level of living decreased as homemakers' education level and family income increased. An increase in ecoconsciousness of homemakers was associated with an increase in family commitment to Type II goals. Families' LOFGA II and age of homemakers also seemed to influence sacrifices in level of living to some extent.

Sacrifices in traditional life style was positively correlated with ecoconsciousness of homemakers ($r = .415^{**}$) and husbands ($r = .280^{**}$). Families' commitment to Type II goals in terms of sacrifices in traditional life style increased as the homemakers' and husbands' ecoconsciousness increased. In addition, LOFGA II also was found to influence sacrifices in traditional life style.

Among the various factors studied ecoconsciousness of homemakers was the most influential factor in relation to overall EOC II. Education level of homemakers emerged out as an important variable that accounted for the differential commitment levels of families to Type II goals. The third most important factor that influenced family commitment to energy conservation oriented goals was family income and the next most important factor was age of homemakers. Education of husbands, LOFGA II, family size, LOPGA II, years of married life, age of husbands, and ecoconsciousness of husbands exerted more or less the same amount of influence on families' commitment to Type II goals but these factors

were not significant in the presence of other factors in influencing overall EOC II of families.

2. Conclusions

Families held varied energy related goals. Resource allocations were made concurrently to the attainment of those goals. Most popular mode of goal attainment was working towards few goals at a time.

Families exhibited differential levels of commitment to their Type I and Type II goals. Family commitment to Type I goals was not associated with LOP GA I. However families that perceived high LOP GA I were less inclined to make sacrifices in leisure than those whose perceived levels of LOP GA I were low, fair or moderate. With increased LOFGA-I overall family commitment to Type I goals, as well as, sacrifices in welfare and security, and level of living decreased.

Overall family commitment to Type I goals was directly associated with ecoconsciousness of husbands and homemakers respectively. Families, by and large, did not pay any heed to ecological implications of their decisions in relation to level of living oriented energy goals, so long as the attainment of those goals contributed to their comfort and standard of living and so long as they could afford to allocate resources for attaining the same.

Age of husbands and homemakers were inversely related to overall EOC I and to sacrifices in social life, welfare and security, and level of living. Families showed difference in the extent of sacrifices in leisure to attain Type I goals when compared by age of husbands and homemakers. Families of young husbands and homemakers showed greater extent of sacrifices in leisure than middle aged or old husbands.

Education level of husbands influenced overall EOC I of families. Families of husbands with medium education were more committed than those of husbands with low or high education in relation to overall EOC I. Similarly the former group was willing and determined to make adjustments in level of living to a greater extent than the latter two groups to realise Type I goals. Families found limiting superfluous consumption in various aspects of living as a means of providing for Type I goals.

As family income increased overall EOC I and sacrifices in each component of CS I, viz., leisure, social life, welfare and security, and level of living, decreased. With an increase in income, families could fulfill more of their Type I goals without sacrificing much and also they considered most of the Type I goals as necessities and hence were not required to make special resource allocations for the same. Those who were actively involved in taking risks

in each of the components or areas of CS I were having lower family income.

An inverse relationship existed between years of married life and overall EOC I as well as each component or area of CS I except leisure. Families in early years of married life showed willingness and determination to forgo leisure to a greater extent than those in middle years or later years of married life to seek Type I goals.

Neither LOPGA II nor LOFGA II was associated with overall EOC II. LOFGA II influenced sacrifices in level of living and traditional life style aimed at reaching Type II goals.

Homemakers' ecoconsciousness was directly related to overall EOC II though husbands' ecoconsciousness showed no definite association with overall EOC II. However families of husbands with high ecoconsciousness were more committed to Type II goals than those with low or moderate ecoconsciousness. As homemakers' ecoconsciousness increased extent of sacrifices by families in each component of CS II increased while husbands' ecoconsciousness could effect the same relationship with sacrifices in traditional life style only.

Homemakers' age affected overall EOC II. Families of old homemakers were more committed to Type II goals than

those of young or middle aged homemakers. An increase in the age of husbands or homemakers resulted in corresponding increase in sacrifices in abundant living to attain Type II goals. Older husbands and homemakers had families that avoided abundant living to a greater extent than others to attain families' Type II goals. Moreover families of old homemakers were willing and determined to make sacrifices in level of living to a greater extent than those of homemakers in middle or young age groups.

Education level of homemakers was inversely related to overall EOC II. As homemakers' education level increased sacrifices in abundant living and level of living decreased while the same relationship was observed between education level of husbands and sacrifices in abundant living. As education of husbands and homemakers increased families were rather prone to be more energy intensive than labour intensive. Families of husbands with less education were more committed to Type II goals than those of husbands with high education. The former probably had less family income and hence was motivated to be committed to Type II goals.

Overall EOC II and sacrifices in each area or component of CS II were in inverse association with family income. As income increased families tended to be less committed to Type II goals. Families with low income were actively engaged in conserving energy as far as possible. Families in later years of married life were willing and determined

to sacrifice abundant living to a greater extent than those in early or middle years of married life.

A hierarchical order in the factors studied in relation to their influence on Type I and Type II goals respectively was found to exist. Family income, ecoconsciousness and age of husbands, ecoconsciousness of homemakers, family size and LOFGA I emerged out as the major predictors of overall EOC I of families, while ecoconsciousness, age and education level of homemakers and family income were seen to be the major predictors of overall EOC II of families.

3. Implications of the Study

The findings from this study can be seen in relation to its implications for conceptualisation of goal-oriented behaviour and for designing future goal-related research studies. Indirectly these findings can be of use in chalking out action programmes to educate families to lead goal-directed life and to frame its goals in relevance to its relation with the larger system. Moreover these findings can also be used as guidelines to plan strategies at the national, state or local level to tackle the energy problem.

3.1 Conceptualisation of Goal-oriented Behaviour

Families are purposive systems and lead goal directed life. To understand the intricacies of goal directed behaviour and to analyse the same it is necessary to define

goal as completely as possible. Various concepts are presented in a fragmented manner in relation to explaining goal.

Concepts for viewing goal in totality should include:

i. Temporal element - reasonable time to be allowed for goal-oriented action to culminate in its attainment, whether it is a short term or long term or an enduring objectives. (vide pp 85,87,96)

ii. Tangibility and immediacy of results of goal attainment. (vide p 168)

iii. Basis in reality - whether the goals are merely nebulous hopes or realistic, feasibility of the goal with reference to the quantum of resources that needs to be allocated from family's potential and available resources. (vide pp 80.87)

iv. Significance of the goal from ecological perspective, the impact of goal oriented behaviour and the realisation of the goals on the natural environment. (vide pp. 83, 169, 170, 184)

v. Status of the goal in the family goal complex - whether the particular goal is major or minor, hierarchical order of the goal in the family goal complex at any particular point of time in its life cycle (vide pp. 91, 173)

vi. The relationship of the goals to personal and family values - whether it is in accord or conflict with

the values held, whether the goal represents an intrinsic value or is pursued for attaining other ends. (vide p. 184)

vii. The stage at which the family is in relation to its goal attainment at any given time - whether the goal has been recently established, whether action has been initiated to attain the goal or whether it is nearing completion. (vide pp. 93, 103)

Albeit families share common goals of varying magnitude, some are able to attain their goals while others are not able to fulfill the same. If a family has very strong desire and determination to attain its goal or goal complex then in spite of resource limitations it would strive to realize the same. This willingness and determination to follow certain lines of action that reflected resource allocation behaviours, to expedite goal attainment was referred to as commitment in the present study. Once the families become committed to their goals, goal attainments are more rapid provided the side-bets associated with goals are strong enough to sustain commitment. Otherwise commitment ebbs and flows and level of attainment would be relatively low. Mode of goal attainment is also an important concept associated with goal-oriented behaviour. The impact of the situational, personal and family variables varied from goal to goal and also within the same goal.

On the basis of this study an attempt is made to define goal as under.

A goal is a desired state of being which when becomes a reality, ~~i.e. an expected goal~~, finds a niche in the hierarchy of goal complex of individual or collective systems, to be attained by the system at a particular point of time in its life through consistent lines of action that reflect allocation of system's resources.

3.2 Future Research

Commitment scales developed herein measured the commitment of families to energy related goals. The same instrument might be adapted to study family goal commitment in terms of behavioural aspects, e.g. what families did rather than what they would do to attain energy related goals. Comparative studies could be conducted to gain insight into commitment behaviour of (1) urban and rural families to energy related goals, (2) persons who have and have not enjoyed earlier the level of living oriented goals they hold, (3) persons, who have and have not experienced energy shortage, to energy conservation oriented goals.

Commitment of families to specific goals rather than broad goal areas could be studied.

Family commitment behaviour in relation to other goal areas, for e.g. child related goals - education and

marriage, financial security related goals, home ownership goals, and investment related goals could also be explored. Commitment Scale I developed for the present study could be adapted to investigate family commitment to any of these goal areas.

Commitment to energy related goals as well as to other goals could be explored in terms of the side-bets that sustain commitment.

3.3 Action Programmes

The study showed that husbands and homemakers were, by and large, ecoconscious. In spite of their being eco-conscious, it was seen that their families were keen on attaining level of living oriented energy goals (Type I goals) and were not able to make much progress to energy conservation oriented goals (Type II goals). This implies the need for developing competencies in the families to make appropriate decisions based on ecologically sound principles in regard to energy related goals. This can be achieved through formal as well as informal education programmes. To develop a meaningful programme, knowledge of husbands and homemakers regarding energy resources of the earth and energy situation needs to be explored. However, it could be pointed out that the content of such an educational programme should include an overview of the family in the ecological perspective; energy resources of the

earth, conventional sources of energy and future energy alternatives, concepts related to goal oriented behaviour, management of energy by families, selection of energy efficient equipment, clothing, housing, automobiles and family's responsibilities in the context of energy crisis.

Moreover, the findings of the study point out the need to urge manufacturers of power-run goods to make energy efficient items. The commitment of families to energy conservation oriented goals showed that though families were aware of conservation measures and were highly committed, the progress was very little. This implies that their commitment ebbed and flowed due to lack of strong side-bets. Therefore to sustain commitment to energy conservation oriented goals, it is imperative to plan stringent measures to control energy consumption. The strategies to promote energy conservation should include incentive taxation, promotion of manufacture of energy efficient goods, concessional prices of energy efficient goods, revision of pricing policy of energy resource, restriction on energy resource consumption etc. Only when the impact of such measures are explicit or only when incentives are very attractive, will people be motivated to remain committed to energy conservation oriented goals.