CHAPTER IV

RESULTS AND DISCUSSION

The results of the investigation are appropriately described and discussed in this chapter. The findings are introduced through composite summary tables followed by the statistical applications for testing the hypotheses, after which a relevant discussion of the same follows. The results are presented under the following main sections.

I. Demographic Description Of The Sample

II. Community Facilities Existing In The City

III. Availability And Awareness Of Community Facilities And Services

IV. Utilization Of Community Facilities

V. Degrees Of Satisfaction In Goal Achievement

VI. Degree Of Desirability Of Significant Features Regarding Community Facilities, As Perceived By Respondents

VII. Range Of Service Preferences Regarding Community Facilities

VIII. Testing The Hypotheses

IX. Discussion Of Findings

I. Demographic Description Of The Sample

The total sample for the inyestigation was drawn from four prominent locales of the highly industrialized, metropolitan city of Hyderabad, having a mixed population of varying socio-economic classes. The respondents were the urban poor housewives/husbands who either belonged to the Low-low-income or Low-middle-income category of socio-economic level. The entire data are reported by their income groups viz, Low-Low-Income (LLI) and Low-Middle-Income (LMI) as well as the combined, Overall Sample (OS).

The data were analysed for demographic characteristics of households under the following:

(a) Personal characteristics

(b) Family characteristics

(c) Physical characteristics

TABLE 3

PERSONAL CHARACTERISTICS OF RESPONDENTS

Personal Characteristics		Income Categories LLI (N = 120) f	%	LMI (N = 120) f	%	Total OS (N = 240) f	%
1. Age of home-makers (HM) and husbands (H) (Years)							
16 - 25	HM	26	21.5	15	12.5	41	8.5
	H	7	5.8	1	0.8	8	1.7
26 - 35	HM	40	33.3	46	38.3	86	17.9
	H	30	25.0	32	26.7	62	12.9
36 - 45	HM	33	27.5	28	23.2	61	12.7
	H	33	27.5	29	24.2	62	12.9
46 - 55	HM	17	14.1	15	12.5	32	6.7
	H	29	24.1	26	21.7	55	11.5
56 and above	HM	4	3.3	16	13.3	20	4.2
	H	21	17.4	32	26.7	53	11.0
Mean	HM	34.9		38.1		36.5	
	H	42.8		45.2		44.0	

(Table 3 Continued...)

Personal Characteristics	Income Categories LLI (N = 120)		LMI (N = 120)		Total OS (N = 240)	
	f	%	f	%	f	%
2. Educational level of head of family						
Illiterate	24	20.0	13	10.9	37	15.4
Primary School	39	32.5	15	12.5	54	22.5
Middle School	21	17.5	25	20.8	46	19.2
High School	25	20.8	32	26.7	57	23.7
Higher Secondary	9	7.5	12	10.0	21	8.7
Graduate	2	1.7	22	18.3	24	10.0
Post graduate/ Professional Degree	-	-	1	0.8	1	0.4
3. Occupation of head of family						
Unemployed	2	1.7	1	0.8	3	1.2
Unskilled	70	58.3	55	45.8	125	52.1
Semi-skilled	7	5.8	4	3.3	11	4.6
Skilled	14	11.7	10	8.3	24	10.0
Clerical, shop-owners, farm owners	15	12.5	26	21.7	41	17.1
Semi - profession	2	1.7	2	1.7	4	1.7
Profession	2	1.7	6	5.0	8	3.3
Retired	8	6.6	16	13.3	24	10.0

(I,a) Personal characteristics of respondents

Age.- The data revealed that most of the respondents belonged to the younger age group (Table 3, Figure 13). The mean ages of the OS of home makers was 36.5 and that of the husbands was 44. The mean age of home makers in the LLI and LMI groups were 34.9 and 38.1 and that of the husbands 42.8 and 45.2 respectively. In the LLI and LMI groups 33.3 per cent and 38.3 per cent of the home makers

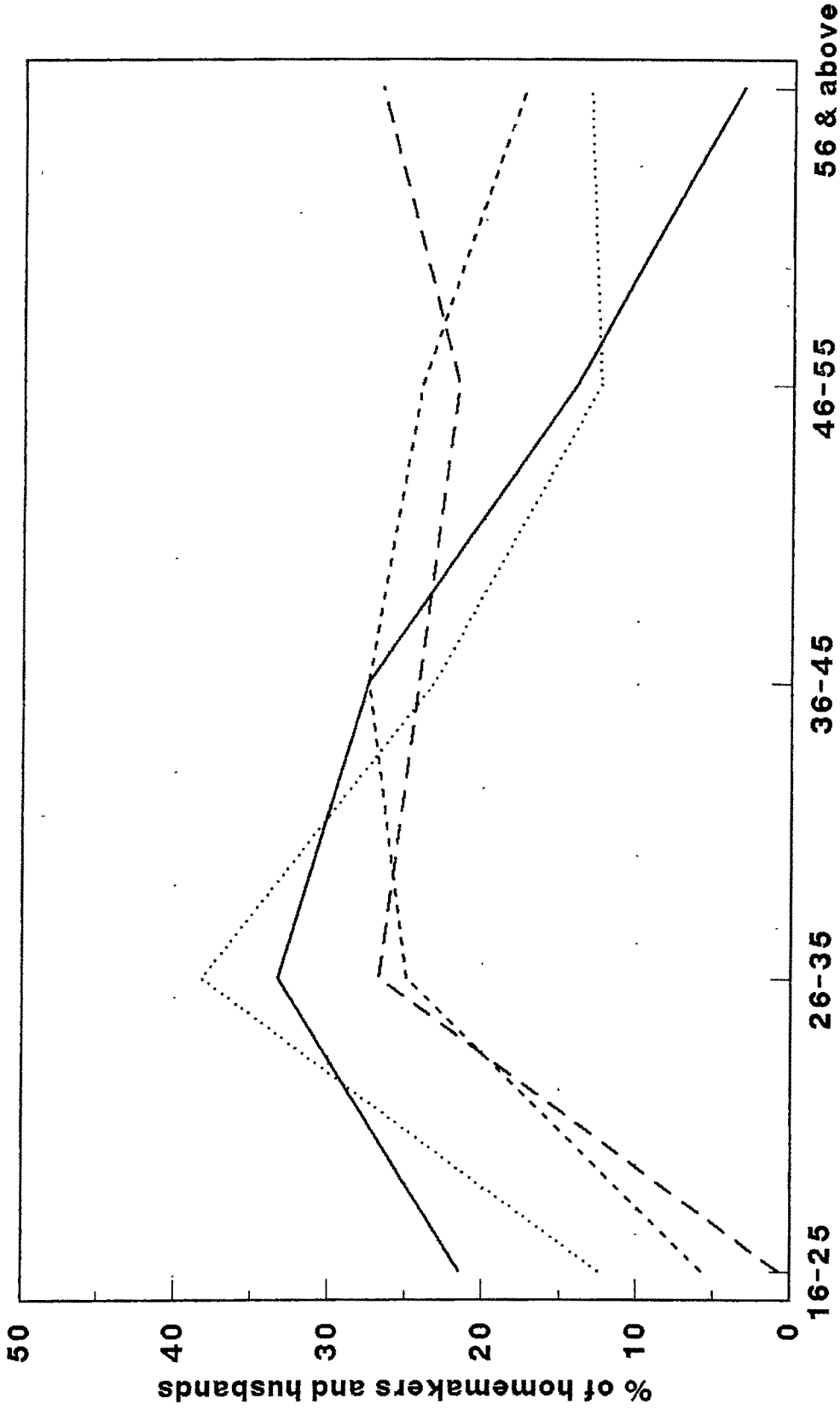


FIGURE 13

GRAPH PLOTTING THE AGE RANGES OF HOMEMAKERS AND THEIR HUSBANDS.

were between 26 to 35 years of age respectively, while 27.5 per cent of husbands in the LLI group, were between 36 to 45 years and 26.7 per cent of them in the LMI group belonged to the age group of 26 to 35 years. The same percentage of them were 56 years and above.

Education.- Almost one-third of the respondents' husbands (32.5 per cent) from the LLI category were educated upto primary school, while slightly over one-fourth (26.7 per cent) of the LMI group had attained a high school education. One member (0.8 per cent) had achieved the post-graduate degree also in the LMI category. The percentage of illiterates was higher in the LLI group (20 per cent) than in the LMI group (10.9 per cent).

Occupation.- The occupational status of the head of the family revealed that 52.1 per cent of the OS were unskilled workers, 58.3 per cent in the LLI group and 45.8 per cent in the LMI group. The others were mainly clerical, shop-owners, farm-owners etc. Only 1.2 per cent of the total sample were unemployed and 6.6 per cent and 13.3 per cent of the LLI and LMI categories respectively, were retired.

(I.b) Family characteristics of respondents

Family type.- On the whole over half the sample (53.7 per cent) belonged to nuclear families while nearly half (46.2 per cent) belonged to joint families. In both income groups therefore, nuclear families were predominant (Table 4.a).

Family size.- The mean number of adults in the total sample as well as both income groups were 3.2 in each case while mean

TABLE 4 (a)

FAMILY CHARACTERISTICS OF RESPONDENTS

Family Characteristics		Income Categories LLI (N = 120) f	%	LMI (N = 120) f	%	Total OS (N = 240) f	%
1. Family type							
Nuclear		63	52.5	66	55.0	129	53.7
Joint		57	47.5	54	45.0	111	36.2
2. Family size (Members: Adults - A Children - C)							
Number range							
0 - 3	A	65	54.1	68	56.7	133	27.7
	C	77	64.1	78	65.0	155	32.3
4 - 6	A	50	41.7	47	39.2	97	20.2
	C	37	30.8	39	32.5	76	15.8
7 - 9	A	5	4.2	4	3.3	9	1.9
	C	6	5.0	3	2.5	9	1.9
10 and above	A	-	-	1	0.8	1	0.2
	C	-	-	-	-	-	-
Mean	A	3.2		3.2		3.2	
	C	2.9		2.8		2.9	
3. Age composition of children and other members (Years) (Male - M, Female - F, Others - O)							
Age range							
Below 12	M	49	40.8	39	32.5	88	36.7
	F	55	45.8	48	40.0	103	42.9
	O	5	4.2	1	0.8	6	2.5
13 to 17	M	5	4.2	6	5.0	11	4.6
	F	12	10.0	12	10.0	24	10.0
	O	0	0	1	0.8	1	0.4

(Continued...)

(Continued...Table 4.a)

Family Characteristics		Income Categories LLI (N = 120) f	%	LMI (N = 120) f	%	Total OS (N = 240) f	%
18 and above	M	31	25.8	40	33.4	71	29.6
	F	29	24.2	35	29.1	64	26.7
	0	100	83.4	97	80.8	197	82.1
Below 12 and 13 to 17	M	11	9.2	14	11.2	25	10.4
	F	12	10.0	10	8.3	22	9.2
	0	1	0.8	0	0	1	0.4
13 to 17 and 18 and above	M	9	7.5	14	11.2	23	9.6
	F	7	5.8	8	6.7	15	6.2
	0	4	3.3	2	1.7	6	2.5
Below 12 and 18 and above	M	7	5.8	5	4.2	12	5.0
	F	2	1.7	3	2.5	5	2.1
	0	8	6.7	18	15.0	26	10.8
Below 12, 13 to 17 and 18 and above	M	8	6.7,	2	1.7	10	4.2
	F	3	2.5	4	3.3	7	2.9
	0	2	1.7	1	0.8	3	1.2
4. Family income (Rupees per month)							
Income range							
Below 500		51	42.4	-	-	51	21.2
501 - 1000		66	55.0	61	50.7	127	52.9
1001 - 1500		3	2.5	44	36.7	47	19.6
1501 - 2000		-	-	11	9.2	11	4.6
2001 and above		-	-	4	3.2	4	1.7
	Mean	613.33		1168.95		891.14	
	S.D	215.34		408.45		428.55	
5. Earning Members (Number)							
Nil		2	1.7	1	0.8	3	1.2
One		105	87.5	105	87.5	210	87.5
Two		12	10.0	12	10.0	24	10.0
Three and above		1	0.8	2	1.7	3	1.2

number of children in the LLI and OS were 2.9 while in the LMI it was 2.8. From the total sample 27.7 per cent of families had one to three adults and 32.3 per cent of families had zero to three children. The LLI and LMI categories had almost similar percentage of families with zero to three adults, 54.1 per cent and 56.7 per cent respectively (Figure 14) and children, 64.1 per cent and 65.0 per cent respectively (Figure 15). The families were comparatively small in majority of both income groups, since there were a higher percentage of nuclear than joint families, in both income categories, as already indicated. Larger family sizes of 7 to 9 and 10 and above were found in a small percentage of families in both income groups, since a lower percentage of families in both income groups were from joint families as known earlier. Only one family of the LMI had 10 or more adult members in the family. In short, a majority of families in both income categories had 0 to 3 adults and children.

Age composition of children and other members.- On the whole, maximum male and female children, 36.7 per cent and 42.9 per cent belonged to the age group below 12 years. A majority of 82.1 per cent comprised 'other' members aged 18 years and above, who were relatives or friends residing with the family, mainly aged people such as parents or parents-in-law. Both the LLI and LMI categories showed that a maximum percentage of males, viz., 40.8 per cent and 33.4 per cent respectively belonged to the ages below 12 years and 18 years and above respectively, while 45.8 per cent and 40 per cent females in both groups respectively, were aged below 12 years. Also, 83.4 per cent and

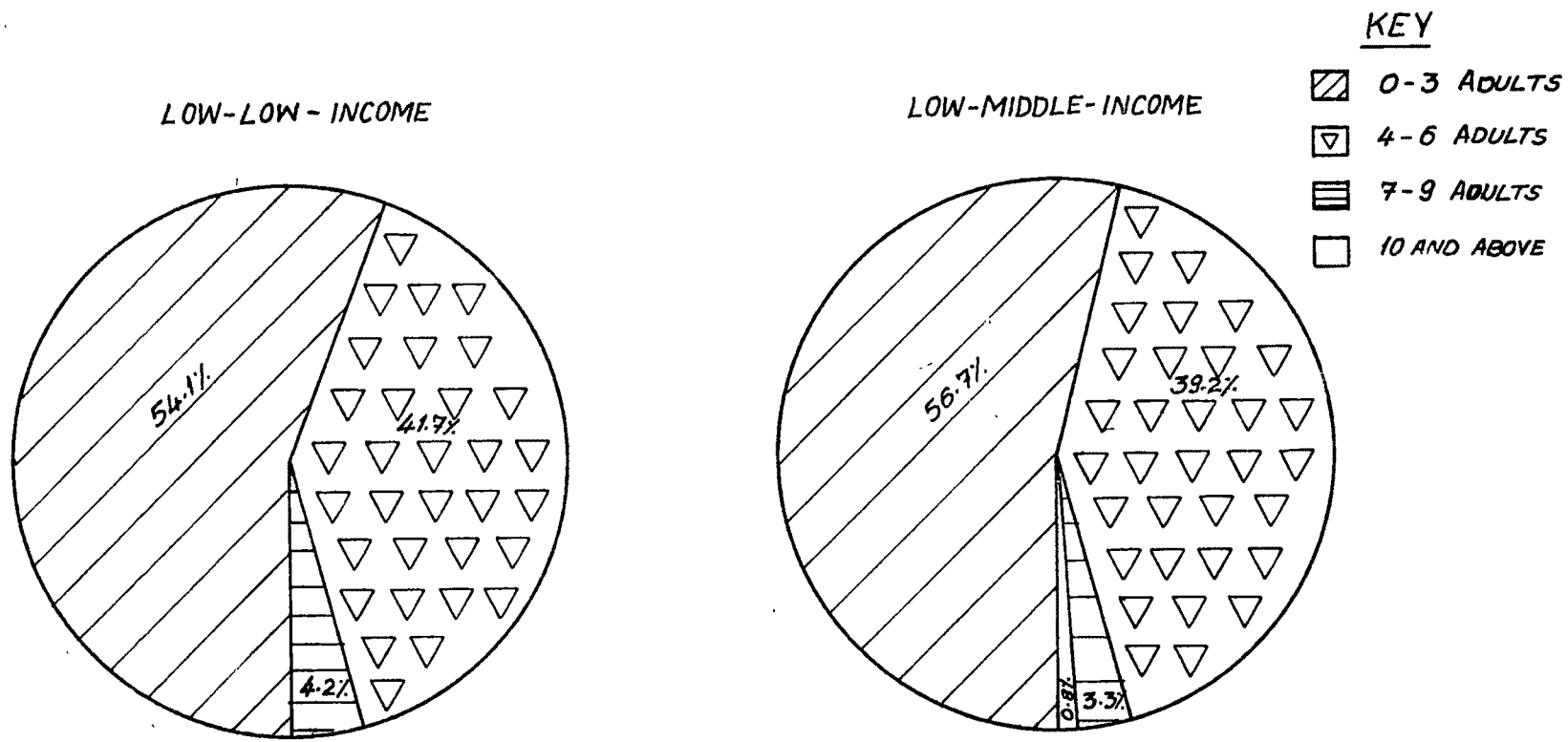


FIGURE - 14

PIE CHARTS DISPLAYING THE PERCENTAGE DISTRIBUTION OF LOW-LOW INCOME AND LOW-MIDDLE INCOME FAMILIES WITH VARYING NUMBER RANGES OF ADULTS

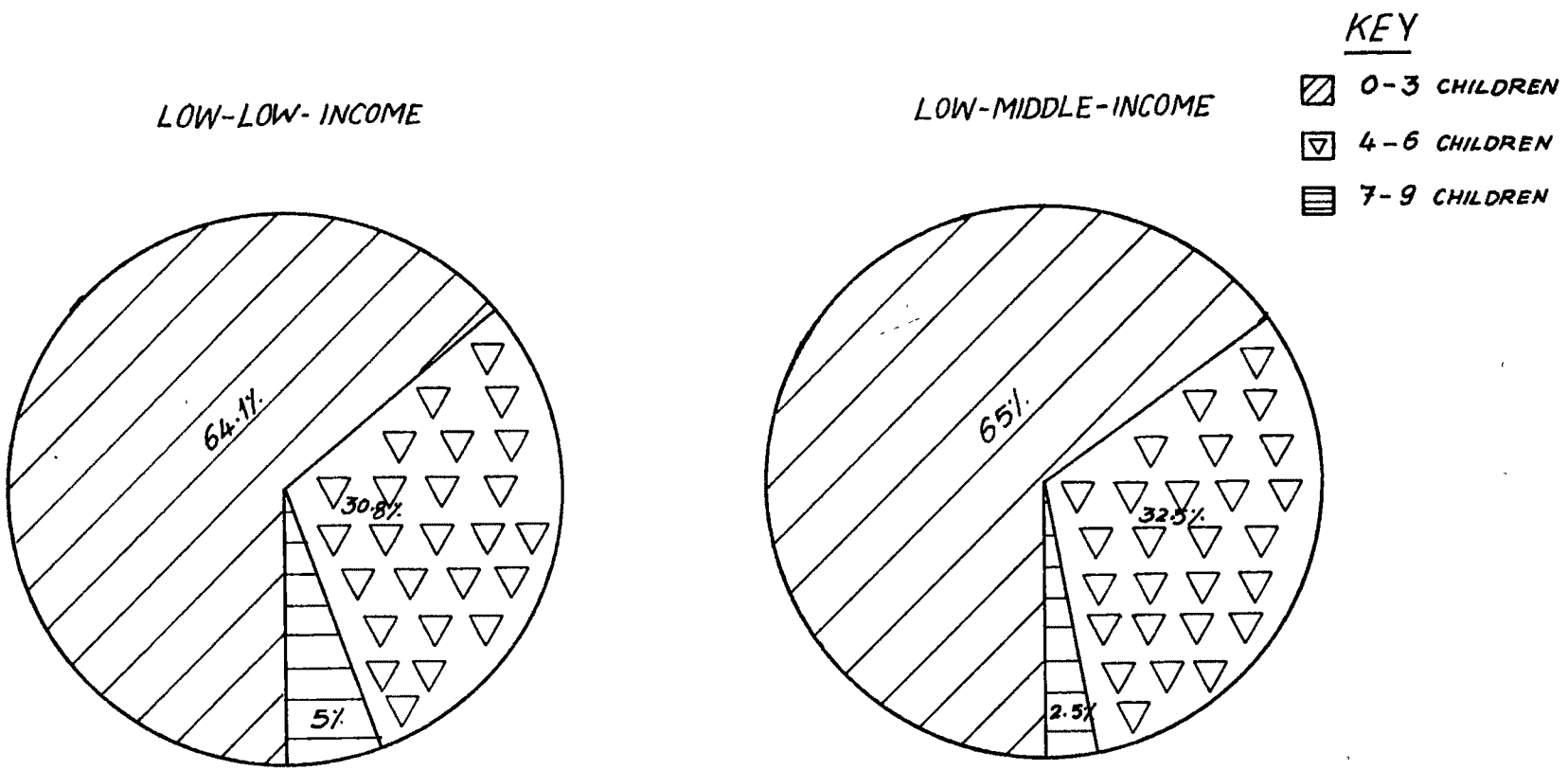


FIGURE - 15

PIE CHARTS DISPLAYING THE PERCENTAGE DISTRIBUTION OF LOW-LOW INCOME AND LOW-MIDDLE INCOME FAMILIES WITH VARYING NUMBER RANGES OF CHILDREN.

80.8 per cent of 'other' members were observed in the LLI and LMI groups respectively, who belonged to the age group of 18 years and above. The other age groups had less than about 10 per cent of children, males, females and other members, in the overall sample. The age ranges below 12 years and 18 and above seemed to be the most common ages to which maximum number of children and other members belonged.

Family income.- The mean family income of the LLI category was Rs.613.33 paise and that of the LMI category was found to be Rs.1168.95 paise. On the whole, the mean family income was Rs.891.14 paise. The minimum income of the LLI group was Rs.200.00 and maximum was Rs.1,200.00 while that of the LMI group was Rs.600.00 and Rs.3,000.00 respectively. A majority (52.9 per cent) of the total sample fell in the income range of Rs.501.00 to Rs.1000.00 per month. As regards the LLI and LMI groups also, this similarity was observed, wherein over half of the sample, in each case, viz., 55 per cent and 50.7 per cent belonged to the same income range (Figure 16). Among the LMI group 36.7 per cent had a monthly family income from Rs.1001.00 to Rs.1500.00 while a small percentage exceeded this limit of family income.

Earners.- In both income groups 87.5 per cent of families each, were supported by one earning member while, in 10 per cent of the cases, for both groups, there were two earners. On the whole, 87.5 per cent of the sample had single-earner families.

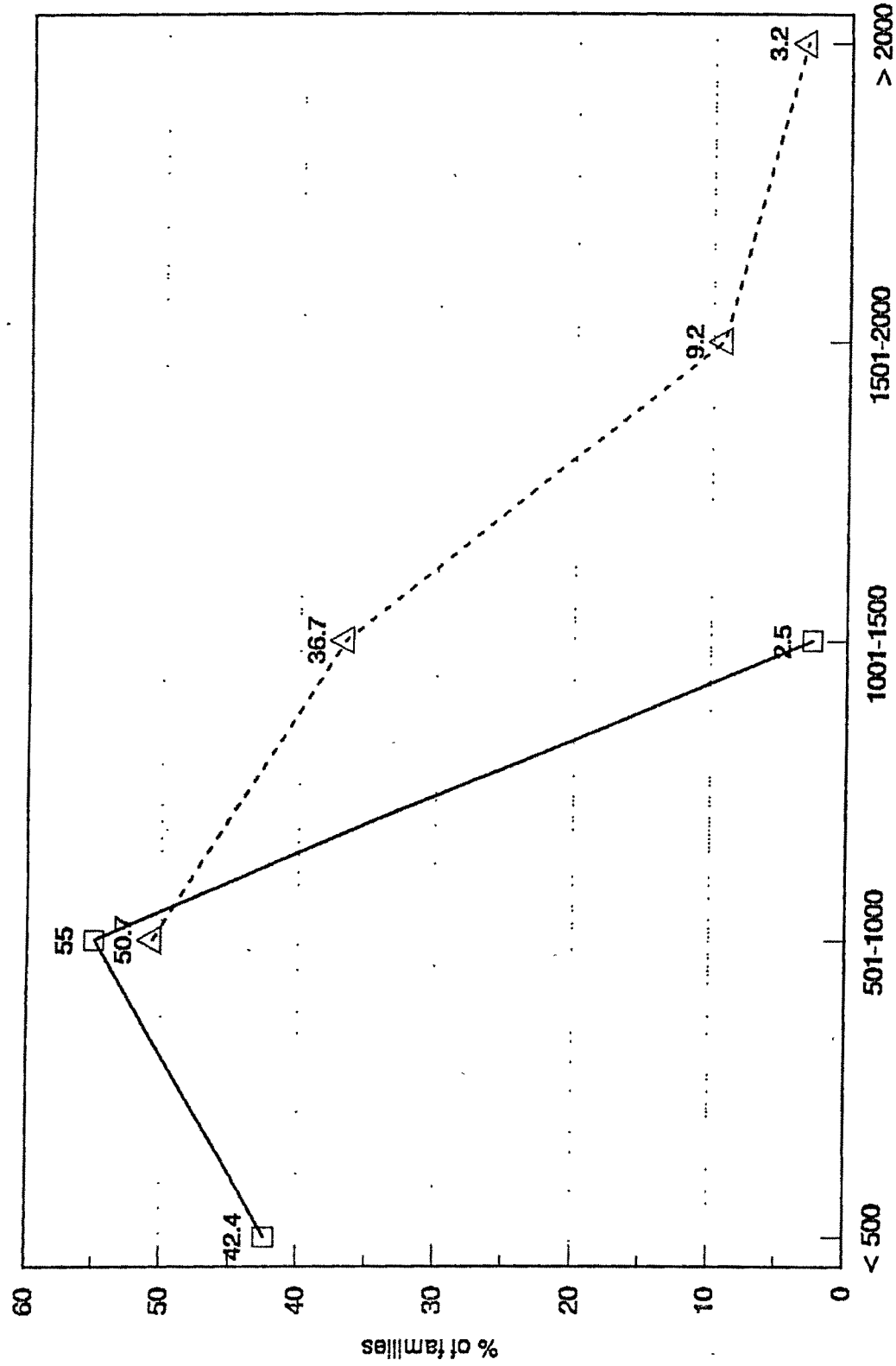


FIGURE 16

GRAPH PLOTTING THE PERCENTAGE DISTRIBUTION OF FAMILIES BY THEIR MONTHLY INCOME RANGES.

The data presented in Table 4 (b) reveal the health characteristics of families, belonging to both income groups, according to their health status, frequency of illness, ease of catching ailments and experienced exhaustion by both adults and children.

Health status.- The perception of families regarding their health status reveals that, on the whole 81.2 per cent of family adults and 78.3 per cent of family children had a good health status, and this status was also observed among both the income groups for adults as well as children.

Frequency of illness.- Over about 60 per cent to 65 per cent of LLI and LMI respondent family adults, rarely fell ill and so also the case with 53.3 per cent and 64.2 per cent of LLI and LMI respondent family children respectively. Hence illness was a rare phenomenon in both income groups for adults as well as children.

Ease of catching ailments.- It was interesting to note that, on the whole, 95.4 per cent of respondents reported that no adults caught ailments very easily, and likewise 83.7 per cent of respondents, reported, that no children caught ailments very easily. One to three adults and children caught ailments very easily in 4.2 per cent and 14.6 per cent of total families respectively.

Exhaustion felt by members.- On an overall basis, 83.3 per cent and 87.5 per cent had no adults or children who complained of any kind of exhaustion. Only 10 per cent of LLI families and 8.3 per cent of LMI families had one and two adults respectively, who complained of exhaustion. Among LLI families 8.3 per cent

TABLE 4 (b)

HEALTH CHARACTERISTICS OF FAMILIES

Sl. No.	Health Characteristics		ADULTS						CHILDREN					
			LLI (N = 120)		LMI (N = 120)		OS (N = 240)		LLI (N = 120)		LMI (N = 120)		OS (N = 240)	
			f	%	f	%	f	%	f	%	f	%	f	%
(1)	Health Status as Perceived by the Respondents													
	Very good		4	3.3	3	2.5	7	2.9	3	2.5	3	2.5	6	2.5
	Good		91	75.8	104	86.7	195	81.2	84	70.0	104	86.7	188	78.3
	Fair		24	20.0	11	9.2	35	14.6	30	25.0	12	10.0	42	17.5
	Poor		1	0.8	2	1.7	3	1.2	3	2.5	1	0.8	4	1.7
(2)	Frequency of Illness													
	Very often		2	1.7	-	-	2	0.8	6	5.0	-	-	6	2.5
	Often		10	8.3	1	0.8	11	4.6	15	12.5	5	4.2	20	8.3
	Occasionally		22	18.3	16	13.3	38	15.8	31	25.8	24	20.0	55	22.9
	Rarely		74	61.7	77	64.2	151	62.9	64	53.3	77	64.2	141	58.7
	Never		12	10.0	26	21.7	38	15.8	4	3.3	14	11.7	18	7.5
(3)	Ease of Catching Ailments (Number of Members) Very Easily - VE Not Easily - NE													
	NIL	VE	114	95.0	115	95.8	229	95.4	94	78.3	107	89.2	201	83.7
		NE	37	30.8	28	23.3	65	27.1	36	30.0	20	16.7	56	23.3
	One to Three	VE	6	5.0	4	3.3	10	4.2	22	18.3	13	10.8	35	14.6
		NE	49	40.8	56	46.7	105	43.7	66	55.0	74	61.6	140	58.3
	Four to Six	VE	-	-	1	0.8	1	0.4	4	3.3	-	-	4	1.7
		NE	30	25.0	33	27.5	63	26.2	18	15.0	25	20.8	43	17.9
	Seven and Above	VE	-	-	-	-	-	-	-	-	-	-	-	-
		NE	4	3.4	3	2.5	7	2.9	-	-	1	0.8	1	0.4
(4)	Exhaustion Felt By Members (Number of Members)													
	NIL		94	78.3	106	88.3	200	83.3	97	80.8	113	94.2	210	87.5
	One		12	10.0	3	2.5	15	6.2	7	5.8	1	0.8	8	3.3
	Two		11	9.2	10	8.3	21	8.7	6	5.0	4	3.3	10	4.2
	Three and Above		3	2.5	1	0.8	4	1.7	10	8.3	2	1.6	12	5.0

declared that over 3 children complained of some exhaustion.

The above features related to health of families reveal that, on the whole both income groups enjoyed a good status of health, in all ways.

(I.c) Physical characteristics of house and neighbourhood

The influence of housing space, both inside and outside, as also neighbourhood, on the play and study of children seemed to be emphatically evident (Table 5).

TABLE 5

PHYSICAL CHARACTERISTICS OF HOUSE AND NEIGHBOURHOOD

Physical Characteristics		Income Categories LLI (N = 120) f	%	LMI (N = 120) f	%	Total OS (N = 240) f	%
1. House space utilization by children							
Inside the house	Play	106	88.3	105	87.5	211	87.9
	Study	99	82.5	99	82.5	198	82.5
Around the house	Play	102	85.0	88	73.3	190	79.2
	Study	59	49.2	46	38.3	105	43.7
2. Play in neighbourhood							
Children play with others	Yes	107	89.2	96	80.0	203	84.6
	No	13	10.8	24	20.0	37	15.4
Provision of play space	Yes	99	82.5	90	75.0	189	78.7
	No	21	17.5	30	25.0	51	21.2

Housing.- The space available inside the house was utilized by a majority of the sample for play and study. In both income groups almost 90 per cent of families used the space inside for play and 82.5 per cent in both cases used the space for study. The space around the house was used by over three-fourths of the OS for play, while 43.7 per cent utilized the space around the house for study. Most of the children in both income categories used the space around the house for play, while less than 50 per cent in both cases used the same for study.

Neighbourhood.- Play in the neighbourhood was enjoyed by 84.6 per cent of the children, who played with others. A majority of families in both LLI and LMI groups, viz., 89.2 per cent and 80 per cent respectively had their children play with those of the neighbourhood, while only the remaining family children did not play with the other children in the neighbourhood. Over three-fourths of the LLI and exactly three-fourths of the LMI respondents declared that, there is provision of play space for children in the neighbourhood and only one-fourth (LMI) or less (LLI) did not find enough play space in the neighbourhood for their children.

II. Community Facilities Existing In The City

The urban population in the city of Hyderabad includes about 300 slums with 76,000 families having 0.26 million pupulation. Besides, there are several large pockets of poor families who thrive on a meagre per capita income of Rs.115.00 to Rs.250.00 per month, in almost all localities of the city, as was observed during the data collection stage of this research work. These poor families need access to certain essential facilities related to

health, education and recreation, which are mainly government institutions and therefore free of charge. A survey of the city area revealed the existence of a number of basic amenities under each area of health, education, and recreation. A glance at Table 6, would reveal the existing facilities available in the city, for use by the urban families, particularly by the urban poor. Besides, the quoted figures, the Municipal Corporation of Hyderabad together with the State Government, has envisaged to take up several projects, namely, Hyderabad Slum Improvement Project (HSIP) and the like, through which additional numbers of the basic facilities, under recreation mainly, will be provided in the coming years. These proposed plans are also indicated below (Table 6).

TABLE 6

EXISTING AND PROPOSED FIGURES OF COMMUNITY FACILITIES IN HYDERABAD

Type of facility	Existing (Number)	Proposed (Number)
1. Health		
Hospitals	17	-
Family welfare centres	34	-
Special Nutrition centres	202	-
2. Education		
Schools		
(i) Balwadis	146	-
(ii) Primary schools	220	-
(iii) Upper primary	99	-
(iv) High schools	110	-

(Continued...)

(Table 6 Continued...)

Type of facility	Existing (Number)	Proposed (Number)
Libraries	85	-
Sewing centres	83	-
Museums	2	-
3. Recreation		
Parks		
(i) Major parks	5	6
(ii) Small parks	158	166
Green belts	57	209
Traffic islands	51	-
Road dividers with horti-cultural development	12	2
Avenue plantations	18000	5000
Playgrounds	399	-
Zoo	1	-
Picnic spots : major	5	-
Lakeviews : major	4	-

Health facilities

There are 17 main hospitals in the twin cities of Hyderabad and Secunderabad which cater to the needs of the citizens. The services under family welfare programme in the twin cities, are provided through 34 urban family welfare centres, i.e. 15 under the Municipal Corporation of Hyderabad, 12 attached to government-run hospitals, one attached to E.S.I. Hospital and 6 under Voluntary Organizations. The Family Welfare Services are also provided by Registered Medical Practitioners and Nursing Homes and they are also recognized for conducting family planning operations. Seventy-four institutions have been recognized for these services.

Besides these, there are 202 special Nutrition Centres which cater to the health needs and nutritional requirements of the population.

Educational facilities

Schools existing for the educational requirements range from primary schools to high schools. There are 146 Balwadies which take care of children, while mothers and older siblings work and go to school respectively, and 220 primary schools in the city. There are as many as 85 libraries, including one children's library, three women's libraries, three mobile libraries and one city central library. Out of the total number, there are 62 recognized, aided libraries, which provide reading material of a wide variety for the public. No further proposals seem to be available for increasing the number of existing health and educational facilities in the city.

Recreational facilities

There are five large parks, spread in the vicinity of the city, two of which, covering areas of 76 and 96 acres have been developed to the extent of 80 per cent and 70 per cent respectively. A large amount of plantation and flowering exists in these parks. Six more parks are proposed to be developed in the city, with enormous plantation work in each of them. With the existing large number of small parks, it is proposed to develop another 166 small parks in the open areas of various layouts of the twin cities. There are 57 greenbelts in the city where 75,000 quick-growing trees have been planted. The aim of green belt is to

provide much needed green covering to the city to restore ecological balance which will also help in protecting the valuable property of Municipal Corporation of Hyderabad (MCH) from encroachments. It is contemplated to fence 209 open places and develop as green belts, by planting quick growing plants in different layouts. The existing 35 traffic islands have been converted into island gardens and most of these have been adopted by private organizations. There are 12 central media at present in the city and two more are proposed to be developed. A large number of avenue plantations exist for providing cool rest and shade to the public, as many as 18,000 and 5000 plantations are further proposed. In addition to this a special programme has been launched to take up tree planting in various localities on a massive scale. There are a number of playgrounds maintained by the MCH. Thirty-four 'A' type of playgrounds, 97 'B' types and 268 'C' types of playgrounds exist in the city. In many playgrounds there are no trees, which leaves the players and spectators to play and watch in the hot sun. It is proposed to take up planting of shade-giving trees around the playground to provide enough shade. In about 10 acres, 500 trees will be planted. In new localities about 40 per cent of area has to be left as lung space. This lung space will be utilized either for development, of park, playground or green belt, depending upon the needs of the locality and also type of soils. About 206 spaces are available whose size comes to 114 acres.

Besides this the Hyderabad Urban Development Authority (HUDA), has identified and proposed development of green belts and parks in about 4,000 acres in and around the city for the

proper development of the city. A large zoological park, and some beautiful picnic spots and lakeviews also beautify the appearance of the city and at the same time provide attractive recreational resorts to the public. The beautiful expanse of water in the lakes is not only a treat to the eye but is also available for developing various water sports and boating etc. The bund on one of the large lakes, is beautified and new plants have been planted on the main bund. Two motor boats ply on the lake, carrying people for recreation. Introduction of water sports complex at the large parks is also contemplated.

With this large variety of community facilities existing, to serve the community, there seems no dearth of free services in the area of health, education and recreation. Nevertheless, it seems interesting to probe the determinants of utilization of these facilities, which have been revealed through the present investigation, and are presented in the pages that follow in this report.

III. Availability And Awareness Of Community Facilities And Services

The presence and location of community facilities, awareness of existence of facilities and services, their cost, have an undoubted influence on extent of utilization of the same. Awareness was a necessary criterion to judge the extent of utilization of facilities.

(III.a) Availability and location of community facilities

Over 63 per cent of LLI as well as LMI respondents pointed out that there was no government hospital available to them at walking distance. About one-fourth of respondents of both income groups, said that a hospital was available at a walking distance time of six to ten minutes (Table 7). A majority claimed non-availability of a health centre, 76.7 per cent in both income groups, while 22.5 per cent and 23.3 per cent of respondents of LLI and LMI respectively, stated that they had the services of a Government health centre available, at a walking distance time of about five minutes only. Under educational facilities, again a majority of 75.8 per cent of respondents, of both income groups, reported non-availability of a Balwadi, while only 5 per cent in both cases reported non-availability of a pre-school. A little over one-fourth of the respondents belonging to both income groups each, mentioned availability of a Balwadi at a proximity of zero to five minutes walking time, and 34.1 per cent and 45.8 per cent reported the same period of walking time to reach a nearby Government pre-school. The availability of a Government Municipal school at six to ten minutes walking time was claimed by 35.9 per cent and 26.6 per cent of the LLI and LMI respondents respectively. About one-fifth of the respondents in LLI group and almost one-fourth in the LMI group reported a walking time of only zero to five minutes to reach the Government/Municipal school. A public library was not available to 47.5 per cent and 41.7 per cent of LLI and LMI respondents, respectively, while 25.8 per cent of LLI and 20.8 per cent of

TABLE 7

AVAILABILITY OF COMMUNITY FACILITIES AND PROXIMITY OF LOCATION

LLI : N = 120
LMI : N = 120

Sl. No.	Community Facilities	Facilities Available (Walking Distance Time in Approximate Minutes)																Facilities not Available			
		0 to 5				6 to 10				11 to 15				Above 15							
		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
(1)	Government Hospital	2	1.7	-	-	31	25.8	28	23.3	3	2.5	6	5.0	8	6.7	10	8.3	76	63.3	76	63.3
(2)	Government Health Centre	27	22.5	28	23.3	1	0.8	-	-	-	-	-	-	-	-	-	-	92	76.7	92	76.7
(3)	Balwadi (Pre-primary School)	27	22.5	27	22.5	2	1.7	1	0.8	-	-	1	0.8	-	-	-	-	91	75.8	91	75.8
(4)	Government Pre-school	41	34.1	55	45.8	35	29.2	12	10.0	30	25.0	37	30.8	8	6.7	10	8.3	6	5.0	6	5.0
(5)	Government Municipal School	22	18.3	28	23.3	43	35.9	32	26.6	33	27.5	37	30.8	13	10.8	15	12.5	9	7.5	8	6.7
(6)	Public Library	9	7.5	11	9.2	31	25.8	25	20.8	22	18.3	30	25.0	1	0.8	4	3.3	57	47.5	50	41.7
(7)	Playground	65	54.2	64	53.3	3	2.5	5	4.1	2	1.7	-	-	1	0.8	-	-	49	40.8	51	42.5
(8)	Park	4	3.4	1	0.8	1	0.8	-	-	-	-	-	-	2	1.7	-	-	113	94.2	119	99.2

LMI respondents reported six to ten minutes of walking time to reach a nearby public library.

Recreational facilities in the form of a playground and park were available at zero to five minutes walking distance time, to 54.2 per cent and 53.3 per cent of LLI and LMI respondents respectively, with regard to the former facility, and only 3.4 per cent and 0.8 per cent of the two income groups respectively, with respect to the latter facility. About 42 per cent of the two income groups reported non-availability of a playground nearby, while a majority of 94.2 per cent and 99.2 per cent of LLI and LMI respondents respectively, reported non-availability of a park nearby, which is naturally expected.

(III.b) Awareness of numbers and cost of facilities

Health.- All the respondents were aware of the availability of more than one Government hospital in the city (Table 8), as also the free services from these hospitals. Out of the entire sample, a majority of 64.2 per cent and 70 per cent of LLI and LMI respondents respectively, were aware of six to ten Government hospitals in the city. Almost all respondents were aware of free services from hospitals. Again 45 per cent and 41.7 per cent of LLI and LMI respondents respectively, were aware of one to five numbers of Government health centres, and 54.2 per cent and 55 per cent of the two groups respectively, were unaware of the same. Nevertheless, 47.5 per cent and 45.8 per cent of the LLI and LMI respondents respectively, were aware of the facilities being free of cost, while the remaining

TABLE 8

AWARENESS OF NUMBER AND COST OF FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Community Facilities	Awareness Of Numbers																Unawareness Of Numbers			
		1 to 5				6 to 10				11 to15				16 & above							
		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
A.	Health																				
(1)	Government hospital	24	20.0	19	15.9	77	64.2	84	70.0	17	14.2	17	14.2	2	1.7	-	-	-	-	-	-
(2)	Government health centre	54	45.0	50	41.7	-	-	-	-	1	0.8	4	3.4	-	-	-	-	65	54.2	66	55.0
(3)	Immunization clinics	63	52.6	80	66.7	7	5.8	6	5.0	-	-	-	-	-	-	-	-	50	41.7	34	28.3
(4)	Family planning counselling centres	62	51.6	61	50.9	2	1.6	9	7.5	-	-	-	-	-	-	-	-	56	46.7	50	41.7
(5)	Sanitary facilities	20	16.7	17	14.2	26	21.6	21	17.5	38	31.6	42	34.9	26	21.7	36	29.9	10	8.3	4	3.3
(6)																					
B.	Education																				
(1)	Balwadi	23	19.2	35	29.1	1	0.8	3	2.5	-	-	1	0.8	-	-	-	-	96	80.0	81	67.5
(2)	Government preschool	67	55.9	63	52.5	27	22.5	29	24.1	7	5.9	12	10.0	-	-	3	2.5	19	15.8	13	10.8
(3)	Government highschool	61	50.8	46	38.5	20	11.6	30	25.0	17	14.2	23	19.1	8	6.7	14	11.6	14	11.7	7	5.8
(4)	Public libraries	69	57.5	77	64.2	15	12.4	23	19.2	5	4.2	3	2.5	4	3.3	1	0.8	27	22.5	16	13.3
(5)	Public reading rooms	58	48.3	67	55.8	1	0.8	8	6.7	3	2.5	-	-	3	2.5	-	-	55	45.8	45	37.5
(6)	Museums	113	94.1	116	96.7	-	-	-	-	-	-	-	-	-	-	-	-	7	5.8	4	3.3
(7)	Exhibitions	116	96.7	116	96.7	-	-	-	-	-	-	-	-	-	-	-	-	4	3.3	4	3.3
(8)	Mahila Mandals	44	36.7	43	35.8	1	0.8	4	3.3	-	-	-	-	-	-	-	-	75	62.5	73	60.8
C.	Recreation																				
(1)	Parks	101	84.2	98	81.6	18	15.0	22	18.4	-	-	-	-	-	-	-	-	1	0.8	-	-
(2)	Playgrounds	105	89.5	104	86.6	6	5.0	13	10.8	-	-	-	-	-	-	-	-	9	7.5	3	2.5
(3)	Zoos	117	97.5	120	100.0	-	-	-	-	-	-	-	-	-	-	-	-	3	2.5	-	-
(4)	Lakeviews	113	94.2	115	95.8	-	-	-	-	-	-	-	-	-	-	-	-	7	5.8	5	4.2
(5)	Picnic spots	103	85.8	111	92.5	-	-	-	-	-	-	-	-	-	-	-	-	17	14.2	9	7.5
(6)	Public swimming pools	43	35.9	65	54.2	-	-	-	-	-	-	-	-	-	-	-	-	77	64.2	55	45.8
(7)	Fishing	20	16.7	14	11.7	-	-	-	-	-	-	-	-	-	-	-	-	100	83.3	106	88.3
(8)	Boating	77	64.2	92	76.7	-	-	-	-	-	-	-	-	-	-	-	-	43	35.8	28	23.3

(continued.. Table 8)

Sl. No.	Community Facility	Awareness Of Cost								Unawareness Of Cost			
		Free				Low							
		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%
A.	Health												
(1)	Government hospital	119	99.2	120	100.0	1	0.8	-	-	-	-	-	-
(2)	Government health centre	57	47.5	55	45.8	-	-	-	-	63	52.5	65	54.1
(3)	Immunization clinics	70	58.3	85	70.8	-	-	-	-	50	41.7	35	29.2
(4)	Family planning counselling centres	64	53.3	70	58.3	-	-	-	-	56	46.7	50	41.7
(5)	Sanitary facilities	110	91.7	116	96.7	-	-	-	-	10	8.3	4	3.3
B.	Education												
(1)	Balwadi	18	15.0	37	30.8	4	3.3	1	0.8	98	81.7	82	68.3
(2)	Government preschool	101	84.2	107	89.2	-	-	-	-	19	15.8	13	10.8
(3)	Government highschool	105	87.5	110	91.7	-	-	1	0.8	15	12.5	9	7.5
(4)	Public libraries	87	72.5	101	84.2	-	-	1	0.8	33	27.5	18	15.0
(5)	Public reading rooms	61	50.8	75	62.5	-	-	-	-	59	49.2	45	37.5
(6)	Museums	15	12.5	20	16.7	97	80.8	96	80.0	8	6.7	4	3.3
(7)	Exhibitions	13	10.8	20	16.7	100	83.3	96	80.0	7	5.8	4	3.3
(8)	Mahila Mandals	37	30.8	39	32.5	6	5.0	6	5.0	77	64.2	75	62.5
C.	Recreation												
(1)	Parks	119	99.2	120	100.0	-	-	-	-	1	0.8	-	-
(2)	Playgrounds	110	91.7	116	96.7	-	-	1	0.8	10	8.3	3	2.5
(3)	Zoos	51	42.5	52	43.3	65	54.2	68	56.7	4	3.3	-	-
(4)	Lakeviews	111	92.5	113	94.2	2	1.7	2	1.7	7	5.8	5	4.2
(5)	Picnic spots	101	84.2	108	90.0	1	0.8	3	2.5	18	15.0	9	7.5
(6)	Public swimming pools	12	10.0	13	10.8	30	25.0	52	43.3	78	65.0	55	45.8
(7)	Fishing	19	15.8	10	8.3	-	-	4	3.3	101	84.2	106	88.3
(8)	Boating	28	23.3	34	28.3	47	39.2	57	47.5	45	37.5	29	24.2

in each case, were unaware of the cost factor. Regarding immunization clinics, a majority, viz., 52.6 per cent of LLI and 66.7 per cent of LMI respondents, were aware of one to five numbers of clinics in the city, while 41.7 per cent of LLI and 28.3 per cent of LMI respondents were unaware of their availability. A majority, 58.3 per cent LLI and 70.8 per cent LMI respondents, stated the services of these clinics as being free, whereas the remaining respondents who were unaware of their existence, in almost all cases, were also unaware of the cost of services in the same. Just above 50 per cent of respondents of both income groups were aware of the existence of one to five Family Planning Counselling centres in the city, while 46.7 per cent and 41.7 per cent of both LLI and LMI respondents respectively, were unaware of the existence of such centres. A majority viz., 53.3 per cent of LLI and 58.3 per cent of LMI respondents were aware that services in these centres were free, while the other respondents,who were unaware of their existence, were also unaware of the cost of utilizing the services of these centres.

As regards sanitary services, that is, availability of public garbage bins, 31.6 per cent of LLI and 34.9 per cent of LMI respondents were aware of the location of about eleven to fifteen such receptacles in the city, as well as 21.7 per cent and 29.9 per cent of the respective groups were aware of sixteen and more of such trash bins in the city. Only a meagre 8.3 per cent and 3.3 per cent of LLI and LMI respondents respectively, were unaware of the existence of these sanitary services. Almost all respondents in both groups, were aware that this service pertaining to health was free of cost.

Education.- It was found that 19.2 per cent and 29.1 per cent of LLI and LMI respondents respectively, were aware of one to five Balwadis in the city, while 80 per cent LLI and 67.5 per cent LMI respondents were unaware of the same. Only 15 per cent LLI and 30.8 per cent LMI respondents were aware that the facility use was free, while a majority, mainly all those who were unaware of the existence of Balwadis, were also unaware of the cost. One to five Government Pre-schools were known to 55.9 per cent of LLI and 52.5 per cent of LMI respondents, while 15.8 per cent and 10.8 per cent of the two groups respectively, were unaware of its existence and therefore, the cost also. Almost 90 per cent of LLI and LMI respondents on the other hand, were aware of its free services. Likewise, for all the other educational facilities, such as Government high schools, public libraries, public reading rooms, and mahila mandals, almost 35 per cent to about 64 per cent of the respondents were aware of one to five numbers of each. It was seen that 22.5 per cent and 45.8 per cent of LLI respondents and 13.3 per cent and 37.5 per cent of LMI respondents were unaware of the existence of public libraries and public reading rooms, respectively. However, a majority of respondents, 87.5 per cent and 72.5 per cent of LLI and 91.7 per cent and 84.2 per cent of LMI respondents were aware of the free services of Government high schools and public libraries respectively. So also 50.8 per cent of LLI and 62.5 per cent of LMI respondents were aware of the free services of public reading rooms. Almost all respondents were aware of one to five museums, and exhibitions held in the city. A majority,

viz., 80.8 per cent and 83.3 per cent of LLI and 80 per cent in both cases of LMI respondents were aware of the low fee charged for museums and exhibitions as spectator facilities. As can be seen from the results, mainly those respondents who were unaware of the existence of educational facilities, were also unaware of the cost of using these facilities.

Recreation.- In all cases, except public swimming pools, fishing and boating sports, about 80 to 95 per cent of respondents were aware of one to five numbers of each facility existing in the city. Even though these facilities were limited in number, almost all respondents were aware of the same; almost all were aware of the zoo existing in the city. Very few respondents in both income groups, were unaware of facilities except in the case of public swimming pools and the venues of fishing sport where, 64.2 per cent and 83.3 per cent of LLI and 45.8 per cent and 88.3 per cent of LMI respondents were unaware of their existence respectively. Boating as a sport too, was not known, for its existence in the lakes of the city, by 35.8 per cent of LLI and 23.3 per cent of LMI respondents. A similar percentage of respondents in all cases claimed cost unawareness, as they were unaware of the existence of the facilities altogether. About 90 to 100 per cent of respondents were aware of the free use of picnic spots, lakeviews, play grounds and parks, while 54.2 per cent of LLI and 56.7 per cent of LMI were aware of the low cost of the zoo as a recreational facility. It was found that 25 per cent and 39.2 per cent of LLI and 43.3 per cent and 47.5 per cent of LMI respondents, were aware of the low cost of using public

swimming pools and enjoying boating as a sport, respectively.

(III.c) Awareness of the service availability, their cost and utilization of services

Health.- The data revealed that 100 per cent of the respondents of both income groups were aware of majority of the services available under health facilities, (Table 9). The services of Immunization and Family Planning Counselling, were also known to almost 100 per cent of respondents from both groups. Only 8.3 per cent and 6.7 per cent of LLI and LMI respondents respectively, were unaware of Family Planning, Counselling services as well as its cost. Also, 100 per cent of the LLI respondents in most cases were aware of the free cost of health services, while almost all LMI respondents were aware of the same. A very low percentage of only LMI respondents said that the cost of these services was low. From the utilization point of view (Figure 17, Table 10), it was found that from 55 per cent to 65 per cent of the LLI respondents made use of the health services, while among the LMI respondents, the percentage who utilized all services ranged from 40.8 per cent (Family Planning Counselling) to 55.8 per cent (sanitary services).

Education.- Among the educational services, it was observed that almost all respondents of both groups were aware of class-rooms and laboratories as services of educational institutions, while only a small percentage of respondents of both groups were aware of the other educational services available for their childrens' use. Almost all respondents

TABLE 9

AWARENESS OF SERVICE AVAILABILITY AND THEIR COST

LLI : N = 120
LMI : N = 120

Sl. No.	Community Services	Awareness Of Availability				Unawareness Of Availability				Awareness of Cost								Unawareness of Cost			
										Free				Low							
		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
A.	Health																				
(1)	Consultation	120	100.00	120	100.00	-	-	-	-	120	100.0	118	98.3	-	-	2	1.7	-	-	-	-
(2)	Medical Examination	120	100.00	120	100.0	-	-	-	-	120	100.0	118	98.3	-	-	2	1.7	-	-	-	-
(3)	Medical treatment	120	100.0	120	100.0	-	-	-	-	120	100.0	118	98.3	-	-	2	1.7	-	-	-	-
(4)	Medicines	120	100.0	120	100.0	-	-	-	-	120	100.0	117	97.5	-	-	3	2.5	-	-	-	-
(5)	Hospitalization	120	100.0	120	100.0	-	-	-	-	120	100.0	118	98.3	-	-	2	1.7	-	-	-	-
(6)	Diet	120	100.0	118	98.3	-	-	2	1.7	120	100.0	116	96.7	-	-	2	1.7	-	-	2	1.7
(7)	Immunization	119	99.2	117	97.5	1	0.8	3	2.5	119	99.2	115	95.8	-	-	1	0.8	1	0.8	4	3.3
(8)	Sanitary (Garbage disposal)	120	100.0	119	99.2	-	-	1	0.8	120	100.0	118	98.3	-	-	1	0.8	-	-	1	0.8
(9)	Family Planning Counselling	110	91.7	112	93.3	10	8.3	8	6.7	110	91.7	111	92.5	-	-	1	0.8	10	8.3	8	6.7
B.	Education																				
(1)	Classrooms and Laboratories	118	98.3	116	96.7	2	1.7	4	3.3	42	35.0	18	15.0	-	-	1	0.8	78	65.0	101	84.2
(2)	Training in Crafts	9	7.5	9	7.5	111	92.5	111	92.5	1	0.8	5	4.2	4	3.3	1	0.8	115	95.8	114	95.0
(3)	Displaying in Museums	7	5.8	6	5.0	113	94.2	114	95.0	-	-	2	1.7	2	1.7	1	0.8	118	98.3	117	97.5
(4)	Informative Exhibitions	13	10.8	11	9.2	107	89.2	109	90.8	-	-	3	2.5	9	7.5	6	5.0	111	92.5	111	92.5
C.	Recreation																				
(1)	Play space in parks	120	100.0	119	99.2	-	-	1	0.8	118	98.3	119	99.2	-	-	-	-	2	1.7	1	0.8
(2)	Play space in playgrounds	119	99.2	119	99.2	1	0.8	1	0.8	117	97.5	119	99.2	-	-	-	-	3	2.5	1	0.8
(3)	Quiet study/ reading in parks	119	99.2	119	99.2	1	0.8	1	0.8	116	96.7	119	99.2	-	-	-	-	4	3.3	1	0.8
(4)	Safari in zoo	119	99.2	119	99.2	1	0.8	1	0.8	73	60.8	75	62.5	44	36.7	44	36.7	3	2.5	1	0.8
(5)	Pleasant view	119	99.2	119	99.2	1	0.8	1	0.8	114	95.0	117	99.5	3	2.5	2	1.7	3	2.5	1	0.8

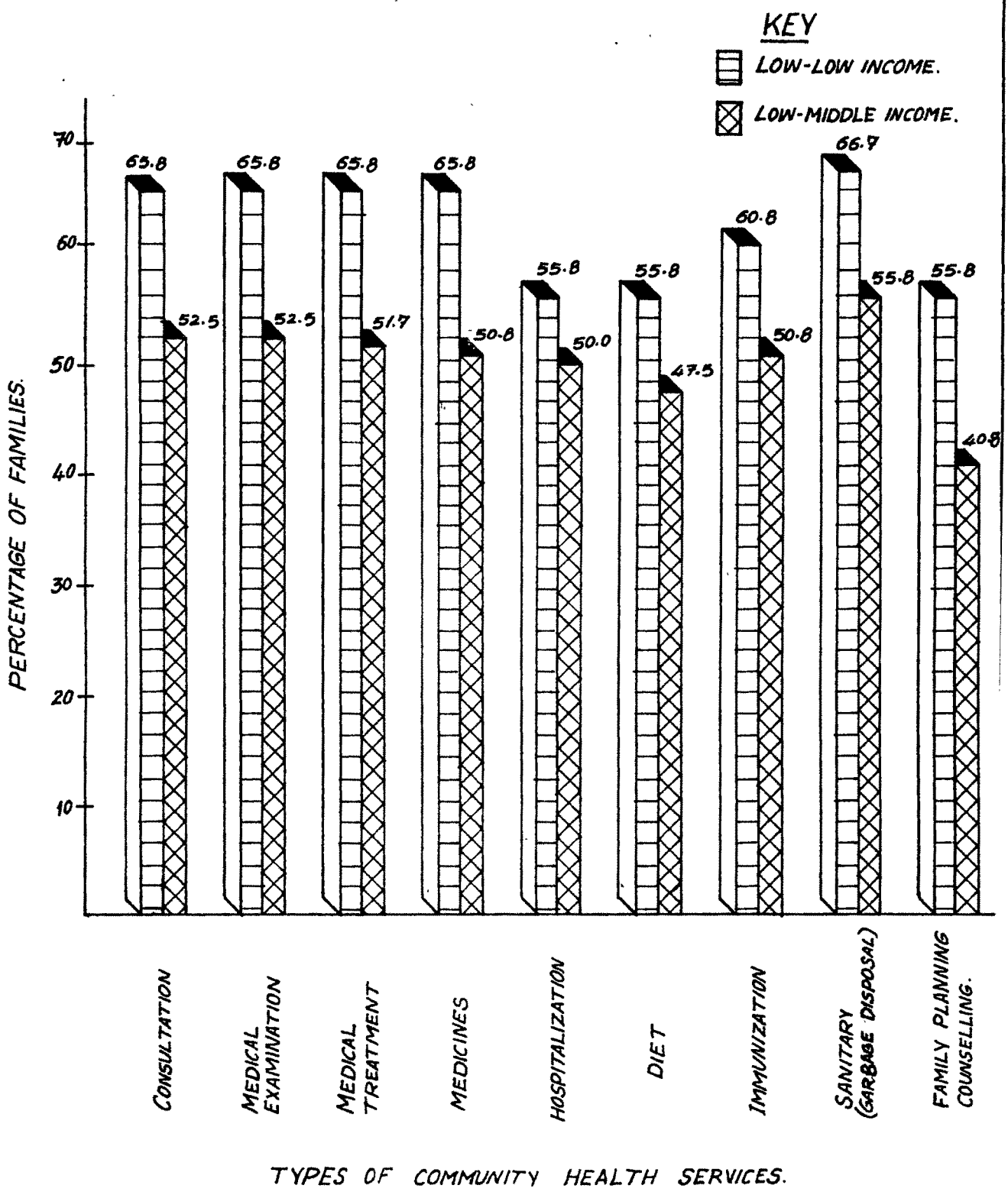


FIGURE - 17

BAR DIAGRAM INDICATING THE

UTILIZATION OF HEALTH SERVICES BY FAMILIES.

TABLE 10

UTILIZATION OF SERVICES FROM COMMUNITY FACILITIES

Sl. No.	Community Services	Utilization of Services (N^{LLI} = 120)				(N^{LMI} = 120)			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
A. Health									
(1)	Consultation	79	65.8	41	34.2	63	52.5	57	47.5
(2)	Medical examination	79	65.8	41	34.2	63	52.5	57	47.5
(3)	Medical treatment	79	65.8	41	34.2	62	51.7	58	48.3
(4)	Medicines	79	65.8	41	34.2	61	50.8	59	49.2
(5)	Hospitalization	67	55.8	53	44.2	60	50.0	60	50.0
(6)	Diet	67	55.8	53	44.2	57	47.5	63	52.5
(7)	Immunization	73	60.8	47	39.1	61	50.8	59	49.2
(8)	Sanitary (garbage disposal)	80	66.7	40	33.3	67	55.8	53	44.2
(9)	Family planning counselling	67	55.8	53	44.2	49	40.8	71	59.1

(continued...)

(continued..Table 10)

Sl. No.	Community Service	Utilization of Services							
		LLI (N = 120)				LMI (N = 120)			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
B.	Education								
(1)	Classroom and laboratories	50	41.7	70	58.3	22	18.3	98	81.6
(2)	Training in crafts	2	1.7	118	98.3	1	0.8	119	99.1
(3)	Display in museums	2	1.7	118	98.3	2	1.7	118	98.3
(4)	Informative exhibitions	7	5.8	113	94.2	8	6.7	112	93.3
C.	Recreation								
(1)	Play space in parks	50	41.7	70	58.3	72	60.0	48	40.0
(2)	Play space in playground	50	41.7	70	58.3	69	57.5	51	42.5
(3)	Quiet study/reading in parks	44	36.7	76	63.3	69	57.5	51	42.5
(4)	Safari in zoo	46	38.3	74	61.6	68	56.7	52	43.3
(5)	Pleasant view	46	38.3	74	61.6	72	60.0	48	40.0

were unaware of the same and in both income groups, hence, also unaware of the cost of services, and therefore did not utilize these educational services, other than class-rooms and laboratories, which were utilized by 41.7 per cent of LLI and only 18.3 per cent of LMI respondents' children (Figure 18, Table 10). A majority, 65 per cent and 84.2 per cent of LLI and LMI respondents respectively, were also unaware that the services of class-rooms and laboratories were free of charge and hence almost the same groups viz., 58.3 per cent of LLI and 81.6 per cent of LMI respondent children did not utilize the class-rooms and laboratories.

Recreation.- Regarding recreation facilities, all the respondents except one each in both income groups were aware of the availability of all services provided by each facility. Also, 100 per cent respondents were aware of the play space in parks. Above 96 per cent of LLI and almost 100 per cent of LMI respondents were aware of the free cost of most recreational services, while a very small percentage of both income groups were unaware of the same. About 36 per cent to 42 per cent of LLI and 56 per cent to 60 per cent of LMI respondent families utilized the services provided by recreational facilities (Figure 19, Table 10).

IV. Utilization Of Community Facilities

The data pertaining to the crux of the investigation viz., utilization of community facilities, are sequentially outlined under this head, for health, education and recreation.

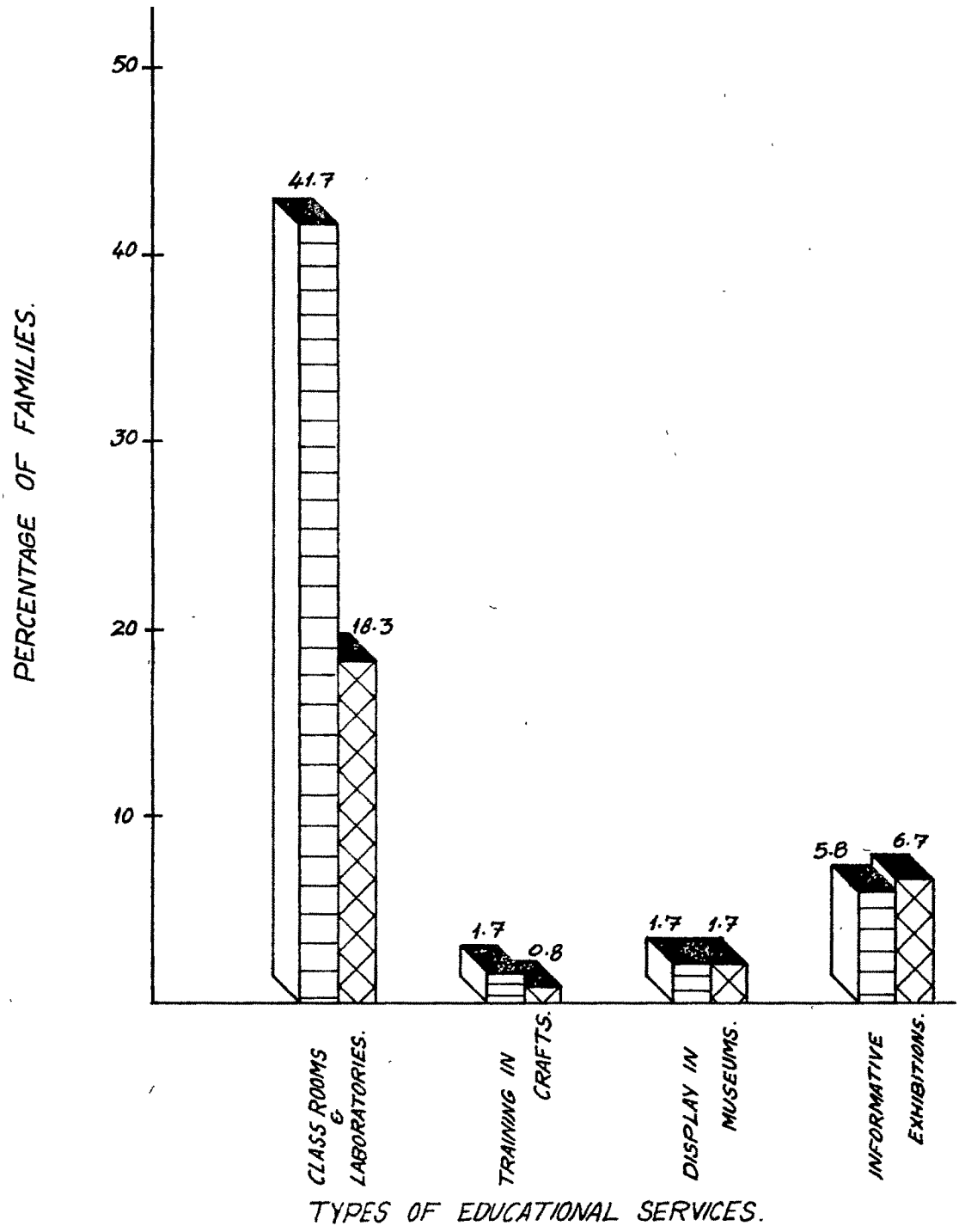


FIGURE - 18.

BAR DIAGRAM EXHIBITING THE UTILIZATION OF EDUCATIONAL SERVICES BY FAMILIES.

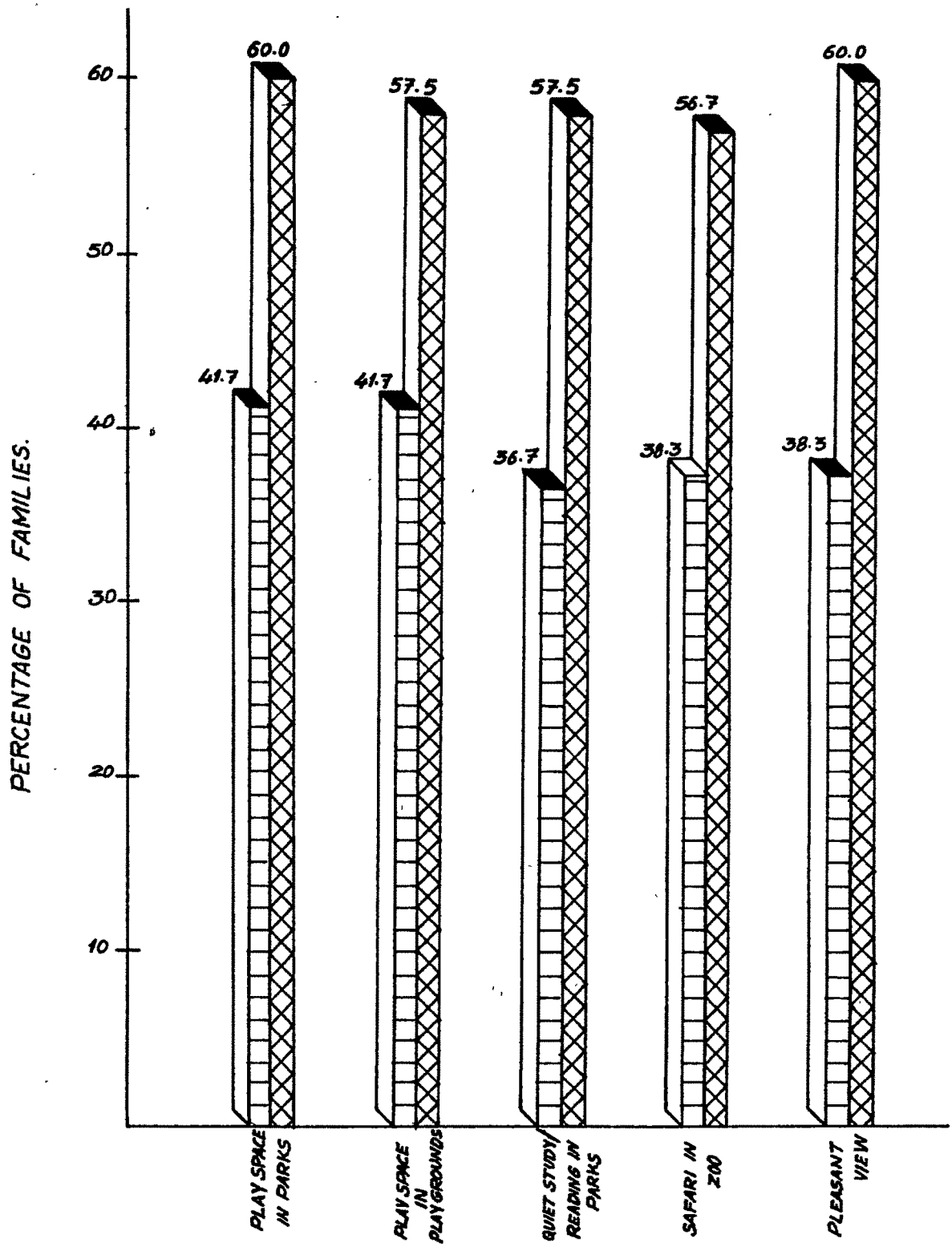


FIGURE - 19

BAR DIAGRAM PROJECTING THE UTILIZATION OF RECREATIONAL SERVICES BY FAMILIES.

(IV.a) Duration of use of community facilities

It is clear from the data (Figure 20) that 32.1 per cent of the sample, comprising 29.2 per cent of LLI and 35 per cent of LMI respondent families, did not make use of community facilities, Among those who utilized the facilities, 35.8 per cent of LLI and 30.8 per cent of LMI families, used the same for over fifteen years. Only a negligible percentage of LLI and LMI families used the facilities for less than a year. Hence, almost one-third of the respondents had not utilized the facilities, one-third of them used the facilities for over fifteen years and the remaining one-third or so used the facilities for a period range less than one to fifteen years. This reveals a fairly long duration of community facility use, in general.

(IV.b) Mode and frequency of innoculation and treatment

It was gathered from the data that private or government hospitals were the most frequently used modes for innoculation and treatment during illness (Table 11). Almost all respondents of both groups never used the services of a health visitor for innoculation, and 89.1 per cent of LLI and 95.8 per cent of LMI respondent families never used the school as a mode of innoculation. They mainly got it done in a private hospital or clinic or the government hospital/health centre. In fact, 42.5 per cent of LLI and 38.3 per cent of LMI respondent families got it done frequently in a government hospital/health centre. However, it can be seen that, majority of the families never got the innoculation done at all.

Regarding mode and frequency of treatment during illness

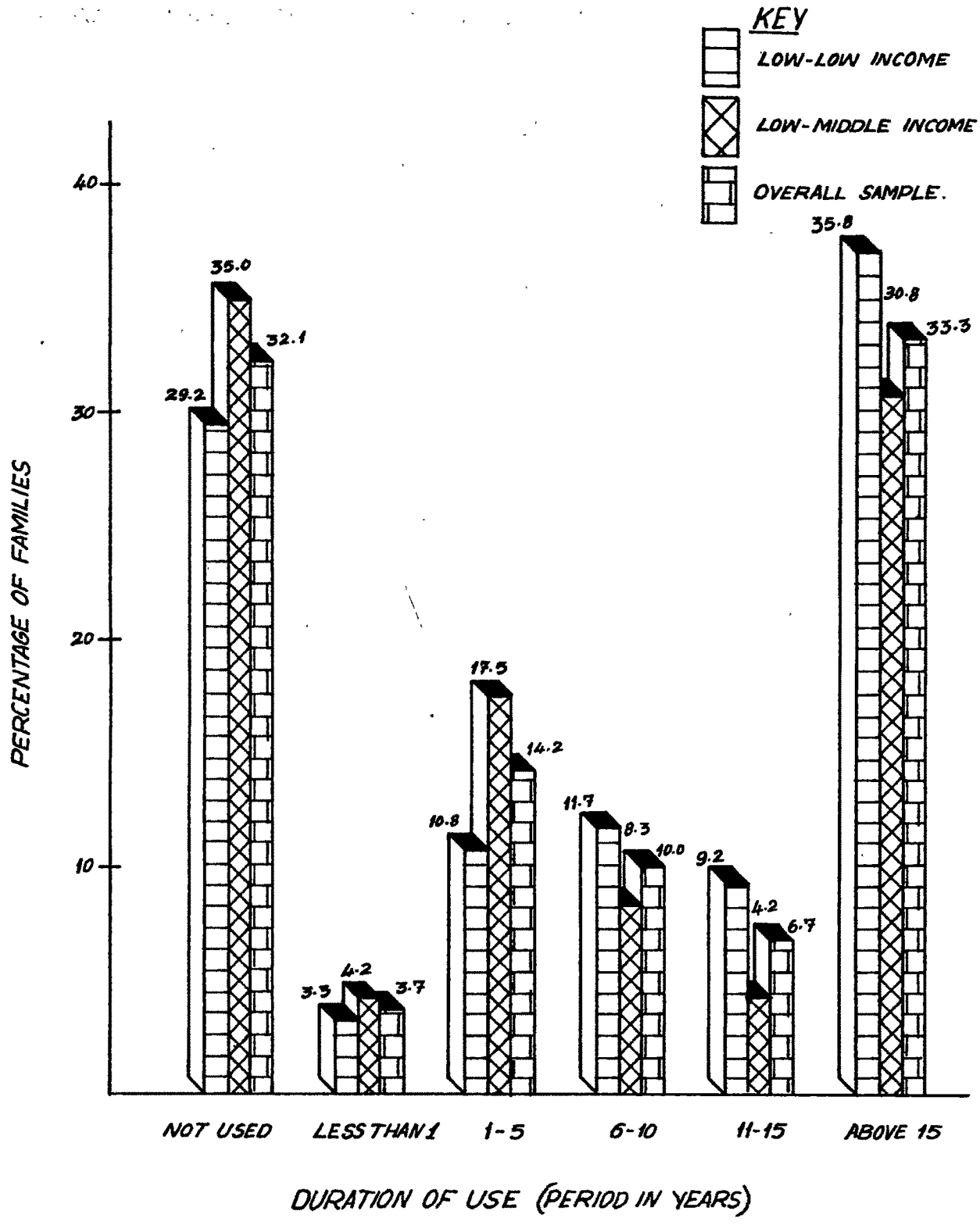


FIGURE - 20

BAR DIAGRAM PORTRAYING THE USE OF COMMUNITY FACILITIES BY FAMILIES.

TABLE 11

MODE AND FREQUENCY OF INNOCULATION AND TREATMENT DURING ILLNESS

LLI : N = 120
LMI : N = 120

Sl. No.	Mode of Innoculation and Treatment	Frequenoy of innoculation and treatment during illness															
		Frequently				Occasionally				Rarely				Never			
		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
(1)	Mode of innoculation																
	Health visitor	3	2.5	2	1.7	2	1.7	-	-	-	-	-	-	115	95.8	118	98.3
	Private hospital/clinic	40	33.3	59	49.2	8	6.7	8	6.7	-	-	1	0.8	72	60.0	52	43.3
	Government hospital/ Health centre	51	42.5	46	38.3	3	2.5	-	-	2	1.7	1	0.8	64	53.3	73	60.8
	School	8	6.7	3	2.5	4	3.3	1	0.8	1	0.8	1	0.8	107	89.1	115	95.8
(2)	Mode of Treatment during illness																
	Private hospital/clinic	52	43.3	60	50.0	27	22.5	23	19.2	4	3.3	3	2.5	37	30.8	34	28.3
	Government hospital/ Health centre	29	24.2	26	21.7	35	29.2	26	21.7	15	12.5	13	10.8	41	34.2	55	45.8
	Private family doctor	7	5.8	14	11.7	2	1.7	1	0.8	1	0.8	1	0.8	110	91.7	104	86.7
	Doctor in the family	2	1.7	5	4.2	-	-	-	-	-	-	-	-	118	98.3	115	95.8
	Household remedies	1	0.8	-	-	3	2.5	2	1.7	-	-	-	-	116	96.7	118	98.3

91.7 per cent to 98.3 per cent, and, 86.7 per cent to 98.3 per cent of LLI and LMI groups respectively, never used the services of a private family doctor, a doctor in the family, nor did they utilize household remedies. Obviously, the former two facilities did not exist in any of these families. During illness, services of a private hospital/clinic was used frequently, by 43.3 per cent and 50 per cent of LLI and LMI respondent families respectively. Almost one-fourth of the respondents of both income groups, utilized the government hospital/health centre frequently, while 29.2 per cent of LLI and 21.7 per cent of LMI utilized it occasionally. Hence, a majority of the sample utilized the government hospital/health centre facility, as and when required.

(IV.c) Hospitalization in government hospitals

Admission of members to government hospitals during illness, was not very common among the families studied (Table 12).

TABLE 12

HOSPITALIZATION OF MEMBERS IN GOVERNMENT HOSPITALS

Number of members hospitalized	Total LLI (N = 120)		Categories LMI (N = 120)		Total OS (N = 240)	
	f	%	f	%	f	%
Nil	94	78.3	106	88.3	200	83.3
One	14	11.7	12	10.0	26	10.8
Two	9	7.5	2	1.7	11	4.6
Three	1	0.8	-	-	1	0.4
Four	2	1.7	-	-	2	0.8

A small per-centage, viz. 11.7 per cent and 10 per cent of LLI and LMI families, respectively, reported one member of their respective families as having been hospitalized in government hospitals, while a negligible percentage of LLI families had hospitalized four members in government hospitals. It was seen that the LLI families utilized hospitalization services of government hospitals more than the LMI families, perhaps due to them having a slightly lower health status than the latter and also a lower income.

(IV.d) Use of community health facilities

The data reveal that a majority of respondents, 67.5 per cent of LLI and 77.5 per cent of LMI groups never used the community health facilities. Also, 19.2 per cent of LLI and 13.3 per cent of the LMI respondent families used the health facilities occasionally and a very few used it frequently (Figure 21, Table 13).

TABLE 13

FREQUENCY OF USE OF COMMUNITY HEALTH FACILITIES

Frequency of use	Income Categories				Total	
	LLI (N = 120)		LMI (N = 120)		OS (N = 240)	
	f	%	f	%	f	%
Frequently	6	5.0	3	2.5	9	3.7
Occasionally	23	19.2	16	13.3	39	16.2
Rarely	10	8.3	8	6.7	18	7.5
Never	81	67.5	93	77.5	174	72.5

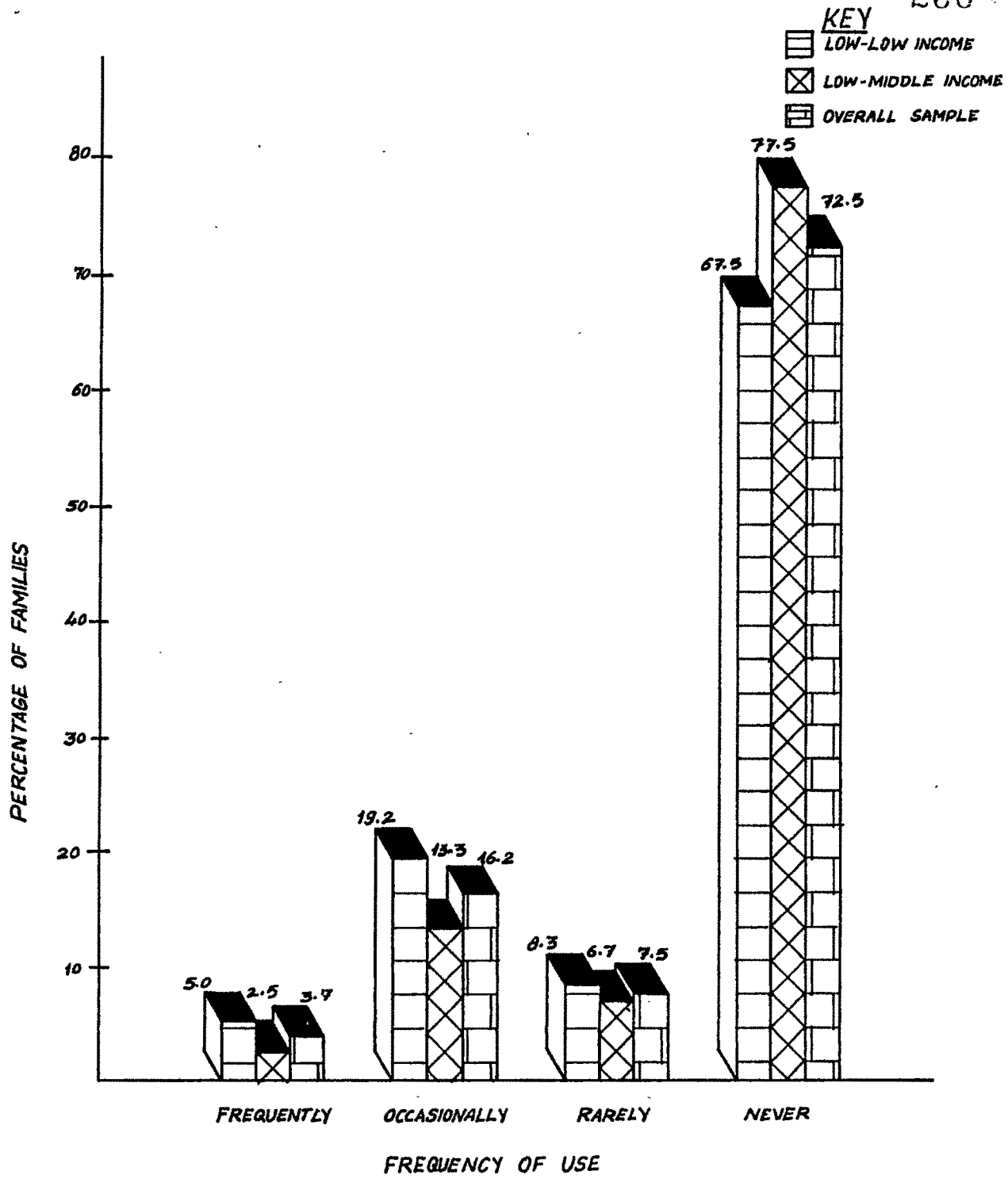


FIGURE - 21

BAR DIAGRAM PICTURING THE FREQUENCY OF USE OF COMMUNITY HEALTH FACILITIES BY FAMILIES

(IV.e) Community educational facilities utilized, and period of use

Almost 90 per cent of families of both income groups, sent their children to one school or the other. Of the total sample 13.3 per cent of LLI and 10 per cent of LMI families had children who never attended any school (Table 14).

Out of the entire sample, 20.8 and 21.7 per cent of LLI and LMI families' children were being sent to the government high school since about six to ten years. Very few sent them to the school for a lesser duration and only 4.2 per cent of LLI family children were sent to the government school for over ten years. The Municipal high school too, was utilized by a very meagre percentage of the sample in both income groups. The maximum percentage of respondents' family children utilized private schools in both income groups, viz., 25 per cent LLI and 27.5 per cent LMI family children, for one to five years, and 22.5 per cent LLI and 36.7 per cent LMI family children, for six to ten years. A few even used the school for over ten years. This information reveals the favourable attitude of both income groups towards private schools and unfavourable attitude towards government schools, even though the latter educational facility does not entail any/much expenditure of their income.

TABLE 14

TYPE OF COMMUNITY EDUCATIONAL FACILITIES UTILIZED AND PERIOD OF USE

LLI: N = 104*
LMI: N = 108

Type of Educational Facilities	Period Of Use In Years											
	1 to 5				6 to 10				Above 10			
	LLI		LMI		LLI		LMI		LLI		LMI	
	f	%	f	%	f	%	f	%	f	%	f	%
Private school	30	25.0	33	27.5	27	22.5	44	36.7	2	1.7	2	1.7
Municipal high-school	4	3.3	1	0.8	2	1.7	-	-	-	-	-	-
Government high-school	9	7.5	2	1.7	25	20.8	26	21.7	5	4.2	-	-

*Children from sixteen LLI and twelve LMI families never attended any school.

(III.f) Kind and frequency of utilization of community educational and recreational facilities and services

The data on qualitative use of the various services provided by educational and recreational facilities, and the frequency of each kind of use, was obtained from the respondents, to know which of the services were most popular, from the utilization point of view, by the respondents contacted (Table 15).

A close scrutiny of the data, revealed that over 79 per cent of LLI and over 62 per cent of the LMI respondent families never used the library facilities, as in most cases a library was not available to them or there was no access to a library. However, about 20 per cent of the LLI and nearly 40 per cent of the LMI did use the library facility and most of them used the facilities "rarely". The LMI group represented a higher percentage of library-users than the LLI group, perhaps due to their slightly higher literacy levels. The library was used mainly for reading magazines, story-books, subject-matter books, general knowledge and newspapers, if at all they were used, by the percentage of sample identified. Also, 64.2 per cent of LLI and 75.8 per cent of LMI respondents never used educational facilities, while 34.2 per cent of LLI and 22.5 per cent of LMI used the facilities 'frequently'. Again, 56.7 per cent of LMI respondents visited the museum 'rarely', while 39.2 per cent of the LLI group visited the museum at the same frequency, which is a natural tendency, irrespective of family income, as museums, exhibitions, fairs etc., are normally visited

TABLE 15

KIND AND FREQUENCY OF UTILIZATION OF COMMUNITY EDUCATIONAL AND RECREATIONAL FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Kind of Utilization	Frequency Of Use											
		Frequently				Occasionally		Rarely		Never			
		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%
(1)	**Educational facilities**												
	Use of educational facility	41	34.2	27	22.5	1	0.8	1	0.8	1	0.8	1	0.8	77	64.2	91	75.8
	Reading in library	3	2.5	8	6.7	5	4.2	5	4.2	16	13.3	32	26.7	96	80.0	75	62.5
	Study in library	3	2.5	8	6.7	5	4.2	5	4.2	17	14.2	32	26.7	95	79.2	75	62.5
	Borrow books	1	0.8	5	4.2	5	4.2	6	5.0	17	14.2	32	26.7	97	80.8	77	64.2
	Read magazines	2	1.7	7	5.8	5	4.2	6	5.0	18	15.0	31	25.8	95	79.2	76	63.3
	Read story books	1	0.8	7	5.8	5	4.2	6	5.0	18	15.0	30	25.0	96	80.0	77	64.2
	Read subject-matter	1	0.8	7	5.8	6	5.0	5	4.2	18	15.0	30	25.0	95	79.2	78	65.0
	Read general knowledge	-	-	7	5.8	5	4.2	6	5.0	18	15.0	29	24.2	97	80.8	78	65.0
	Read newspaper	2	1.7	7	5.8	4	3.3	6	5.0	17	14.2	31	25.8	97	80.8	76	63.3
	Visit museums	-	-	3	2.5	5	4.2	15	12.5	47	39.2	68	56.7	68	56.7	34	28.3
	Visit exhibitions	1	0.8	3	2.5	5	4.2	16	13.3	56	46.7	69	57.5	58	48.3	32	26.7
	Attend educative lectures	-	-	2	1.7	4	3.3	10	8.3	23	19.2	23	19.2	93	77.5	85	70.8
(2)	**Recreational Facilities**												
	Read/study in park	1	0.8	-	-	2	1.7	11	9.2	25	20.8	40	33.3	92	76.7	69	57.5
	Play in park	2	1.7	-	-	5	4.2	15	12.5	39	32.5	58	48.3	74	61.7	47	39.2
	Relax in park	2	1.7	-	-	6	5.0	18	15.0	38	31.7	59	49.2	74	61.7	43	35.8
	Get together in park	2	1.7	-	-	5	4.2	18	15.0	38	31.7	59	49.2	75	62.5	43	35.8
	Play in playground	3	2.5	-	-	5	4.2	18	15.0	39	32.5	57	47.5	73	60.8	45	37.5
	Visit zoos	1	0.8	-	-	4	3.3	16	13.3	43	35.8	65	54.2	72	60.0	39	32.5
	Visit lakeviews	1	0.8	-	-	4	3.3	16	13.3	41	34.2	64	53.3	74	61.7	40	33.3

only once in way. It was observed that 46.7 per cent of LLI and 57.5 per cent of LMI respondent families visited 'rarely' the yearly exhibition which is regularly held in the city, along with any other exhibition that might be organized. About 78 per cent of LLI and 71 per cent of LMI respondents 'never' attended any educative lecture, as this was very 'rare', or an altogether absent phenomenon, in the locales of the city, where the urban poor dwell. On the whole, the urban poor families did not seem to be very enthusiastic about community educational facility-use, perhaps due to their unfavourable opinions regarding government institutions.

Recreational facilities were used by the two income categories only once in a way, mainly due to the distance involved in reaching the same. All types of activities like reading, playing, relaxing, getting together, were carried out in parks, as well as, play in playgrounds, visit to the Zoo and lakes by about 20 to 36 per cent of LLI and 33 to about 54 per cent of LMI groups for all the activities. However, a majority of the LLI group 'never' used the recreational facilities, while only a little over one-third of the LMI group never used the recreational facilities for a majority of the activities.

(IV.g) Factors influencing the utilization of community facilities

The utilization of community facilities is influenced by several factors, some under the control of users and some not under their control. This section of the findings concentrates on the exhaustive list of characteristic features,

situational factors and respondents' opinions, which act as aggregates of conditions, influencing the utilization of facilities, either as facilitators or constraints. The responses to these factors have been quantified as scores (Appendix IV). The more the number of facilitators influencing utilization of the respective facilities of health, education and recreation, the higher the feature score, in each case, while, the more the number of constraints the lower the score in each case. Frequency scores could be high due to facilitators influencing frequent use, or constraints also leading to frequent use, in some cases, when the respondent families have no other choice, (mainly because of lack of money resource) but, to use the facilities according to their needs, in spite of constraints. Nevertheless, the general tendency, is seen as, the more the constraints, the lower the frequency of use score. The lower frequency score could be on account of less frequent use, or non-use, due to constraints.

Health.- The health facilities mean feature scores were typically low, (Table 16), because of the undesirable characteristic features, inconvenient situational factors and unfavourable opinions of almost all respondents in both the income categories. On the contrary, the mean frequency score of health facility use was found to be highest for the LLI group, against the characteristic features, viz., 27.08, which shows that in spite of poor characteristic features, the LLI group still utilized the health facilities as and when required. The frequency score was, no doubt low, which

TABLE 16

MEAN FEATURE AND FREQUENCY SCORES OF FACTORS INFLUENCING UTILIZATION OF COMMUNITY FACILITIES

LLI : N = 128
LMI : N = 128

Sl. No.	Category / Scores	Characteristic Features				Situational Factors				Respondents' Opinion			
		Feature Score		Frequency Score		Feature Score		Frequency Score		Feature Score		Frequency Score	
		LLI	LMI	LLI	LMI	LLI	LMI	LLI	LMI	LLI	LMI	LLI	LMI
(1)	**Health**												
	Total Score	1694	1687	3250	2669	1055	1029	2225	1866	1787	1703	2896	2312
	Mean Score	14.12	14.06	27.08	22.24	8.79	8.58	18.54	15.55	14.89	14.19	24.13	19.21
	Standard Deviation	2.53	2.95	23.64	23.79	1.96	1.78	16.41	16.74	3.95	3.92	20.86	21.12
(2)	**Education**												
	Total Score	641	537	1933	1035	638	556	1286	615	930	707	3647	1794
	Mean Score	5.34	4.48	16.11	8.63	5.32	4.63	10.72	5.13	7.75	5.89	30.39	14.95
	Standard Deviation	2.87	2.73	19.43	16.06	1.86	1.56	12.79	10.22	9.14	7.67	35.94	29.68
(3)	**Recreation**												
	Total Score	2213	2256	1210	2121	492	517	551	911	1155	1168	536	983
	Mean Score	18.44	18.80	10.08	17.68	4.10	4.31	4.59	7.59	9.63	9.73	4.47	8.19
	Standard Deviation	2.77	1.41	12.94	16.11	1.78	1.52	6.39	6.86	1.26	0.81	6.08	6.75

may be due to occasional or rare use of the facility. The Standard Deviation of this frequency score was found to be 23.64. The situational factor mean feature scores for both income categories were only 8.79 and 8.58 respectively, indicating a poor conditional component, or adverse situations, on the whole which impede use of facilities. The Standard Deviations in this case were 1.96 for the LLI and 1.78 for the LMI group. The corresponding mean frequency scores too were found to be quite low, 18.54 and 15.55 for LLI and LMI groups respectively, indicating rather poor use of the facilities. Although the mean feature scores, were similar for both income categories, the mean frequency score was observed to be higher for the LLI than the LMI group, in all factor aggregates, concerning health facility use.

Education.- The mean feature scores on educational facility use, reveal a very unfavourable attitude and poor opinion regarding community educational facilities, by both income categories, as was also revealed through responses to the queries in the schedule, as well as through the adverse remarks passed by almost 100 per cent of the respondents regarding the poor conditions prevailing in government educational institutions. Both the mean feature and frequency scores were rather low in all factor aggregates. The mean feature scores against respondents' opinion was 7.75 and 5.89 for LLI and LMI groups respectively, while the frequency score was 30.39 and 14.95 for LLI and LMI groups respectively. This revealed that in spite of abhorable conditions, the LLI group had a

much higher mean frequency score than the LMI group, as they were forced to send their children to government and municipal schools, because they were almost free institutions and the LLI families could not afford the educational expenses involved in private schools which could be availed of by LMI categories, to a certain extent. A glance at all the educational mean feature and frequency scores reveals this fact, that, the LLI group obtained a higher mean score than the LMI group (Table 16).

Recreation.- As regards the mean feature scores for both income categories, regarding recreational facilities, a similar trend was observed, that is, the scores for both income groups were very much similar, for all factor aggregates, 18.44 (LLI) and 18.80 (LMI) for characteristics features, 4.10 (LLI) and 4.31 (LMI) for situational factors and 9.63 (LLI) and 9.73 (LMI) for respondents' opinion. This reveals the consistency of ideas, regarding the existing characteristic features of recreational institutions, similarity of situational factors, as well as, of opinions regarding the recreational facilities. However, in the case of these facilities, it is seen that the LMI group had a higher mean frequency score than the LLI group in all factor aggregates, characteristic features (10.08 and 17.68), situational factors (4.59 and 7.59) and respondents' opinion (4.47 and 8.19), of LLI and LMI respectively. This may be due to the fact that the LMI group had easier access to recreational facilities than the LLI groups, as they had the finance for transport to reach the facility unlike the latter group. Commutation to and from

the facility seemed to be the biggest constraint in utilizing the services of recreational facilities, as major parks, zoos, playgrounds etc., usually cover a large expanse of land area, generally located at far off distances from residential areas, and are inevitably very few in number. Commutation as a constraint in the utilization of facilities was also seen in some earlier studies reviewed, in this context, which were conducted abroad as well as in India, Burgess (1927), Delhi Pilot Project (1961), Greater London Council (1968), Dee (1970), Central Steering Group (1971), Northwest Regional Study (1972).

V. Degrees Of Satisfaction In Goal Achievement

Every family sets certain broad goals for health, educational, recreational and other needs of its members. The urban poor families must try to achieve these goals with the minimum expenditure of money, a resource most dear to them. Since community facilities exist as free resources, the poor families try to realize their family goals by drawing upon the services of these resources. In this investigation, the degrees of satisfaction that were achieved by each respondent family for each goal-realization through the use of community facilities only, was sought for each of the areas of health, education and recreation.

The degree of satisfaction mentioned by each respondent family, was quantified by scores and the mean scores for each goal was computed for the LLI and LMI groups separately, as well as for the overall sample as a whole. Again, the Grand mean

of all the health, education and recreation goals were computed separately for LLI, LMI and the OS.

The score ranges for various degrees of satisfaction were framed and the mean scores obtained for each goal, under health, education and recreation, by the two income groups and the OS, were given the classified degree of satisfaction, according to the score range under which each mean score fell, (Refer page 201 - Methodology).

An examination of grand mean scores for health and recreational goals reveals 'Satisfaction' in goal achievement through use of community health and recreational facilities, whereas, the Grand mean for educational goals, depicts a total dissatisfaction with this facility on the part of both income groups and the OS (Table 17).

Health goals

The Mean scores computed for each health goal separately, for each income group and for the total sample, fell in the score range of one to two, classified as 'Satisfied'. Hence, on the whole each health goal which was achieved through the use of community facilities by the respondent families of both income groups, and by the total sample, gave the identified degree of satisfaction as just 'Satisfied'. This shows that the respondents were only 'Satisfied' with the community health facilities which were resourceful in attaining their goals.

TABLE 17

MEAN SCORES AND DEGREES OF SATISFACTION REGARDING HEALTH, EDUCATIONAL AND RECREATIONAL GOALS

Sl. No.	Broad Family Goals	Mean Scores With Degrees Of Satisfaction		
		LLI (N = 120)	LMI (N = 120)	OS (N = 240)
A.	Broad Health Goals			
(1)	To maintain good health of members	1.49 (S)	1.27 (S)	1.38 (S)
(2)	To safeguard health through preventive medicine	1.48 (S(	1.28 (S)	1.38 (S)
(3)	To obtain right treatment and maintain a low medical expense	1.46 (S)	1.28 (S)	1.38 (S)
(4)	To obtain right treatment, irrespective of cost	1.32 (S)	1.03 (S)	1.17 (S)
(5)	To get to know about family planning	1.28 (S)	1.05 (S)	1.15 (S)
(6)	To secure health information and increase awareness on health issues	1.38 (S)	1.09 (S)	1.23 (S)
(7)	*Broad Health Goals - Grand Mean	1.40 (S)	1.17 (S)	1.28 (S)
B.	Broad Educational Goals			
(1)	To secure school education and/adult literacy	0.60 (UD)	0.50 (D)	0.56 (UD)
(2)	To obtain books, stationery and/or uniforms	0.51 (UD)	0.39 (D)	0.45 (D)
(3)	To avail the school lunch facility	0.46 (D)	0.38 (D)	0.42 (D)
(4)	To increase creativity and get trained at skilled crafts	0.46 (D)	0.41 (D)	0.43 (D)
(5)	To gain knowledge through reading material and increased social contacts	0.58 (UD)	0.43 (D)	0.51 (UD)
(6)	To inculcate good values, principles and evoke discipline in children	0.65 (UD)	0.48 (D)	0.56 (UD)
(7)	*Broad Educational Goals - Grand Mean	0.54 (UD)	0.43 (D)	0.48 (D)

(continued...)

(continued... Table 17)

Broad Family Goals	Mean Scores With Degrees Of Satisfaction		
	LLI (N = 120)	LMI (N = 120)	OS (N = 240)
C. Broad Recreational Goals			
To provide -			
(1) unrestricted space for family members to recreate themselves	1.40 (S)	1.60 (S)	1.50 (S)
(2) ample means of pleasant scenic viewing	1.35 (S)	1.65 (S)	1.50 (S)
(3) a quiet place for study / reading	1.36 (S)	1.61 (S)	1.48 (S)
(4) a place to indulge in sport	1.38 (S)	1.63 (S)	1.50 (S)
(5) a place for family and/or friends to get together	1.35 (S)	1.61 (S)	1.48 (S)
(6) fresh air to breathe	1.51 (S)	1.74 (S)	1.63 (S)
(7) * Broad Recreational Goals - Grand Mean	1.39 (S)	1.64 (S)	1.52 (S)

* These are the Grand Means computed from mean degrees of satisfaction scores of all Health, Educational and Recreational Goals put together, respectively, viz. A, Grand Average Mean of Broad Health Goals; B, Grand Average Mean of Broad Educational Goals and, C, Grand Average Mean of Broad Recreational Goals.

Educational goals

The mean scores for educational goals exposes a very poor picture of respondents' degree of satisfaction. The LLI group obtained very low mean scores for the educational goals, 'to secure school education/adult literacy'(M = 0.60) 'to obtain books, stationery and/uniforms', (M = 0.51), 'to gain knowledge through reading materials and increased social contacts' (M = 0.58), 'to inculcate good values, principles and evoke discipline in children' (M = 0.65). These scores, being between 0.5 to 1, recorded the 'Undecided' degree of satisfaction, where they were neither satisfied nor dissatisfied, and could not decide whether they had achieved the goal through community educational facility use. Two educational goals however, 'to avail the school lunch facility' and 'to increase creativity and get trained at skilled crafts', met with a 'dissatisfied' mean score of 0.46 for the LLI group, in both cases. Obviously, the school lunch programme was not functioning in the school, so also the latter.

All the educational goals obtained mean scores of 0.50 and below and hence attained the 'Dissatisfied' degree in the case of the LMI group of respondents. On the whole also, the sample of respondents experienced an 'Undecided' and 'Dissatisfied' feeling of goal achievement in the case of each educational goal, obtaining very low mean scores. This reveals that the educational facilities project a very disappointing effect on the values held by the urban poor families for education.

Recreational goals

A glimpse of the last portion of the table contents, distinctly reveals that the LLI respondents obtained mean scores from 1.35 to 1.51 for each of the recreational goals, indicating only a 'Satisfied' degree of satisfaction for the achievement of these goals through the use of community recreational facilities. A similar trend is observed in the LMI category who obtained individual mean scores ranging from1.60 to 1.74, thus attaining a 'Satisfied' degree. The entire sample again obtained a 'Satisfied' degree of satisfaction, for each individual goal. Hence, the recreational facilities availed of by the respondent families, to some extent, did enable achievement of broad recreational goals of both income groups, as, families did visit parks, for all kinds of activities such as study, play, enjoying the landscape, meeting friends etc. and got an opportunity to recreate themselves at a 'free' or 'low' cost, the only constraint being the mode of commutation due to which many could not visit a park or zoo, hence the degree of satisfaction obtained was of the second rank only. However, the opinion of respondents regarding recreational facilities was more positive than negative, unlike the health and educational facilities, where a great many drawbacks were pointed out by the respondents.

VI. Degree Of Desirability Of Significant Features Regarding Community Facilities, As Perceived By Respondents

Community health, educational and recreational facilities, each require a certain standard of functioning, if they are to be considered as facilities which serve the public. For this, there are certain significant features, in each facility, that are desirable to the consumers of services, from these facilities It was felt necessary to obtain information, through the investigation, from both income categories, regarding the degree of desirability of certain salient features under each community facility, which were enlisted in the schedule. ~~The list of significant features were felt to be the basic essentials under each facility, and were listed in the schedule.~~ The list of significant features were felt to be the basic essentials under each facility, and were listed only by the common knowledge of the investigator. These lists were orally presented before the respondents, while they were being interviewed, and each respondent then indicated the degree of desirability of each feature, as it was being stated to them. Tables 18, 19 and 20, that follow, contain information on the frequency and percentage distribution of respondents by income categories, according to their degree of desirability, concerning each salient feature, under health, education and recreation, respectively.

It was observed that a majority of respondents from both income categories, ranging from 65 per cent to over 90 per cent in the LLI group and from 45 per cent to 88 per cent

TABLE 18

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS ACCORDING TO THE DEGREE OF DESIRABILITY OF SIGNIFICANT FEATURES CONCERNING COMMUNITY HEALTH FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Significant Features Regarding Community Health Facilities	Degree of desirability											
		Most Desirable				Desirable				Not Essential			
		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%
(1)	Health facilities should always be kept spotlessly clean and tidy	109	90.8	104	86.7	11	9.2	16	13.3	-	-	-	-
(2)	Patients should be attended upon without any delay	109	90.8	104	86.7	11	9.2	16	13.3	-	-	-	-
(3)	The equipment used should always be kept clean	109	90.8	104	86.7	11	9.2	16	13.3	-	-	-	-
(4)	There should be no dearth of equipment	109	90.8	103	85.8	11	9.2	17	14.2	-	-	-	-
(5)	There should be no shortage of supplies	107	89.2	103	85.8	13	10.8	17	14.2	-	-	-	-
(6)	Consultation should be free of cost	82	68.3	66	55.0	38	31.7	53	44.2	-	-	1	0.8
(7)	Consultation should be at most normal rate	81	67.5	65	54.2	39	32.5	55	45.8	-	-	-	-
(8)	Treatment should be adequate	101	84.2	103	85.8	19	15.8	17	14.2	-	-	-	-
(9)	Post-treatment problems should receive prompt attention	106	88.3	105	87.5	14	11.7	15	12.5	-	-	-	-
(10)	Hospitalization facilities should be adequate	106	88.3	106	88.3	14	11.7	14	11.7	-	-	-	-
(11)	Linen should be changed for each patient regularly	106	88.3	105	87.5	14	11.7	15	12.5	-	-	-	-
(12)	Linen should be changed after each patient vacates	106	88.3	105	87.5	14	11.7	15	12.5	-	-	-	-
(13)	The medical staff should be experienced and well qualified	107	89.2	104	86.7	13	10.8	16	13.3	-	-	-	-
(14)	A medical store should be located within the hospital premises	79	65.8	57	47.5	39	32.5	57	47.5	2	1.7	6	5.0
(15)	Proper dietary service should be available to hospitalized patients	79	65.8	55	45.8	41	34.2	65	54.2	-	-	-	-
(16)	Some doctors should be available on all days for an adequate period	87	72.5	84	70.0	33	27.5	36	30.0	-	-	-	-

in the LMI group, considered each salient feature as 'most desirable' for health facilities, while a much lower percentage, in both groups, considered the features to be 'desirable' with regard to health facilities (Table 18). Only one family (0.8 per cent) of LMI group, felt that 'free consultation' was 'not an essential' feature, and two families (1.7 per cent) of the LLI and six families (5 per cent) of the LMI groups considered 'location of a medical store within the hospital premises' as not being an 'essential' feature with regard to health facilities. This indicated that the respondents were most clear about what they wanted from the community health facilities, and it was when these were not made available to them, that they felt dissatisfied and did not make use of the services.

Under community educational facilities, it was seen that most of the respondents of the LLI category ranging from 60 per cent to 92 per cent, considered three-fourths, of the significant features as being 'most desirable' with regard to community educational facilities. However only one-third or less considered 'provision of bus facility' (15.8 per cent), 'variety of extra-curricular activities' (30 per cent) and 'lectures held at convenient timings' (27.5 per cent) as being 'most desirable', while a majority of them considered the same three features to be just 'desirable'. Almost one-third of the LLI and less than one-third of the LMI group, considered the first among the three above mentioned features, as 'not essential'. Except for the first and third above mentioned features, the LMI group also indicated a majority

TABLE 19

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS ACCORDING TO THE DEGREE OF DESIRABILITY OF SIGNIFICANT FEATURES CONCERNING COMMUNITY EDUCATIONAL FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Significant Features Regarding Community Educational Facilities	Degree Of Desirability											
		Most Desirable				Desirable				Not Essential			
		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%
(1)	Classroom should be spacious	105	87.5	99	82.5	15	12.5	21	17.5	-	-	-	-
(2)	Classroom should always be clean and tidy	104	86.7	100	83.3	16	13.3	20	16.7	-	-	-	-
(3)	Adequate facilities in the form of comfortable furniture, lighting and materials should be provided in the school	101	84.2	99	82.5	19	15.8	21	17.5	-	-	-	-
(4)	There should be a good teadher-student ratio	105	87.5	106	88.3	15	12.5	14	11.7	-	-	-	-
(5)	Teachers should be experienced and well trained	105	87.5	104	86.7	15	12.5	16	13.3	-	-	-	-
(6)	Books, stationery and uniforms should be available in the school, free of cost	90	75.0	52	43.3	30	25.0	66	55.0	-	-	2	1.7
(7)	Children should be given proper attention in and out of the classroom	107	89.2	101	84.2	13	10.8	19	15.8	-	-	-	-
(8)	Strict discipline should be maintained	111	92.5	107	89.2	9	7.5	13	10.8	-	-	-	-
(9)	Admission should be free of cost	74	61.7	53	44.2	44	36.7	65	54.2	2	1.6	2	1.6
(10)	Admission fee should be most nominal	72	60.0	48	40.0	47	39.2	69	57.5	1	0.8	3	2.5
(11)	Health and nutrition facilities should be provided free of cost	78	65.0	53	44.2	42	35.0	66	55.0	-	-	1	0.8
(12)	The school must provide a bus facility	19	15.8	9	7.5	66	55.0	81	67.5	35	29.2	30	25.0
(13)	Adequate variety of extra-curricular activities should exist in the school	36	30.0	50	41.7	83	69.2	70	58.3	1	0.8	-	-
(14)	Lectures should be held at convenient timings	33	27.5	32	26.7	86	71.7	88	73.3	1	0.8	-	-
(15)	Adult literacy programmes should be held regularly at convenient timings	75	62.5	70	58.3	45	37.5	49	40.8	-	-	1	0.8
(16)	A library containing useful reading material should be accessible during convenient timings	72	60.0	72	60.0	48	40.0	47	39.2	-	-	1	0.8

of respondents who considered all the features as being 'most desirable'. 'Lectures to be held at convenient timings' was considered by 73.3 per cent of the LMI respondents, as being 'desirable'. About 54 per cent to 67 per cent of LMI respondents also considered certain other features as being 'desirable'. Very few families reported some of the features as being 'not essential' (Table 19). In this category also, it may be observed that respondents had a good knowledge of the requirements of education, which could be provided by well-organized community educational facilities.

A majority of respondents from LLI and LMI categories, ranging from 65 per cent to over 90 per cent of the former and from 59 per cent to about 86 per cent of the latter, considered all the significant features mentioned under recreational facilities, as being 'most desirable' (Table 20). Less than 30 per cent of LLI and LMI respondents, considered the features as 'desirable', except in case of one feature viz., 'pleasant music should be played in the park', where 30 per cent of LLI and 40.8 per cent of LMI respondents considered it as being just 'desirable'. Very few features were considered 'not essential' by a meagre number of respondents from the LLI group alone. Only five (4.2 per cent) respondents of the LMI group considered the feature, 'only medically certified persons should be permitted to use the swimming pool', as being 'not essential'.

The data repeatedly disclosed the values held by both income categories regarding desirable recreational requirements,

TABLE 20

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS ACCORDING TO THE DEGREE OF DESIRABILITY OF SIGNIFICANT FEATURES CONCERNING COMMUNITY RECREATIONAL FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Significant Features Regarding Community Recreational Facilities	Degree of Desirability											
		Most Desirable				Desirable				Not Essential			
		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%
(1)	The venue of the recreational facilities should always be kept clean and tidy	109	90.8	103	85.8	11	9.2	17	14.2	-	-	-	-
(2)	Large dust bins should be placed at strategic points	107	89.2	103	85.8	13	10.8	17	14.2	-	-	-	-
(3)	Play space for children should be adequate	105	87.5	104	86.7	15	12.5	16	13.3	-	-	-	-
(4)	Play space should be free and unrestricted	104	86.7	104	86.7	16	13.3	16	13.3	-	-	-	-
(5)	A close vigil by authorities should be maintained to curb all immoral activities in a park and to maintain safety	106	88.3	102	85.0	14	11.7	18	15.0	-	-	-	-
(6)	All nuisance elements should be handled seriously by authorities	101	84.2	101	84.2	19	15.8	19	15.8	-	-	-	-
(7)	A park should have a well-planned pleasant landscape	101	84.2	99	82.5	19	15.8	21	17.5	-	-	-	-
(8)	Added attractions like boating should be provided in the park	85	70.8	88	73.3	34	28.3	32	26.7	1	0.8	-	-
(9)	Pleasant music should be played in the park	78	65.0	71	59.2	36	30.0	49	40.8	6	5.0	-	-
(10)	A park should be spacious and have comfortable venues to relax	91	75.8	95	79.2	28	23.3	25	20.8	1	0.8	-	-
(11)	Adequate play equipment should be available	88	73.3	92	76.7	32	26.7	28	23.3	-	-	-	-
(12)	The park should be well illuminated	91	75.8	84	70.0	28	23.3	36	30.0	1	0.8	-	-
(13)	A zoo should have the 'safari' facility as an added attraction	103	85.8	102	85.0	17	14.2	18	15.0	-	-	-	-
(14)	Only medically certified persons should be permitted to use the swimming pool	103	85.8	100	83.3	12	10.0	15	12.5	5	4.2	5	4.2
(15)	Museums should have a well organized arrangement of worthwhile exhibits	101	84.2	99	82.5	18	15.0	21	17.5	1	0.8	-	-
(16)	Playgrounds should not be isolated but located in safe areas	100	83.3	103	85.8	20	16.7	17	14.2	-	-	-	-

as was the case with respect to other facilities as well. The respondents, apparently, sought the most essential requirements of a recreational facility, before deciding upon whether the facility was of value to them or not. They seemed to be very clear in their perception of what they ought to receive from community recreational facilities, in order to promote the recreational interests and goals of their families.

This valuable information was elicited, only to feel the pulse of the respondents, to explore whether they were aware of the dividends in the form of benefits from community facilities, which exist for their utilization and whether they were knowledgeable about the existence or non-existence of such features in the facilities, that were used, or not used by them. In fact, it seemed most likely, that a knowledge of these significant features, could have been the key factor responsible for their utilization or non-utilization of a facility.

VII. Range Of Service Preferences Regarding Community Facilities

Several studies have revealed that 'distance' of a facility from place of residence, or, mode of commutation from residence to facility is a major determinant of facility use. Burgess (1927); Delhi Pilot Project (1961); Banwasi Seva Ashram (1970); Dee (1970); Central Steering Group (1971); Anand and Srinivase (1972); North-West Regional Study (1972); Sapru et.al., (1975); Ram et.al., (1976); India Population Project (1981); Khan et.al., (1982) and Mukherjee (1982). It was considered worthwhile and most valuable, to obtain from the respondents,

of both income categories, the range of service they felt most desirable for each of the major health, educational and recreational facilities, available to them.

Range of service, refers to the farthest distance over which people are willing to go, to avail themselves of the goods or services.

This bit of data seemed imperative to reveal the locational requirements of facilities for the respondents' use and could be used as a clue in future by planners, administrators and designers. It could also reveal the kind of influence 'distance' has on the use of facilities, whether as a facilitator (mainly for LMI groups who can spend money on transportation) or a constraint (mainly for the LLI group who cannot afford the same). Information on range of service requirements in frequency and percentage distributions, income-wise is reported in Table 21, and a graphical representation of the same in Figure 22.

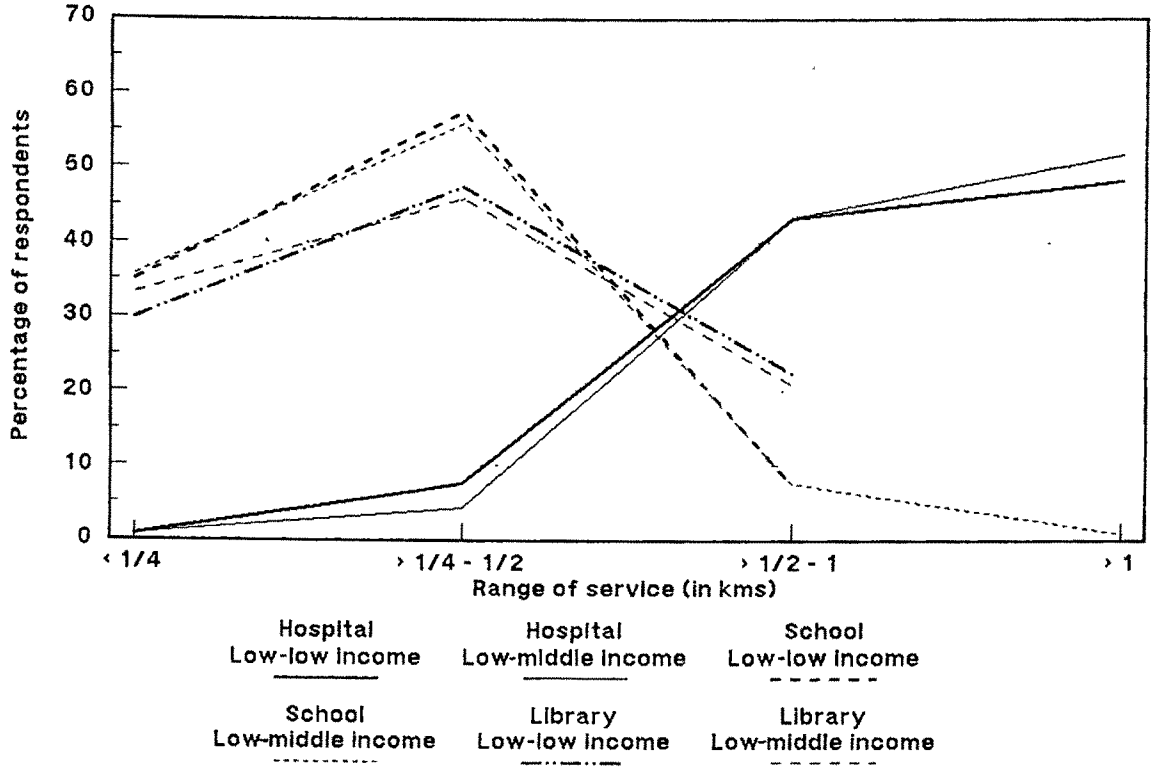
Very similar requirements of majority of both income groups, regarding the range of service for the selected community facilities, were observed. Almost similar percentages of LLI and LMI respondents gave the same distance range as the preferred range of service. With regard to the hospital or health centre, the maximum percentage of LLI (48.3 per cent) and a majority of LMI (51.7 per cent) respondents claimed that it could be located above one kilometre from their residence, but not beyond two to two and a half kilometres, while, 43.3 per cent of both income groups wanted the facility to be located within half to one kilometre from their residence. Since an institution like a

TABLE 21

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS INDICATING THE RANGE OF SERVICE PREFERENCES OF SELECTED COMMUNITY FACILITIES

LLI : N = 120
LMI : N = 120

Sl. No.	Selected Community Facilities	Range Of Service (In Kilometres)															
		Less than $\frac{1}{4}$				Above $\frac{1}{4}$-$\frac{1}{2}$				Above $\frac{1}{2}$ - 1				Above 1			
		LLI		LMI		LLI		LMI		LLI		LMI		LLI		LMI	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
(1)	Hospital/Health Centre	1	0.8	1	0.8	9	7.5	5	4.2	52	43.3	52	43.3	58	48.3	62	51.7
(2)	School	42	35.0	43	35.8	69	57.5	67	55.8	9	7.5	9	7.5	-	-	1	0.8
(3)	Library	36	30.0	40	33.3	57	47.5	55	45.8	27	22.5	25	20.8	-	-	-	-
(4)	Park	5	4.2	5	4.2	23	19.1	17	14.2	71	59.2	73	60.8	21	17.5	25	20.8
(5)	Playground	46	38.3	47	39.2	70	58.3	63	52.5	4	3.3	9	7.5	-	-	1	0.8



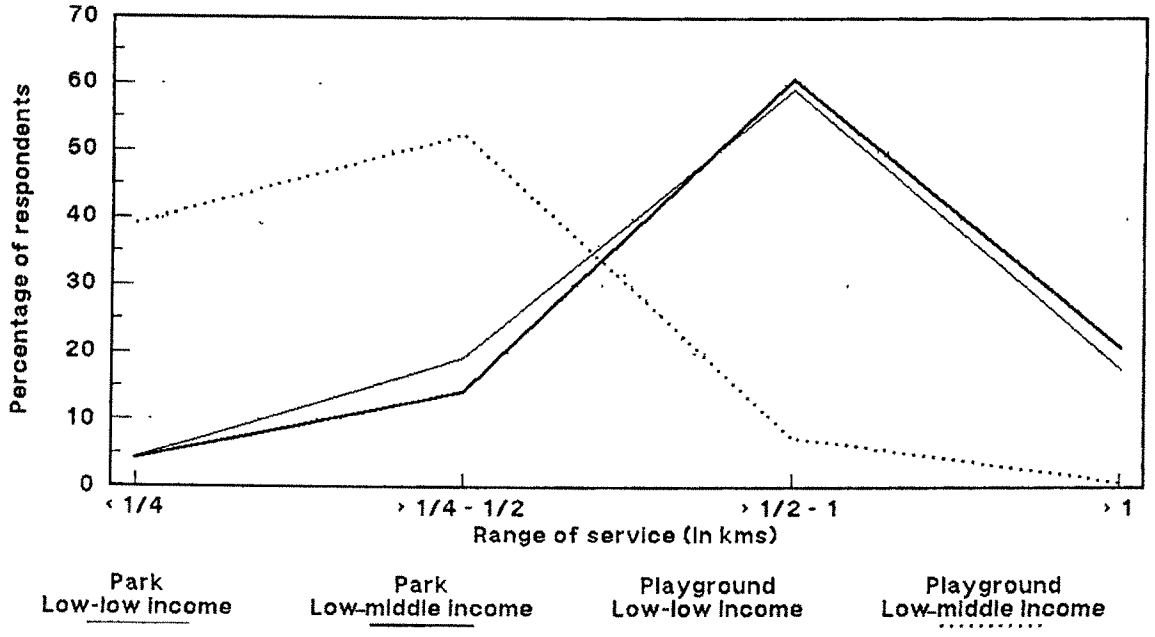


FIGURE 22

GRAPH PLOTTING THE COMPARISON OF RANGE OF SERVICE PREFERENCES OF SELECTED COMMUNITY FACILITIES.

hospital, cannot be located near to the residential areas, these requirements of most of the respondents seem realistic enough, as they did not mind travelling over one kilometre to avail of the hospital services. Nearly 60 per cent of respondents from both categories desired the school to be within one-fourth to half a kilometre, as the children had to go to school by themselves. A slightly lower percentage of respondents desired the school to be within one-fourth kilometre of their residence. The public library was required to be located within one-fourth to half a kilometre from the residence of nearly 50 per cent of respondents in both groups, while, about one-third each of the two groups wanted it within quarter kilometre. Nearly one-fourth of the respondents in each group, were willing to accept half to one kilometre as the preferred range of service, with respect to the library facility. A park covers a vast expanse of greenland, and hence, cannot always be located near to one's residence. Hence, about 60 per cent of respondents from both categories expressed the desired range of service to be between half to one kilometre, while a lower percentage did not mind travelling over one kilometre to reach a park. A playground is another facility, an expanse of barren land used for play/sport, which cannot always be in the vicinity of the neighbourhood. Being aware of this fact, over 50 per cent respondents in both groups desired the playground to be quarter to half a kilometre from their residence. However, nearly 40 per cent in each case, also desired location of the facility within quarter kilometre of their residence.

It may be observed that most of the respondents mainly

desired the range of service as quarter to half a kilometre in case of the school, library and playground, or half to one kilometre as in the case of a park. A facility such as a hospital, being used occasionally or rarely, was accepted to be located even beyond one kilometre. These ranges of service desired by the respondents of both income categories revealed a confluence of ideas between both groups and exposed the realistic approach to the use of facilities, as they were willing to travel distances, by practical standards, if the services rendered by the facilities were useful and fruitful.

This information gives planners valuable qualitative and quantitative guides for allocating the proper types of facilities to locations within residential sub-areas, and for reserving the required area of space for each.

VIII. Testing The Hypotheses

In order to test the hypotheses, predicted for the study, Analysis of Variance (Appendix V) and Multiple Regression Analysis were computed. When Multiple Regressions showed significant 't' values, these significant variables were again subjected to the Step-wise Regression Analysis, which revealed 'F' values suggesting significance or non-significance of variables. This was the main statistical test which revealed the influence of various factors as independent variables, on the utilization of facilities, as the dependent variable. The Principal Component Analysis was computed as a method of reduction of scores into a single standardized score and the Canonical Correlation Analysis was a test statistic done to

find out the combined correlation between two sets of variables.

All the hypotheses were tested for influence of the explanatory variables on the dependent variable 'utilization of facilities' which was obtained through various kinds of data from the schedule. Hence the dependent variable in different forms of data, was regressed on the independent variables, such that each hypothesis was tested in more than one combination of dependent and independent variables.

Hypothesis 1 : The utilization of health services among both the income categories and the overall sample is not influenced by social factors (Tables 22 and 23).

First combination

The dependent variable utilization of health services was regressed on the social factors like family type, family size, represented by total adults, and total children, education of head, occupation of head and monthly family income, as well as health status of families.

In the Multiple Regression Analysis, it was found that the Beta Coefficients (these estimate the relative importance of individual predictors in explaining variance in the dependent variables - use of services) were not significant even at 15 per cent, except for total adults and monthly family income, having a negative influence in the case of the OS. In particular, the variable, total adults, had a lower 't' value (Prob. > T = .03; Sig. .05) than the variable, monthly family income (Prob. > T = .11; Sig. .15). Even in a Single-variate Regression, it was found

that, total adults had a somewhat significant value (Prob.>T = .07; Sig. .10), while in a Two-variate Regression, as indicated by the Step-wise Regression, both total adults and monthly family income, were obtained, as relatively much more significant, other variables showing a definite non-significant influence. The Step-wise Regression, procedure when applied to the above two variables revealed 'F' values that were somewhat significant (total adults, F = .07 and monthly family income, F = .08) at 10 per cent. Hence, it may be inferred that among the social variables considered, these two variables had a somewhat significant influence, total adults having a positive influence and monthly family income having a negative indluence on the use of health services. Although the significance was at a level of 10 per cent, the possibility of a slight direct and indirect influence of both the variables, cannot be ruled out.

With regard to the LLI category, the Multiple Regression Analysis of the same social variables revealed a very significant 't' value (Prob.>T = .01; Sig. .01) for the total adults and a somewhat significant value for monthly family income (Prob.> T = .11) which again revealed a negative influence. However, when these two variables were put through the Step-wise Regression, only the former met the 15 per cent significance level for entry into the model, Prob.> F being .14, Sig. .15, which is rather low. The LMI category however, did not seem to show significance of any social factor through both the tests, hence revealing that, in the case of this income group, none of the above social factors had any influence on the utilization of health services.

With regard to the influence of various factors comprising the health status of families in the OS, only one aspect of health status, viz., 'adults not easily catching ailments', emerged somewhat significant in the Multiple Regression Analysis (Prob.> T = .07; Sig. .10) and was taken up in the Step-wise Regression procedure with a Prob.> F value again as .07; Sig. .10. Hence, again it may be inferred that this aspect of the variable health status does have a somewhat significant influence on use of health services, rather low use or non-use of the services. The same aspect of health status was not accepted in the two regression tests, in the case of the LLI category, revealing no influence of the variable on use of health services. With regard to the LMI category, the Beta coefficient was significant at 5 per cent level with a Prob.> T value of .05, in the Multiple Regression Analysis. When this variable was put through the Step-wise Regression procedure, it emerged very significant (Prob.> F = .01; Sig. .01, Table 23), indicating that the health status of adults, did have a strong influence on utilization of health services, perhaps low or non-use of the same, as appeared earlier. No other aspect of health status in all the three cases seemed to have any kind of influence on the dependent variables, as indicated clearly by the non-significant 't' values in the Multiple Regression Analysis (Table 22).

Thus, the null hypothesis was rejected for the variables total adults in a family, and the monthly family income, both of which emerged somewhat significant in influencing the use of health services, the latter negatively, in the case of the OS.

TABLE 22

MULTIPLE REGRESSION ANALYSIS

DEPENDENT VARIABLE : UTILIZATION OF HEALTH SERVICES

Sl. No.	Variables	Parameter estimate			Standard error			T for H:Parameter=0			Prob. > T		
		OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Family type	0.11	0.89	-0.46	0.63	0.82	1.01	0.18	1.08	-0.45	0.8555	0.2804	0.6468
(2)	Total adults	0.47	0.84	0.04	0.22	0.35	0.37	2.12	2.38	0.12	0.0346*	0.0186**	0.9028
(3)	Total children	0.18	0.36	0.00	0.17	0.28	0.29	1.04	1.25	0.00	0.2995	0.2113	0.9979
(4)	Education of head	-0.07	0.06	-0.17	0.19	0.30	0.25	-0.38	0.21	-0.69	0.7000	0.8328	0.4914
(5)	Occupation of head	0.02	-0.24	0.19	0.13	0.19	0.18	0.20	-1.23	1.05	0.8393	0.2184	0.2939
(6)	Monthly family income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.58	-1.58	0.16	0.1140	0.1157	0.8725
(1)	Health status Adults	0.07	0.05	0.39	0.76	1.06	1.18	0.09	0.05	0.32	0.9261	0.9553	0.7428
(2)	Health status Children	-0.00	0.04	-0.28	0.69	0.89	1.26	-0.00	0.05	-0.22	0.9978	0.9567	0.8223
(3)	Frequency sickness Adults	-0.17	0.51	-0.49	0.49	0.13	0.74	-0.36	0.70	-0.65	0.7195	0.4853	0.5119
(4)	Frequency sickness Children	-0.07	-0.47	0.05	0.40	0.67	0.58	-0.18	-0.71	0.08	0.8548	0.4759	0.9309
(5)	Catching ailments Adults V.E.	-0.11	1.04	-0.69	0.67	1.10	0.96	-0.16	0.94	-0.72	0.8691	0.3456	0.4706
(6)	Catching ailments Adults N.E.	0.26	0.03	0.43	0.14	0.20	0.22	1.76	0.17	1.96	0.0789	0.8649	0.0516*
(7)	Catching ailments Children V.E.	-0.18	-0.52	0.28	0.38	0.49	0.73	-0.49	-1.05	0.38	0.6239	0.2933	0.6999
(8)	Catching ailments Children N.E.	-0.02	0.08	-0.06	0.18	0.25	0.27	-0.12	0.28	-0.24	0.9002	0.7759	0.8093
(9)	Exhaustion adults	-0.04	-0.18	-0.33	0.47	0.63	0.82	-0.10	-0.28	-0.40	0.9163	0.7732	0.6899
(10)	Exhaustion children	0.32	0.32	0.23	0.32	0.37	0.86	0.98	0.88	0.27	0.3236	0.3798	0.7857
(1)	Characteristic Feature Score	2.78	3.75	2.05	0.53	0.78	0.71	5.23	4.76	2.86	0.0001****	0.0001****	0.0049**
(2)	Situational Factor Feature Score	4.14	3.81	4.47	0.50	0.68	0.76	8.13	5.56	5.85	0.0001****	0.0001****	0.0001****
(3)	Respondents' opinion Feature Score	2.73	2.55	2.84	0.29	0.42	0.42	9.18	6.02	6.75	0.0001****	0.0001****	0.0001****
(1)	Health Feature Score HFSCI	0.50	0.52	0.48	0.05	0.07	0.08	8.97	6.68	5.97	0.0001****	0.0001****	0.0001****

**** Significant at 0.0001 level
** Significant at 0.01 level
* Significant at 0.05 level

TABLE 23

STEPWISE REGRESSION ANALYSIS

HEALTH FACILITY USE

Sl. No.	Dependent Variable	Step	Factors listed by order of entry	df	OS		LLI		LMI	
					F Value	Prob>F	F Value	Prob.>F	F Value	Prob>F
(1)	Use of health services	1	Total Adults	1	3.1721	0.0762	2.1587	0.1444	-	-
		2	Monthly family income	2	3.0395	0.0826	-	-	-	-
		1	Adults catching ailments not easily	1	3.1801	0.0758	-	-	5.7495	0.0181**
(1)	Characteristic Feature Frequency Score	1	Total Adults	1	-	-	3.0094	0.0854	-	-
		2	Monthly family income	1	-	-	2.5050	0.1162	-	-
(2)	Situational factor Frequency Score	1	Total Adults	1	2.1034	0.1483	3.8971	0.0507*	-	-
		2	Monthly family income	2	-	-	2.1839	0.1421	-	-
(3)	Respondents' opinion Frequency Score	1	Education of head	1	4.1817	0.0420*	-	-	-	-
		1	Total Adults	1	-	-	2.5297	0.1144	-	-
		2	Monthly family income	2	-	-	2.2992	0.1321	-	-
		3	Occupation of head	3	-	-	2.3848	0.1252	-	-
(1)	Characteristic Feature Frequency Score	1	Children catch ailments very easily	1	-	-	3.1872	0.0768	-	-
		1	Health status of adults	1	-	-	-	-	2.2831	0.1335
(2)	Situational Factor Frequency Score	1	Children catch ailment very easily	1	-	-	2.6114	0.1088	-	-
(3)	Respondents' Opinion Frequency Score	1	Health status of adults	1	-	-	-	-	2.5843	0.1106

** Significant at 0.01 level; * significant at 0.05 level.

However, in the case of the LLI category the null hypothesis was partly rejected for the variable total adults in the family only. In the case of the LMI category, since no variable met even the 15 per cent level of significance, no factor seemed to influence the utilization of health services, hence in this case the null hypothesis was accepted for all the social factors. It was accepted for the variables family type, total children in the family, education of head, occupation of head, when applied to the OS and also for monthly family income, when applied to the LLI category alone. With regard to health status as a factor influencing use of health services, the null hypothesis was rejected in the case of the OS and the LMI category with respect to the variable 'adults not easily catching ailments', but accepted when applied to the LLI category.

Thus, it may be inferred that the social variables, viz., the demographic factor family size, in relation to the total adults in the family, in the case of the OS and the LLI group, the economic factor monthly family income, in the case of the OS, and the health status of adults, in them not catching ailments easily in the case of the entire sample and the LMI group, did have an influential role in some way, over the utilization of health services. No other social factor seemed to influence this behavioural aspect of the families studied.

Second combination

The Health Characteristic Feature Frequency Score (CFFRSC), Situational Factor Frequency Score (SFFRSC) and the Respondents' Opinion Frequency Score (ROFRSC) again representing

frequency of use of health services were also regressed on the same social variables, through Multiple Regression and Step-wise Regression Analyses. When the CFFRSC was regressed on the social factors through the Multiple Regression Analysis, it was found that no factor emerged significant even at the 15 per cent level, for the OS, therefore, the same is not reported as a table. With regard to the LLI category when CFFRSC was regressed on the social factors, the Beta coefficients of all variables did not meet even the 15 per cent level of significance, except again in the case of a low 't' value for the variable total adults (Prob.>T = .02; Sig. .05) and a higher 't' value for the variable monthly family income, negatively influencing the dependent variable (Prob.>T = .15; Sig. .15). However, when the Step-wise procedure was applied, the variable total adults again obtained a somewhat significant Prob. F Value (Prob.> F = .08; Sig. .10) while the monthly income variable, obtained a less significant value (Prob.> F = .11; Sig. .15) having a negative influence.

With regard to the LMI category, when CFFRSC was regressed on the social factors, no variable met even the 15 per cent level of significance. When the SFFRSC was regressed on the social factors with regard to the OS, only total adults had a small Prob.> T value, however not lower than 15 per cent. Even so, when this variable was put through the Step-wise Regression Analysis, it came out to be significant only at 15 per cent (Prob.> F = .14; Sig. .15) revealing a low significance.

A similar trend is seen among the LLI group, as in the case of CFFRSC, when the SRFRSC was regressed on the social

factors. The variable total adults again showed a low Prob.>T value (Prob.>T = .02; Sig. .05). However, the monthly family income though not significant even at 15 per cent was also put though the Step-wise procedure along with the variable total adults. As Table 23 shows, the variable total adults emerged significant (Prob.> F = .05; Sig. .05), while the variable monthly family income obtained a lesser significance (Prob.>F = .14; Sig. .15) being negatively influential to a certain extent on the frequency of use associated with situational factors of health services of the LLI group. Again, in the case of the LMI category, when the variable SFFRSC was regressed on the social factors, no variable met the 15 per cent level of significance, nor any where near it, to be put through the Step-wise procedure. Hence, here also the social factors did not influence the use of health facilities by LMI category, in the situational factors associated with health services use.

A Multiple Regression Analysis of the ROFRSC on the social factors with regard to the OS revealed the lowest Prob.>T value, to be as that for the variable Education of the Head (0.18). Though this was not significant at 15 per cent it was put through the Step-wise procedure and was found to be significant, (Prob.> F = .04; Sig. .05), revealing that this variable significantly influenced the frequency of use associated with respondents' opinion of health services in a negative fashion. It may be noted that this variable appeared significant only with regard to the OS but not in the case of either income category.

With regard to the LLI category, low Prob.>T values were obtained, for total adults (Prob.>T = .05; Sig. .05), occupation of head (Prob.> T = .12; Sig. .15) and monthly family income, which though not near 15 per cent level, had a lower value of 0.21 and was also included in the Step-wise Regression Analysis. The Table 23 reveals the Prob.>F values for the three variables total adults, monthly family income and occupation of head to be as 0.11, 0.13 and 0.12 respectively, all showing significance only at the 15 per cent level. This leads to the inference that these three variables may have an influence on the use of health services associated with respondents' opinion of facilities, the latter two having a negative influence. When the variable ROFRSC was regressed on social factors with regard to the LMI category, the Prob.> T was lowest for the variable Education of the Head (Prob.>T = .14; Sig. .15), but the same was not accepted by the Step-wise procedure. Hence, as in earlier cases, no social factor seemed to influence even frequency of use associated with respondents' opinion of health facilities, by the LMI group.

It may be inferred from the above, that these dependent variables, on use of health services, also are influenced by the same explanatory variables, total adults and to a certain extent negatively by monthly family income in the case of the OS and the LLI group, more so, in the latter. Education of head emerged significant in negatively influencing the variable ROFRSC, for the OS, and occupation of head was found to play a negatively influential role in the health services use associated with respondents' opinion, though not to a significant degree in

the case of the LLI group. The trend through these results apparently pin-points the two main variables, total adults and monthly family income, where the former positively influences and the latter, negatively, and to a less significant degree, influences the use of health services. It would not be wrong therefore, to infer that these two variables do have a definite impact on health service use.

The null hypothesis in this case too is rejected for the variables total adults and monthly family income and occupation of head to some extent, for the LLI group and total adults, education of head, for the OS. It is accepted for the variables family type and total children, in case of the respective two sample groups, and for all the social factors in case of the LMI group, as no variable appeared significant, even at 15 per cent in this category. The dependent variables CFFRSC, SFFRSC, and ROFRSC, were also regressed on the various aspects of health status, as done earlier for the dependent variable use of health services.

The Multiple Regression Analysis of all the three dependent variables on the aspects of health status as the explanatory variables, did not reveal any significant factor for the OS in each case, therefore the table is not reported. Hence it may be concluded that no aspect of health status influenced the frequency of use of health services associated with the above features, with regard to the OS.

When regressions were computed for the dependent variable CFFRSC on the aspects of health status for the LLI group, the

lowest Prob.>T value was obtained for the variable,'children catch ailments very easily', (Prob.>T = .18) though not significant at even 15 per cent. In the Step-wise Regression (Table 23), this variable obtained a low Prob.>F value (Prob.>F = .07; Sig. .10), showing a somewhat significant, negative influence on the dependent variable, which meant that the ease with which children catch ailments had a negative role in influencing health service use behaviour, associated with the characteristic features of the health facilities.

The dependent variable CFFRSC when regressed on the same health status variables of the LMI group, showed low Prob.>T values for health status of adults, frequency of sickness in adults, exhaustion felt by children. But in the Step-wise Regression, only the variable, health status of adults emerged slightly significant (Prob.>F = .13; Sig. .15) showing that it had a minor role in influencing the frequency of use associated with characteristic features of health facilities, among the LMI group.

The SFFRSC when regressed on the health status variables, for the LLI group, the lowest values were found for the variables, 'children catch ailments very easily' and 'adults catch ailments not easily' and in the Step-wise procedure, only the former variable again emerged somewhat significant (Prob.> F = .10; Sig. .10) showing a negative influence on frequency of use associated with the situational factors of health facilities, which again meant that the ease with which children catch ailments, had a negative role in influencing health service use

behaviour associated with the situational factors of health facility use. The LMI group showed no significant health status variable to influence this aspect of health service use.

With regard to the ROFRSC, the LLI group showed no significant health status variables in the Multiple Regression Analysis. In the case of the LMI group, the variables,'exhaustion felt by adults and children, frequency of sickness in adults and health status of adults' which had the highest Prob.> T value and hence least significant of the four, and which were also no where near the 15 per cent level of significance, were picked and put through the Step-wise procedure. Surprisingly, the variable health status of adults, was the only one accepted and seemed to be very slightly significant (Prob.> F = .11; Sig. .15) showing that the health status of adults, in a minor way influenced the frequency of use of health services, associated with the respodents' opinion, with regard to the LMI group.

The above computations reveal that, the null hypothesis that, 'the health status of families does not influence use of health facilities', was partly rejected for variables such as 'children catch ailments very easily, and health status of adults' while the hypothesis is accepted for all the other health status variables. Hence, the above two variables in a somewhat significant way, do influence the use of health services, the former negatively and the latter positively, in the case of LLI and LMI groups respectively.

Hypothesis 2 : The utilization of health services, among both the income categories and the overall sample is not influenced by physical factors (Table 22 and 23).

First combination

The dependent variable utilization of health services through CFFRSC, SFFRSC,ROFRSC, were regressed on the independent variables, characteristic features of facilities, situational factors faced by families and respondents' opinion regarding facilities, respectively, and again on resource availability and location.

The Multiple Regression Analysis of the characteristic feature frequency score (dependent variable signifying frequency of use of health facilities) on the characteristic feature score (independent explanatory variable signifying characteristic features of the facilities as perceived by respondents) gave a Prob.>T figure of extremely high significance in the case of the overall sample, (Prob.>T = .0001; Sig. .0001) and LLI group (Prob.>T = .0001; Sig. .0001), and of high significance for the LMI group (Prob.>T = .004; Sig. .01). This shows that the frequency of use of health facilities associated with characteristic features was very greatly influenced by the perception of respondents' regarding the characteristic features of health facilities, in the case of the sample taken as a whole, as well as for the two income groups.

Again the Beta coefficient of SFFSC (situation score) when regressed upon by the SFFRSC (utilization score) reported

Prob.>T values of extreme high significance in the case of the OS (Prob.>T = .0001; Sig. .0001) LLI group (Prob.>T = .0001; Sig. .0001) and the LMI group (Prob.>T = .0001; Sig. .0001). This again, showed the very strong impact of the situational factors experienced by respondents, on the frequency of use of health facilities, under those conditional factors. They seemed to bear a very firm bond of cause and effect relationship, as in the earlier case.

Strongly again, it was seen, when the ROFRSC (utilization score) was regressed on the ROFSC (opinion score), by way of a Single-variate regression, as in the above two cases, the Beta coefficient like-wise, gave Prob.>T values of the same extreme degree of significance, for the OS (Prob.>T = .0001; Sig. .0001), the LLI group (Prob.>T = .0001; Sig. .0001), as well as for the LMI group (Prob.>T = .0001; Sig. .0001), as shown in Table 22. In this case too, a most highly significant influence of the respondents' opinion regarding the community health facilities seemed to govern the frequency of use of these facilities, associated with the opinions of the respondents, in each sample grouping. A very close and strong, cause and effect relationship is clearly discernable between the two variables studied.

The above tests show the cause and effect relationship of the two variables in each case viz., CFFRSC and CFSC; SFFRSC and SFFSC; and ROFRSC and ROFSC, the former being the dependent variable and the latter the independent variable, in each case. However, each respective pair of variables is

represented by means of scores, showing in all, three sets of scores, viz., three frequency of use scores (dependent variables) and three feature scores (independent variables).

Second combination

The Multiple Regression Analysis done by using these sets of scores, was visualized to perhaps give a general picture of the cause and effect relationship, hence two more sophisticated and authentic tests, namely the Principal Component Analysis and the Canonical Correlation Analysis were computed on the same variables, the outcome of which is explained in the following paragraphs.

The Principal Component Analysis, combined the three frequency scores, into a single summarized score termed 'Health Frequency Score', and also the three feature scores into a single summarized score called 'Health Feature Score' in the case of each respondent family. This summarization brought out the individual differences to the maximum extent, as the test was made for the three scores on each family, so as to obtain a single score representing clearly the differences in families. This test revealed whether the coefficients of the three variables in each case (frequency of use and feature) of a single family are given equal weightage or not.

As can be seen from the results of the test for the OS (Appendix VI), the Eigenvector Coefficients are of the same order as shown below :

EIGENVECTORS FOR HFRSC 1

	OS	LLI	LMI
CFFRSC	0.579114	0.579741	0.578506
SFFRSC	0.575635	0.573582	0.577586
ROFRSC	0.577296	0.578709	0.575957

However, it is apparent that the three variables of a single family are given equal weightage, by the revelation of the identical Eigenvectors, viz., 0.57. The first Principal Component has an Eigenvalue of 2.96 (Appendix VI), the number of standardized variables being, three. In other words, the first component itself is having a variance of 2.96, that is 98.7 per cent of the total standarized variation. This shows that the first component is therefore, a very good summary of the three scores combined into a single score, and no other components need to be visualized.

In the case of the second set of Eigenvector Coefficients (feature scores), also, an almost similar trend is detectable.

EIGENVECTORS FOR HFSC 1

	OS	LLI	LMI
CFSC	0.592639	0.602659	0.583887
SFFSC	0.524666	0.515117	0.533054
ROFSC	0.611150	0.609473	0.612315

The three variables can be meaningfully combined, and no other variables need to be thought of. Since the cumulative

percentage of variation is 75 per cent, the Lamda (λ) or Eigenvalue being 2.24, the first component can be used, without doubt, as an acceptable summary of the three scores. The first Principal Component's weights may be positive or negative. The first and third Eigenvectors are given similar importance being 0.59 and 0.61 respectively and the second one (situational factor feature score) is given relatively less importance having a slightly lower value of 0.52. However, since the three vectors are almost alike, they are given equal weightage. Hence the test shows that the two sets of scores for each family, can be successfully summarized into single scores without much loss of information. A scrutiny of the Principal Component Analysis for the LLI group and the LMI group also reveals an almost identical trend as shown in the figures above, leading to the same conclusion that the scores for each family in the two income groups could also be successfully summarized into single scores.

The Canonical Correlation Analysis was another test statistic done to confirm the authencity of the cause and effect relationship of the frequency score and the feature score, available as two sets of scores, characteristic, situational and respondents' opinion.

This test is a type of combined correlation between two sets of variables, not taken individually, but as two separate scores. The results of the Canonical Correlation Analysis for the OS (Appendix VII) for the health variables, show that the chances of getting an F, as large as, or larger than 12.5145

is only 0.0001, that is, one in 10,000. Hence, the HO of zero correlation is not accepted, that is, the first Canonical Correlation is to be taken as not zero, and hence whatever is obtained, is an estimate of the Correlation between the two sets.

In the second Canonical Correlation, the chances are 69 out of 100 (69 per cent), and this shows a very good chance of getting the F value of 0.5550 or larger, when the hypothesis is true. Therefore, the HO is accepted that is, the second and higher order correlates are zeros.

The Canonical Correlation makes use of two sets of variables, to see how one set of variables correlate with another set of variables. As seen from the table (Appendix VII), the first Canonical variate for the 'Var' set is having the highest correlation with the first Canonical variate of the 'with' set. In other words, the two sets of variables do have a correlation and the maximum such possible correlation is 0.59, which is achieved by the combination of the first set with weights, 0.060, - .002 and -.019, and the second set with weights - .147, 0.258 and 0.234. It is obvious that in the first case the first variable dominates and in the second case the second variable dominates. The Canonical structure shows that the correlation of each single variable in the set with the first Canonical variate are 0.99, 0.97 and 0.97, that is, a perfect correlation.

A glance at the Canonical Correlation Analysis tables for the LLI and the LMI groups (Appendix VII) reveals an

identical trend, including a perfect correlation between each single variable in the respective sets with the first respective canonical variate for both income categories.

A Single-variate Regression was carried out with the summarized scores for the OS, LLI and LMI categories. The dependent variable was now a summarized version of characteristic feature, situational factor and respondents' opinion frequency score called the 'Health Frequency Score (HFRSC 1)', The independent variable too in each case, was a summarized version of the same three feature scores referred to as 'Health Feature Score (HFSC 1)'.

Hence, the Health Frequency Score was regressed on the Health Feature Score, and in all three cases the Prob.> T value was found to be identical and extremely significant. (Prob.> T = .0001; Sig. .0001 for the OS, LLI and LMI; Refer Table 22).

In the Single-variate regression explained earlier through Table 22, also, where the original scores were used, the Prob.> T value was of the same extreme significance. These two tests, further confirm the authenticity of the cause and effect relationship that exists between the dependent variable frequency score and the explanatory variable feature score in the case of health facilities.

Hence, through the results of the above tests one might infer, that there exists a definite strong causal influence of the characteristic features, situational factors and respondents' opinion over the corresponding effectual 'frequency of use' variables, at an extremely high level of significance.

The dependent variables CFFRSC, SFFRSC and ROFRSC, in the case of the OS, LLI and LMI were also regressed on the physical factor resource available, and location in each case. It was observed that in all cases the Prob.>T was high, showing a not significant influence of the resource availability and location on the 'frequency of use' variables. In other words the availability and location of the government hospital and government health centres did not in any way influence the frequency of use of the same facilities.

On the basis of the above results, the null hypothesis stating that the utilization of health services, among both income categories and the OS is not influenced by physical factors, is rejected with regard to the variables characteristic features of health facilities, situational factors faced by families and respondents' opinion regarding health facilities, as an extremely significant influence of the explanatory variables on the dependent variables, is seen in connection with all the sample groups. However, the null hypothesis is accepted for the variable resource availability and location with regard to all the three groups studied.

Hypothesis 3 : Educational services use, among both the income categories and the overall sample, is not affected by the stipulated social factors, excluding health status of the family.

First combination

In order to test the above hypothesis, each service use

related to educational facilities, was individually regressed on the explanatory social variables, for the three sample categories (Table 24).

When the dependent variable utilization of school facilities was regressed on the social factors, it was seen that the variables total adults (Prob.> T = .008; Sig. .01) emerged very significant; total children (Prob.> T = .0001; Sig. .0001) was extremely significant, education of head (Prob.> T = .05; Sig. .05) was significant, Monthly family income (Prob.>T = .02; Sig. .05) was significant and occupation of head (Prob.>T = .08; Sig. .10) was somewhat significant, in the case of the OS. However, when these variables were put through the Step-wise regression procedure only three variables came to be significant viz., total children (Prob.> F = .0001; Sig. .0001) extremely significant; Education of head (Prob.> F .0002; Sig. .001) highly significant in a negative way and occupation of head (Prob.> F = .03; Sig. .05) significant negatively at 5 per cent level (Table 25).

With regard to the LLI category, the Multiple Regression test showed Beta coefficients of family type, somewhat significant (Prob.> T = .06; Sig. .10), total children, very significant (Prob.>T = .01; Sig. .01), education of head, significant (Prob.> T = .02; Sig. .05) and occupation of head, somewhat significant (Prob.> T = .10; Sig. .10). In the Step-wise Regression, only two variables attained a high significance, viz., total children (Prob.> F = .001; Sig. .001) and education of head, negatively (Prob.> F = .01; Sig. .01) while family type (Prob.> F = .06;

TABLE 24

MULTIPLE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Variables: Dependent	Independent	Parameter Estimate: OS	LLI	LMI	Standard - Error: OS	LLI	LMI	T for H:Parameter=0: OS	LLI	LMI	Prob. > T: OS	LLI	LMI
(1)	Classroom Utilization	Family type	0.09	0.17	-0.00	0.06	0.09	0.09	1.44	1.86	-0.07	0.1512	0.0653	0.0383
		Total adults	0.06	0.00	0.00	0.02	0.04	0.03	2.67	0.21	2.50	0.0081**	0.8277	0.0138*
		Total children	0.09	0.08	0.07	0.01	0.03	0.02	5.03	2.52	3.00	0.0001****	0.0128*	0.0033**
		Education of Head	-0.03	-0.07	-0.01	0.02	0.03	0.02	-1.89	-2.27	-0.56	0.0599	0.0250*	0.5722
		Occupation of Head	-0.02	-0.03	-0.02	0.01	0.02	0.01	-1.73	-1.63	-1.27	0.0849	0.1051	0.2063
		Monthly family income	-0.00	0.00	-0.00	0.00	0.00	0.00	-2.28	0.19	-1.78	0.0234*	0.8499	0.0778
(2)	Training in Crafts Utilization	Family type	0.00	-0.01	0.00	0.01	0.02	0.02	0.06	-0.49	0.35	0.9520	0.6213	0.7235
		Total Adults	-0.00	-0.01	0.00	0.00	0.01	0.00	-0.28	-0.96	0.18	0.7743	0.3356	0.8536
		Total children	0.00	0.00	-0.00	0.00	0.00	0.00	0.53	0.26	-0.12	0.5951	0.7884	0.8983
		Education of Head	-0.00	-0.01	0.00	0.00	0.00	0.00	-0.83	-1.80	0.56	0.4036	0.0730	0.5726
		Occupation of Head	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.31	0.31	0.7206	0.7539	0.7538
		Monthly family income	-0.00	0.00	-0.00	0.00	0.00	0.00	-0.26	1.28	-0.89	0.7948	0.2024	0.3718
(3)	Display in Museums utilization	Family type	0.00	0.01	-0.03	0.02	0.02	0.03	0.05	0.66	-0.98	0.9603	0.5064	0.3252
		Total Adults	-0.00	0.00	0.00	0.00	0.01	0.01	-0.60	0.05	0.09	0.5459	0.9562	0.9213
		Total children	0.00	0.01	0.00	0.00	0.00	0.00	0.96	1.67	0.16	0.3340	0.0966	0.8726
		Education of Head	-0.00	0.00	-0.00	0.00	0.00	0.00	-0.68	0.18	-1.02	0.4947	0.8516	0.3068
		Occupation of Head	0.00	0.00	-0.00	0.00	0.00	0.00	0.10	0.18	-0.46	0.9202	0.8565	0.6467
		Monthly family income	-0.00	-0.00	-0.00	0.00	0.00	0.00	-0.53	-0.82	-1.12	0.5906	0.4122	0.2637
(4)	Informative Exhibitions Utilization	Family type	-0.04	-0.03	-0.09	0.03	0.04	0.06	-1.20	-0.77	-1.62	0.2310	0.4405	0.1065
		Total Adults	-0.02	-0.03	-0.03	0.01	0.02	0.02	-1.69	-1.81	-0.06	0.0918	0.0730	0.9514
		Total children	0.00	0.00	0.00	0.01	0.01	0.01	0.45	0.45	0.43	0.6528	0.6489	0.6656
		Education of Head	-0.02	-0.04	-0.01	0.01	0.01	0.01	-2.29	-2.80	-0.70	0.0229*	0.0059**	0.4838
		Occupation of Head	-0.01	-0.00	-0.02	0.00	0.01	0.01	-1.41	-0.16	-1.90	0.1591	0.8661	0.0589*
		Monthly family income	0.00	0.00	-0.00	0.00	0.00	0.00	0.86	1.34	-1.23	0.3881	0.1800	0.2192

**** Significant at 0.0001 level; ** significant at 0.01 level; * significant at 0.05 level.

TABLE 25

STEPWISE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Dependent Variable	Step	Factors listed by order of entry	df	OS		LLI		LMI	
					F Value	Prob.> F	F Value	Prob.> F	F Value	Prob.> F
(1.)	Classroom Utilization	1	Total children	1	16.3632	0.0001****	10.0648	0.0019***	4.7477	0.0313*
		2	Education of Head/Total Adults (LMI)	2	14.5561	0.0002***	6.6145	0.0114**	3.0958	0.0811
		3	Family type/Monthly Income (LMI)	3	-	-	3.5635	0.0616	5.4897	0.0208*
		3/4	Occupation of Head	3/4	4.3155	0.0388*	2.7017	0.1030	-	-
(2)	Display in Museums - Service Utilization	1	Total children	1	-	-	3.6637	0.0580*	-	-
		1	Education of Head	1	-	-	-	-	2.3755	0.1259
(3)	Informative Exhibition - Service Utilization	1	Education of Head	1	4.3404	0.0383*	4.2244	0.0421*	-	-
		2	Total Adults	2	-	-	2.1016	0.1498	-	-
		3	Monthly family income	3	-	-	3.7656	0.0547*	-	-
		1	Occupation of Head	1	-	-	-	-	3.8510	0.0521*
(4)	Frequency of Use of Educational Facilities	1	Education of Head	1	14.9719	0.0001****	-	-	-	-
		2	Total children	2	17.6596	0.0001****	-	-	-	-
		3	Occupation of Head	3	4.6814	0.0315*	-	-	-	-
		1	Total children	1	-	-	13.3907	0.0004***	-	-
		2	Education of Head	2	-	-	11.0256	0.0012***	-	-
		3	Family type	3	-	-	2.4805	0.1180	-	-
		1	Occupation of Head	1	-	-	-	-	4.0973	0.0452*
		2	Education of Head	2	-	-	-	-	2.7324	0.1010

**** Significant at 0.0001 level; *** Significant at 0.001 level
** Significant at 0.01 level; * Significant at 0.05 level

Sig. .10) and occupation of head, negatively (Prob.> F = .10; Sig. .10) were only somewhat significant in influencing classroom utilization by the LLI group.

For the LMI category, the significant variable in the Multiple Regression were found again to be, total adults very significant (Prob.> T = .01; Sig. .01), total children very significant (Prob.>T = .003; Sig. .01) and monthly family income somewhat significant (Prob.> T = .07; Sig. .10) at 10 per cent only. Again in the Step-wise procedure, total children was significant (Prob.> F = .03; Sig. .05) monthly family income was significant, negatively (Prob.> F = .02; Sig. .05) and total adults was only somewhat significant (Prob.> F = .08; Sig. .10), in influencing the dependent variable.

When the dependent variable utilization of 'training in crafts service' was regressed on the social variables, none emerged significant in any sample group except the variable education of head was somewhat significant (Prob.> T = .07; Sig. .10) with respect to the LLI group, but the same was not accepted in the Stepwise Regression. Hence no social variable was found to influence the utilization of training in crafts service of the educational facilities, in any sample group.

The Multiple Regression of the variable 'display in Museum' service utilization on the social variables revealed no significant variables in the case of the OS. In the LLI category, education of head was somewhat significant (Prob.> T = .09; Sig. .10) and it emerged significant in the Step-wise procedure (Prob.> F = .05; Sig. .05), showing a negative influence on

use of the service 'display in Museums'. In the LMI category, education of head again had the lowest 't' value,though not significant even at 15 per cent, but the same was significant at 15 per cent in the Step-wise procedure. (Prob.> F = .12; Sig. .15), having a negative influence of low significance.

Informative exhibitions service utilization was regressed on the social variables, of which education of head obtained a low Prob.> T value (Prob.> T = .02; Sig. .05), total adults, somewhat significant (Prob.> T = .09; Sig. .10) and occupation of head had a low significance value (Prob.> T = .15; Sig. .15), in the case of the OS. The Step-wise Regression procedure only accepted the variable education of head (Prob.> F = .03; Sig. .05) which negatively influenced the use of informative exhibitions in the case of the OS. For the LLI category, total adults was somewhat significant (Prob.> T = .07; Sig. .10) education of head was very significant (Prob.> T = .005; Sig. .01) and monthly family income obtained a low value though not significant even at 15 per cent level. However, the Prob.> F values in the Step-wise Regression Analysis, showed significant values for education of head (Prob.> F = .04; Sig. .05) having a negative influence, total adults very slightly significant (Prob.> F = .14) significant only at 15 per cent in a negative way, and monthly family income (Prob.> F = .05; Sig. .05). In the case of the LMI group only the variable occupation of head was found to be significant, having a negative influence on use of informative exhibitions (Prob.> F = .05; Sig. .05).

The null hypothesis was rejected for the variables total children, education of head (negative influence), and occupation of head (negative influence) influencing use of school facilities for the entire sample, and accepted for the variables family type, total adults and monthly family income. In the LLI category with reference to the same dependent variable, it was rejected for total children and education of head (negative influence) and partly for family type and occupation of head (negative influence). It was accepted for the variables total adults and monthly family income.

In the LMI group, the null hypothesis was rejected for total children, monthly family income (negative influence), and partly for total adults and was accepted for family type, education and occupation of head.

With regard to the utilization of service 'training in crafts', the null hypothesis was accepted in the case of all social variables, as none appeared to be significant in their influence on the dependent variable in the case of any sample group. The null hypothesis was accepted for all social variables when the dependent variable 'display in museum' utilization was regressed, in relation to the OS. However, for the LLI group, it was rejected for education of head (negative influence) and accepted for all others. In the LMI group, it was partly rejected for the same variable education of head which had a very low negative influence on use of 'display in Museum' service and accepted for other variables.

The null hypothesis was rejected for education of head, which influenced (negatively), the use of informative exhibitions, in the case of the OS, but accepted for all other social variables. In case of the LLI category it was rejected for education of head (negative influence), monthly family income and partly for total adults (negatively) which had a low significant influence and accepted for the other three social variables. The null hypothesis was rejected for occupation of head (negative influence), and accepted for the other five social variables, which did not influence the use of informative exhibitions in the case of the LMI group.

In short, it can be seen from the above that the prominent social variables which influenced the use of educational services in a significant manner for all the sample groups were, total children in the family, education of head, occupation of head, monthly family income. The variables, family type and total adults in the family too, had a small, less significant influence on the use of educational services.

Second combination

In continuation with testing the same hypothesis, the utilization of educational services through other data, was also regressed on the social variables (Table 26). The dependent variables were frequency of utilization of educational facilities, use of library services, use of Museums, exhibitions, and attendance at educational lectures. Each of these dependent variables was regressed on the social factors. The variables which were significant at different levels for the three sample categories

TABLE 26

MULTIPLE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Variables: Dependent	Independent	Parameter Estimate: OS	LLI	LMI	Standard Error: OS	LLI	LMI	T for H:Parameter=0: OS	LLI	LMI	Prob. > T: OS	LLI	LMI
(1)	Frequency of use of Community Educational Facilities	Family type	-0.12	-0.20	-0.08	0.20	0.28	0.29	-0.59	-0.70	-0.30	0.5500	0.4810	0.7614
		Total adults	-0.07	0.05	-0.24	0.07	0.12	0.10	-1.05	0.40	-2.29	0.2947	0.6851	0.0239*
		Total children	-0.21	-0.21	-0.25	0.05	0.09	0.08	-3.92	-2.18	-2.98	0.0001***	0.0311*	0.0035**
		Education of Head	0.17	0.21	0.15	0.06	0.10	0.07	2.86	2.02	2.03	0.0046**	0.0450*	0.0443*
		Occupation of Head	0.01	0.06	-0.00	0.04	0.06	0.05	0.28	0.86	-0.11	0.7753	0.3869	0.9114
		Monthly family income	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.48	1.12	0.5263	0.6299	0.2636
(2)	Read in Library-Use	Family type	0.17	0.20	0.14	0.11	0.13	0.21	1.45	1.50	0.68	0.1467	0.1357	0.4925
		Total adults	0.01	0.03	-0.05	0.04	0.05	0.07	0.30	0.64	-0.72	0.7639	0.5232	0.4688
		Total children	0.01	0.02	-0.02	0.03	0.04	0.06	0.47	0.57	-0.36	0.6329	0.5668	0.7186
		Education of Head	-0.06	-0.10	-0.03	0.03	0.04	0.05	-1.73	-2.06	-0.67	0.0841	0.0405*	0.5010
		Occupation of Head	-0.00	0.05	-0.05	0.02	0.03	0.03	-0.30	1.65	-1.49	0.7613	0.1015	0.1378
		Monthly family income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.33	-1.49	0.77	0.1817	0.1367	0.4413
(3)	Study in Library-use	Family type	0.16	0.18	0.14	0.11	0.13	0.21	1.39	1.39	0.68	0.1640	0.1671	0.4925
		Total adults	0.01	0.03	-0.05	0.04	0.05	0.07	0.28	0.67	-0.72	0.7777	0.4999	0.4688
		Total children	0.01	0.02	-0.02	0.03	0.04	0.06	0.42	0.59	-0.36	0.6718	0.5523	0.7186
		Education of Head	-0.06	-0.11	-0.03	0.03	0.04	0.05	-1.85	-2.29	-0.67	0.0645	0.0237*	0.5010
		Occupation of Head	-0.00	0.04	-0.05	0.02	0.03	0.03	-0.38	-1.51	-1.49	0.7044	0.1338	0.1378
		Monthly family income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.23	-1.50	0.77	0.2169	0.1360	0.4413
(4)	Borrow Books-use	Family type	0.08	0.07	0.06	0.10	0.11	0.18	0.83	0.68	0.34	0.4035	0.4964	0.7314
		Total adults	0.02	0.05	0.00	0.03	0.04	0.06	0.78	1.21	0.03	0.4362	0.2280	0.9755
		Total children	0.06	0.07	0.05	0.02	0.03	0.05	2.22	1.95	1.11	0.0273*	0.0526	0.2682
		Education of Head	-0.06	-0.09	-0.04	0.03	0.04	0.04	-2.16	-2.25	-0.99	0.0318*	0.0261*	0.3225
		Occupation of Head	-0.02	0.02	-0.06	0.02	0.02	0.03	-0.96	1.04	-1.80	0.3347	0.3006	0.0743
		Monthly family income	-0.00	-0.00	-0.00	0.00	0.00	0.00	-1.93	-1.71	-0.41	0.0546*	0.0891	0.6810
(5)	Read Magazines-Use	Family type	0.17	0.16	0.19	0.11	0.12	0.20	1.53	1.35	0.96	0.1258	0.1782	0.3380
		Total adults	0.01	0.03	-0.03	0.04	0.05	0.07	0.31	0.75	-0.50	0.7496	0.4533	0.6170
		Total children	0.02	0.04	-0.00	0.03	0.04	0.05	0.67	0.95	-0.15	0.5005	0.3416	0.8797
		Education of Head	-0.06	-0.10	-0.04	0.03	0.04	0.05	-1.99	-2.39	-0.78	0.0475*	0.0182*	0.4316
		Occupation of Head	-0.01	0.04	-0.06	0.02	0.02	0.03	-0.48	1.68	-1.66	0.6284	0.0953	0.0998
		Monthly family income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.37	-2.07	0.73	0.1704	0.0401*	0.4643
(6)	Read Story Books - Use	Family type	0.16	0.12	0.21	0.11	0.11	0.20	1.45	1.10	1.02	0.1463	0.2711	0.3073
		Total adults	0.02	0.06	-0.04	0.03	0.04	0.07	0.71	1.36	-0.56	0.4758	0.1759	0.5769
		Total children	0.04	0.08	-0.01	0.03	0.04	0.05	1.56	2.15	-0.18	0.1185	0.0331*	0.8559
		Education of Head	-0.04	-0.06	-0.04	0.03	0.04	0.05	-1.41	-1.48	-0.77	0.1574	0.1413	0.4386
		Occupation of Head	-0.01	0.03	-0.06	0.02	0.02	0.03	-0.73	1.38	-1.63	0.4608	0.1697	0.1056
		Monthly family	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.74	-2.10	0.77	0.0817	0.0377*	0.4423

(Continued...)

(continued.. Table 26)

Sl. No.	Variables		Parameter Estimate			Standard Error			T for H:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(7)	Read Subject-matter Books-	Family type	0.18	0.15	0.22	0.11	0.11	0.19	1.62	1.30	1.13	0.1052	0.1949	0.2575
		Total adults	0.00	0.04	-0.06	0.03	0.05	0.07	0.09	0.96	-0.93	0.9237	0.3347	0.3545
		Total children	0.02	0.05	-0.02	0.03	0.04	0.05	0.77	1.37	-0.43	0.4409	0.1735	0.6626
		Education of Head	-0.07	-0.09	-0.06	0.03	0.04	0.05	-2.25	-2.15	-1.27	0.0253*	0.0335*	0.2039
		Occupation of Head	-0.01	0.04	-0.06	0.02	0.02	0.03	-0.70	1.62	-1.80	0.4792	0.1076	0.0740
		Monthly family income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.04	-2.13	1.22	0.2960	0.0352*	0.2236
(8)	Read General Knowledge- Use	Family type	0.12	0.04	0.22	0.10	0.09	0.20	1.15	0.49	1.10	0.2497	0.6207	0.2711
		Total adults	0.01	0.02	-0.04	0.03	0.04	0.07	0.30	0.48	-0.57	0.7575	0.6315	0.5650
		Total children	0.02	0.04	-0.01	0.02	0.03	0.05	0.91	1.19	-0.18	0.3600	0.2343	0.8532
		Education of Head	-0.07	-0.13	-0.03	0.03	0.03	0.05	-2.28	-3.86	-0.61	0.0235*	0.0002***	0.5372
		Occupation of Head	-0.01	0.03	-0.05	0.02	0.02	0.03	-0.88	1.36	-1.56	0.3774	0.1752	0.1217
		Monthly family Income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.52	-1.67	0.75	0.1294	0.0966	0.4537
(9)	Read Newspaper- Use	Family type	0.13	0.11	0.17	0.11	0.11	0.20	1.19	0.99	0.83	0.2331	0.3208	0.4075
		Total adults	0.00	0.02	-0.07	0.03	0.05	0.07	0.09	0.57	-0.93	0.9230	0.5660	0.3497
		Total children	0.01	0.02	-0.02	0.03	0.04	0.05	0.38	0.65	-0.49	0.6999	0.5116	0.6199
		Education of Head	-0.07	-0.13	-0.04	0.03	0.04	0.05	-2.23	-3.05	-0.77	0.0263*	0.0028**	0.4424
		Occupation of Head	-0.01	0.04	-0.05	0.02	0.02	0.03	-0.58	1.46	-1.53	0.5594	0.1459	0.1286
		Monthly family Income	-0.00	-0.00	0.00	0.00	0.00	0.00	-1.32	-1.68	0.98	0.1850	0.0949	0.3257
(10)	Visit Museums- Use	Family type	0.00	0.03	0.02	0.10	0.11	0.17	0.01	0.28	0.14	0.9924	0.7757	0.8887
		Total adults	0.10	0.08	0.11	0.03	0.05	0.06	2.91	1.64	1.88	0.0039**	0.1020	0.0618
		Total children	0.06	0.06	0.06	0.02	0.04	0.04	2.34	1.56	1.32	0.0197*	0.1198	0.1892
		Education of Head	-0.03	-0.04	-0.01	0.03	0.04	0.04	-1.04	-1.09	-0.40	0.2989	0.2754	0.6833
		Occupation of Head	-0.01	-0.00	-0.03	0.02	0.02	0.03	-0.88	-0.23	-1.07	0.3768	0.8125	0.2836
		Monthly family	-0.00	-0.00	-0.00	0.00	0.00	0.00	-4.12	-2.89	-1.15	0.0001****	0.0045**	0.2519
(11)	Visit Exhibition- Use	Family type	-0.00	-0.08	0.13	0.10	0.12	0.17	-0.08	-0.70	0.77	0.9324	0.4856	0.4396
		Total adults	0.09	0.07	0.11	0.03	0.05	0.06	2.65	1.48	1.89	0.0085**	0.1393	0.0613
		Total children	0.05	0.05	0.06	0.02	0.04	0.04	1.97	1.38	1.27	0.0492*	0.1695	0.2066
		Education of Head	-0.05	-0.09	-0.03	0.03	0.04	0.04	-1.86	-2.02	-0.74	0.0636	0.0455*	0.4603
		Occupation of Head	0.00	0.02	-0.01	0.02	0.02	0.03	0.03	0.84	-0.58	0.9741	0.3994	0.5618
		Monthly family Income	-0.00	-0.00	-0.00	0.00	0.00	0.00	-3.20	-2.41	-0.81	0.0015***	0.0175**	0.4182
(12)	Attend Educational Lectures- Use	Family type	-0.00	0.01	0.01	0.09	0.10	0.17	-0.09	0.12	0.08	0.9281	0.9016	0.9300
		Total adults	0.06	0.06	0.04	0.03	0.04	0.06	1.94	1.52	0.68	0.0527*	0.1312	0.4954
		Total children	0.00	-0.00	0.01	0.02	0.03	0.05	0.34	-0.08	0.37	0.7343	0.9325	0.7111
		Education of	0.00	-0.03	0.03	0.02	0.03	0.04	0.26	-0.81	0.80	0.7933	0.4158	0.4241
		Occupation of Head	0.01	-0.00	0.02	0.02	0.02	0.03	0.67	-0.12	0.80	0.5011	0.9012	0.4216
		Monthly family Income	-0.00	-0.00	-0.00	0.00	0.00	0.00	-1.70	-1.24	-0.20	0.0891	0.2149	0.8407

**** Significant at 0.0001 level; *** Significant at 0.001 level
** Significant at 0.01 level; * Significant at 0.05 level

in the Multiple Regression Analysis, are indicated in the above tables. The variables against each dependent variable for the three sample categories, which emerged significant in the Stepwise Regression are shown in Table 27. Each income group and the OS showed different variables, a few similar variables, that were significant at different levels for each of the dependent variables shown. The data revealed (Table 27) that the variable education of the head, was found to influence every dependent variable in the case of the OS and LLI category only, at highly significant levels except the dependent variables 'visiting Museums' and 'attendance at lectures', where the significance level was only 10 per cent, in the case of LLI group alone. The other social factors which were found to be highly significant in influencing the dependent variables concerned with educational service use, were, in order of frequency, monthly family income, found to influence all dependent variables except the first two, occupation of head, family type, total adults and total children. When frequency of use of educational facilities was regressed on monthly family income alone, there was no significant influence of this factor on use behaviour neither by the total sample nor by the two income categories. All these social factors influenced behaviour of the LLI group, mostly, and therefore, the total sample also. Most of the factors were highly significant in all cases, some were significant, and a few were somewhat significant. In the case of the LMI group, the factor occupation of the head was found to be an outstanding variable influencing the use of all the services related to educational facilities.

TABLE 27

STEPWISE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variables)	Order of entry and df	Total sample		Order of entry and df	LLI		Order of entry and df	LMI	
				F Value	Prob.>F		F Value	Prob.>F		F Value	Prob.>F
(1)	Frequency of Utilization of educational facilities	Total children	1	12.7873	0.0004***	1	6.1525	0.0145**	2	6.5591	0.0117**
		Education of Head	2	14.2533	0.0002***	2	4.8603	0.0294*	1	5.7681	0.0179**
		Total adults	-	-	-	-	-	-	3	5.0530	0.0265*
(2)	Read in Library	Education of Head	1	7.8908	0.0054**	1	6.7883	0.0104**	-	-	-
		Family type	2	4.3075	0.0390*	2	3.0217	0.0848	-	-	-
		Occupation of Head	-	-	-	3	2.9522	0.0884	1	3.8047	0.0535*
(3)	Study in Library	Education of Head	1	8.4673	0.0040**	1	8.1851	0.0050**	-	-	-
		Family type	2	3.9593	0.0478*	-	-	-	-	-	-
		Monthly family income	-	-	-	2	2.6241	0.1079	-	-	-
		Occupation of Head	-	-	-	3	2.4299	0.1218	1	3.8047	0.0535*
(4)	Borrow Books	Education of Head	1	12.4255	0.0005***	1	7.4582	0.0073**	-	-	-
		Total children	2	3.6098	0.0587*	-	-	-	-	-	-
		Monthly family income	3	5.0745	0.0252*	-	-	-	-	-	-
		Occupation of Head	-	-	-	-	-	-	1	5.8975	0.0167**
(5)	Read Magazines	Education of Head	1	9.8202	0.0019***	1	9.0043	0.0033**	-	-	-
		Family type	2	4.9360	0.0272*	-	-	-	-	-	-
		Monthly family income	-	-	-	2	4.8479	0.0296*	-	-	-
		Occupation of Head	-	-	-	3	3.0308	0.0843	1	4.8422	0.0297*
(6)	Read Story Books	Monthly family income	1	7.9044	0.0053**	-	-	-	-	-	-
		Total children	2	3.0816	0.0805	-	-	-	-	-	-
		Education of Head	3	2.9402	0.0877	1	3.8715	0.0515*	-	-	-
		Occupation of Head	-	-	-	2	2.2230	0.1387	1	4.8290	0.0299*

(Continued...)

Sl No.	Dependent Variable	Factors (Independent Variables)	Order of entry and df	Total sample F Value	Total sample Prob>F	Order of entry and df	LLI F Value	LLI Prob>F	Order of entry and df	LMI F Value	LMI Prob>F
(7)	Read subject matter Books	Education of Head	1	10.6800	0.0012***	1	7.4682	0.0072**	-	-	-
		Family type	2	5.9625	0.0153**	-	-	-	2	2.2055	0.1402
		Monthly family income	-	-	-	2	3.6625	0.0581*	-	-	-
		Occupation of Head	-	-	-	3	2.8788	0.0924	1	5.9226	0.0164**
(8)	Read General Knowledge	Education of Head	1	12.5488	0.0005***	1	19.2667	0.0001****	-	-	-
		Monthly family income	2	4.0097	0.0464*	2	2.5091	0.1159	-	-	-
		Occupation of Head	-	-	-	-	-	-	1	4.5900	0.0342*
(9)	Read Newspaper	Education of Head	1	11.4417	0.0008***	1	13.4601	0.0004***	-	-	-
		Monthly family income	2	3.9003	0.0494*	2	3.4818	0.0645	-	-	-
		Family type	3	2.1734	0.1417	-	-	-	-	-	-
		Occupation of Head	-	-	-	3	2.3030	0.1318	1	4.1769	0.0432*
(10)	Visit Museums	Monthly family income	1	14.8190	0.0002***	1	6.3335	0.0132**	-	-	-
		Total adults	2	9.7528	0.0020**	-	-	-	-	-	-
		Total children	3	6.4694	0.0116**	-	-	-	-	-	-
		Education of Head	-	-	-	2	2.6326	0.1074	-	-	-
(11)	Visit Exhibitions	Education of Head	1	14.3763	0.0002***	1	7.8181	0.0060**	-	-	-
		Monthly family income	2	2.9270	0.0884	2	2.4722	0.1186	-	-	-
		Total adults	3	6.5864	0.0109**	-	-	-	-	-	-
		Total children	4	3.9450	0.0482*	-	-	-	-	-	-
(12)	Attend Educational Lectures	Total adults	1	3.2484	0.0728	-	-	-	-	-	-
		Monthly family income	2	2.8005	0.0956	-	-	-	-	-	-
		Education of Head	-	-	-	1	2.6924	0.1035	-	-	-

**** Significant at 0.0001 level; *** Significant at 0.001 level; ** Significant at 0.01 level;
* Significant at 0.05 level.

No other social factor gained any significance in playing an influential role. In the case of the first dependent variable alone, the factors total children (negative), education of head (very significant) and total adults in a negative way (significant) had an influential role. Hence, it may be stated after a close scrutiny of the Table 27, that the Prob.> F values show a definite influence of certain common social factors on all the services associated with educational facilities. Most prominently, the factors education, occupation of head and monthly family income, had a negative influence on all the dependent variables.

The null hypothesis is, therefore, totally rejected for all the social factors, which, influenced behaviour in the utilization of various educational services by the total sample and LLI groups mainly, and/or the LMI groups, in some cases, as evident from the table contents.

Third combination

The use of educational services was again regressed through the composite representation of use, viz., CFFRSC, SFFRSC, ROFRSC as the dependent variables, each of which was regressed on the social factors (Table 28). When the CFFRSC was regressed on the social factors, the variables total children was highly significant (Prob.>T = .0004; Sig. .001), education of head was significant (Prob.>T = .03; Sig. .05), and family type and total adults had a low Prob.>T value, with regard to the OS. The Step-wise Regression (Table 29) took up only the two variables, education of head (negative) which proved to

TABLE 28

MULTIPLE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Variable Dependent	Independent	Parameter Estimate OS	Parameter Estimate LLI	Parameter Estimate LMI	Standard Error OS	Standard Error LLI	Standard Error LMI	T for H: Parameter=0 OS	T for H: Parameter=0 LLI	T for H: Parameter=0 LMI	Prob. > T OS	Prob. > T LLI	Prob. > T LMI
(1)	Characteristic Feature Frequency Score	Family type	4.05	7.47	0.59	2.71	3.83	3.94	1.49	1.95	0.15	0.1366	0.0534*	0.8794
		Total adults	1.36	0.20	1.56	0.95	1.64	1.44	1.43	0.12	1.07	0.1517	0.9029	0.2827
		Total children	2.70	3.07	1.66	0.75	1.32	1.12	3.59	2.31	1.47	0.0004***	0.0225*	0.1437
		Education of Head	-1.78	-2.96	-1.06	0.83	1.39	1.00	-2.13	-2.13	-1.06	0.0335*	0.0351*	0.2898
		Occupation of Head	-0.50	-0.95	-0.52	0.56	0.92	0.70	-0.89	-1.03	-0.73	0.3734	0.3048	0.4645
		Monthly family income	-0.00	-0.00	-0.00	0.00	0.01	0.00	-1.38	-0.55	-0.30	0.1671	0.5822	0.7630
(2)	Situational Factor Frequency Score	Family type	2.17	4.64	-0.20	1.76	2.51	2.49	1.23	1.84	-0.08	0.2192	0.0677	0.9343
		Total adults	0.83	-0.00	0.90	0.61	1.07	0.91	1.35	-0.00	0.98	0.1763	0.9938	0.3265
		Total children	1.88	2.06	1.11	0.48	0.87	0.71	3.85	2.37	1.55	0.0002***	0.0194**	0.1220
		Education of Head	-1.20	-1.86	-0.82	0.54	0.91	0.63	-2.21	-2.03	-1.29	0.0275*	0.0443*	0.1981
		Occupation of Head	-0.39	-0.72	-0.38	0.36	0.60	0.44	-1.07	-1.19	-0.84	0.2839	0.2364	0.3986
		Monthly family income	-0.00	-0.00	-0.00	0.00	0.00	0.00	-1.67	-0.57	-0.30	0.0955	0.5646	0.7616
(3)	Respondents' Opinion Frequency Score	Family type	6.13	11.88	0.82	5.02	7.11	7.26	1.22	0.67	0.11	0.2233	0.0976	0.9098
		Total adults	2.53	-0.34	3.14	1.76	3.04	2.66	1.44	-0.11	1.18	0.1513	0.9111	0.2405
		Total children	5.26	5.41	3.46	1.39	2.46	2.07	3.77	2.19	1.66	0.0002***	0.0302*	0.0981
		Education of Head	-3.32	-5.61	-1.96	1.54	2.58	1.84	-2.15	-2.17	-1.06	0.0324*	0.0321*	0.2912
		Occupation of Head	-1.06	-1.93	-0.97	1.05	1.71	1.30	-1.01	-1.13	-0.74	0.3113	0.2607	0.4595
		Monthly family income	-0.01	-0.00	-0.00	0.00	0.02	0.01	-1.61	-0.37	-0.41	0.1073	0.7104	0.6760

*** Significant at 0.001; ** Significant at 0.01 level; * Significant at 0.05 level.

be highly significant, (Prob.>F = .001; Sig. .001) and total children which again proved to be highly significant (Prob.>F = .0007; Sig. .001) for the OS.

In the LLI category, the variables family type (Prob.>T = .05; Sig. .05), total children (Prob.>T = .02; Sig. .05) and education of head (Prob.>T = .03; Sig. .05) were significant in the Multiple Regression Analysis and were accepted in the same order by the Step-wise procedure viz., (Prob.>F = .01; Sig. .05), (Prob.>F = .03; Sig. .05) and (Prob.>F = .004; Sig. .01) respectively. None of the variables emerged significant in the Multiple Regression Analysis and hence the Step-wise Regression, in the case of the LMI group.

Similarly, when the variable SFFRSC was regressed on the social factors, the Step-wise Regression revealed the variables, education of head as highly significant, having a negative influence (Prob.> F = .0008; Sig. .001), total children as highly significant (Prob.>F = .0004; Sig. .001), and monthly family income, somewhat significant, having a negative influence (Prob.> F = .09; Sig. .10) for the OS.

In the LLI category, education of head was significant negatively (Prob.> F = .02; Sig. .05), total children was significant (Prob.> F = .02; Sig. .05), and family type was very significant (Prob.>F = .005; Sig. .01) in the Step-wise analysis results. As regards the LMI category, no variable gained significance at a high level. Education of head and total children were very slightly significant, (Prob.>F = .11; Sig. .15) and (Prob.>F = .13; Sig. .15) respectively, the former having a

slightly negative influence.

Again for the dependent variable ROFRSC, the Step-wise procedure showed the variables, education of head (Prob.> F = .001; Sig. .001) and total children (Prob.> F = .0005; Sig. .001) as being highly significant, the former having a negative influence, in the case of the OS. Monthly family income obtained a low significant value in this case (Prob.>F = .12; Sig. .15) with a slight negative influence.

In the case of the LLI class, education of head, (negative), and total children had a significant influence (Prob.>F = .02; Sig. .05) and (Prob.> F = .03; Sig. .05) respectively, while family type had a very significant influence (Prob.> F = .009; Sig. .01) on the frequency of use of educational services associated with respondents' opinion, as revealed by the Step-wise procedure.

In the LMI group, however, no variable met the five per cent level of significance. The variable total children seemed to have a very low significant influence (Prob.> F = .11; Sig. .15) on the respondents' opinion frequency score.

Hence, the null hypothesis was rejected for education of head, total children, for the entire sample with the CFFRSC as dependent variable, and accepted for other social factors. It was rejected for education of head, total children, and family type and accepted for other social variables with regard to the LLI. The null hypothesis was accepted for all social factors in the case of the LMI group, for the same dependent variable.

TABLE 29

STEPWISE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variables)	Order of entry and df	OS		Order of entry and df	LLI		Order of entry and df	LMI	
				F Value	Prob.> F		F Value	Prob.> F		F Value	Prob.> F
(1)	Characteristic Feature Frequency Score	Education of Head	1	10.1365	0.0016***	3	5.7396	0.0182**	-	-	-
		Total children	2	11.7512	0.0007***	2	4.4406	0.0372*	-	-	-
		Family type	-	-	-	1	8.2336	0.0049**	-	-	-
(2)	Situational Factor Frequency Score	Education of Head	1	11.4176	0.0008***	3	0.0908	0.0259*	2	2.5769	0.1111
		Total children	2	13.1440	0.0004***	2	4.9128	0.0286*	1	2.3095	0.1313
		Monthly family income	3	2.8591	0.0922	-	-	-	-	-	-
		Family type	-	-	-	1	8.1350	0.0051**	-	-	-
(3)	Respondents' Opinion Frequency Score	Education of Head	1	10.8164	0.0012***	3	5.5319	0.0204*	-	-	-
		Total children	2	12.5139	0.0005***	2	4.5105	0.0358*	1	2.4602	0.1194
		Monthly family income	3	2.3946	0.1231	-	-	-	-	-	-
		Family type	-	-	-	1	6.9935	0.0093**	-	-	-

*** Significant at 0.001 level; ** Significant at 0.01 level; * Significant at 0.05 level.

TABLE 30

SINGLE - VARIATE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Variable		Parameter Estimate			Standard Error			T for H:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Characteristic Feature Frequency Score	Characteristic Feature Score	2.67	2.27	2.82	0.37	0.58	0.47	7.07	3.87	5.94	0.0001****	0.0002***	0.0001****
(2)	Situational Factor Frequency Score	Situational Factor Feature Score	3.14	2.91	2.99	0.39	0.57	0.53	8.05	5.08	5.58	0.0001****	0.0001****	0.0001****
(3)	Respondents' Opinion Frequency Score	Respondents' Opinion Feature Score	1.78	1.35	2.20	0.23	0.33	0.29	7.73	3.99	7.53	0.0001****	0.0001****	0.0001****
(1)	EFRSC1	EFSC1	0.53	0.44	0.61	0.05	0.08	0.07	9.70	5.36	8.46	0.0001****	0.0001****	0.0001****

**** Significant at 0.0001 level; *** Significant at 0.001 level
** Significant

With regard to the SFFRSC, the null hypothesis was rejected for the factors education of head, total children and partly for monthly family income, and accepted for the other social factors, in the case of the total sample. It was rejected for education of head, total children and family type and accepted for the other social factors in the LLI class case, while it was partly rejected for education of head and total children and accepted for the others, in the case of LMI class.

For the ROFRSC, the null hypothesis was rejected for the variables, education of head (negative) and total children and partly for monthly family income (negative) while, it was accepted for the other social factors, with regard to the OS. With regard to the LLI group, the null hypothesis was rejected for the variables education of head, total children and family type while it was accepted for other factors. In the LMI category, the null hypothesis was accepted for all the social factors, except total children, for which it was only partly rejected, due to it having a very low level of significance,

Hypothesis 4 : Educational services use, among both the income categories and the overall sample, is not affected by the stipulated physical factors.

First combination

The dependent variable CFFRSC, SFFRSC, and ROFRSC were regressed on the corresponding independent variables, CFSC, SFFSC and ROFSC (Table 30), through a Single-variate Regression Analysis.

The results indicate an extremely high level of significance in the influence of feature scores on the frequency scores of characteristic features (Prob.> T = .0001; Sig. .0001) for the entire sample and likewise for the LLI group (Prob.> T = .0002; Sig. .001) a highly significant value and for the LMI, again an extremely significant influence of the same variable (Prob.> T = .0001; Sig. .0001). Similarly, the same extreme level of significance was seen for all the sample categories, in the influence of situational feature scores over frequency scores, (Prob.> T = .0001; Sig. .0001 for all sample groups). Again the same was found for the respondents' opinion feature score over frequency score. (Prob.> T = .0001; Sig. .0001 for all sample groups) indicating a very high level of significance in the influence of the variable on frequency of use associated with respondents' opinion.

Second combination

However, to further ascertain this result, as in the case of health variables, the Principal Component Analysis and Canonical Correlation tests were carried out. The Principal Component Analysis was done to summarize the three frequency scores into 'Educational Frequency Score' and the three feature scores into 'Educational Feature Score' in the case of each respondent family, which clearly distinguished one family from another.

As evident from the results of the test, for the OS (Appendix VI), the Eigenvector Coefficients are of the same order as indicated below.

EIGENVECTORS FOR EFRSC 1

	OS	LLI	LMI
CFFRSC	0.574877	0.572802	0.577654
SFFRSC	0.578253	0.579356	0.576855
ROFRSC	0.578913	0.579866	0.577542

The three variables of a single family, in the case of education also, are given equal importance, due to the identical values of the Eigenvectors.

The first Principal Component has the Eigenvalue 2.96, the number of standardized variables being three. In short, the first Principal Component itself has a variance of 2.96, that is, 98.7 per cent of the total standardized variation. This proves that the first component, is therefore, a very good summary of the three scores combined to a single score, and no other components need to be thought about.

The second set of Eigenvector Coefficients (feature scores), also show a similar trend as in the case of health scores.

EIGENVECTORS FOR EFSC 1

	OS	LLI	LMI
CFSC	0.607832	0.594423	0.629245
SFFSC	0.520416	0.536648	0.485519
ROFSC	0.599757	0.598892	0.606896

The above three variables can be meaningfully combined into a single score. Since the cumulative percentage of

variation is 70 per cent the Lamda (λ) or Eigenvalue being 2.09, the first component can be used as an acceptable summary of the three scores. In the case of education also, as in the case of health, the first and third Eigenvectors are given equal importance being 0.60 and 0.59 respectively, while the second one (SFFSC) is given slightly less importance, being 0.52. However, since the values are almost similar, they are given equal emphasis, hence proving the fact, that the two sets of scores for each family, can be successfully summarized into single scores, without much loss of information.

In the case of the Principal Component Analysis for the LLI group also, a similar trend is observed, as seen from the results. In the case of the LMI group, the Principal Component Analysis results, reveal similar Eigenvectors for the frequency variables, viz., 0.57 in all three cases. However, in the case of the feature variables, a single component (First Principal Component) explains around 68 per cent, whereas the two others (not calculated) would have together explained only 32 per cent, that is, on an average about 16 per cent only, per component. Hence, it is reasonable to use the first component alone, as representing all the three scores together.

The Eigenvectors of the feature variables, indicate a similarity of weightage given to the first (0.62) and third, (0.60) while the second one is given much less importance (0.48). Nevertheless, in this case also, since the values are quite close, they are given equal importance, showing that the two sets of scores for each family can be summarized into single scores, without the problem of loss of information.

The Canonical Correlation Analysis for the OS with regard to Education variables (Appendix VII), show that the chances of getting an F as large or larger than 10.9846 is only .0001, that is, one in 10,000. Hence, the HO of zero correlation is not accepted, that is, the first Canonical Correlation is to be taken, as not zero, and hence whatever is obtained is an estimate of the correlation between the two sets.

In the second Canonical Correlation, the chances are 8 out of 100 (8 per cent), that is, a reasonable chance of getting the F value 2.0848 or larger, when the hypothesis is true. Therefore the HO is accepted, that is, the second and higher order correlations are zeros.

The first Canonical variate for the 'Var' set has the highest correlation with the Canonical variate of the 'With' set. Thus, the two sets of variables do have a correlation, and the maximum such possible correlation is 0.54, which is achieved by the combination of the first set with weights 0.011, 0.123, - .019, and the second set with weights 0.080, 0.299 and 0.052. In the both cases, it is obvious that the second variable dominates, more so in the second set.

The Canonical structure reveals that the correlation of each single variable in the set with the first Canonical variate are 0.97, 0.99 and 0.98, that is, a perfect correlation. A scrutiny at the Canonical Correlation Analysis tables for the LLI and LMI groups, (Appendix VII), also show a similar trend, including a perfect correlation between each single variable in the respective sets with the first corresponding Canonical

variate, for both income categories.

The above two tests clearly indicate the authenticity of the summarized scores, and the perfect correlation that exists between the sets of variables. To follow this result a further Single-variate regression was carried out with the summarized scores for the OS, LLI and LMI categories. The Educational Frequency Score (EFRSC 1) was regressed on the Educational Feature Score (EFSC 1) and in all the three sample categories, the Prob.>T was again found to be identical and extremely significant (Prob.>T = 0.0001; Sig. .0001 for all groups; Table 30), as found in the Single-variate regression of the original scores, shown in Table 30. The above two tests affirm the strong causal influence of the feature variables over the frequency of use variables, at an extremely high degree of significance, the case of the educational variables for each sample group.

A Multiple Regression Analysis of the CFFRSC, SFFRSC and the ROFRSC with the physical factor resource availability and location, was computed for the three sample groups (Table 31).

The CFFRSC when regressed on the availability and location of Balwadi, Government Pre-school, Municipal school and Public library, revealed a highly significant Prob.>T value for Balwadi distance, (Prob.>T = 0.004; Sig. .01) and a somewhat significant value for Municipal school distance (Prob.>T = 0.08; Sig. .10) for the total sample. Only the Balwadi distance had a high significant value, with regard to the LLI group (Prob.>T = .004; Sig. .01) and for the LMI group the variable Municipal school distance, had a somewhat significant value (Prob.>T = .09;

TABLE 31

MULTIPLE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Variables: Dependent	Independent	Parameter Estimate: OS	LLI	LMI	Standard Error: OS	LLI	LMI	T for H: Parameter=0: OS	LLI	LMI	Prob. > T: OS	LLI	LMI
(1)	Characteristic Feature Frequency Score	Balwadi distance	1.51	2.49	0.79	0.52	0.85	0.63	2.89	2.91	1.26	0.0041**	0.0042**	0.2097
		Government pre-school distance	-0.30	-0.21	-0.32	0.31	0.48	0.39	-0.95	-0.45	-0.81	0.3394	0.6537	0.4162
		Government municipal school distance	0.55	0.39	0.70	0.31	0.44	0.41	1.75	0.89	1.68	0.0804	0.3756	0.0950
		Public library distance	-0.14	-0.11	-0.08	0.19	0.29	0.23	-0.74	-0.37	-0.37	0.4600	0.7059	0.7099
(2)	Situational Factor Frequency Score	Balwadi distance	0.92	1.46	0.55	0.34	0.56	0.39	2.69	2.59	1.40	0.0076**	0.0107**	0.1633
		Government pre-school distance	-0.19	-0.07	-0.29	0.20	0.32	0.25	-0.94	-0.22	-1.18	0.3440	0.8190	0.2393
		Government municipal school distance	0.32	0.15	0.57	0.20	0.29	0.26	1.56	0.50	1.94	0.1192	0.6138	0.0544*
		Public Library distance	-0.14	-0.12	-0.10	0.12	0.19	0.15	-1.17	-0.64	-0.70	0.2418	0.5215	0.4801
(3)	Respondents' Opinion Frequency Score	Balwadi distance	2.68	4.35	1.48	0.97	1.58	1.16	2.75	2.74	1.27	0.0064**	0.0070**	0.2066
		Government pre-school distance	-0.60	-0.45	-0.66	0.58	0.90	0.73	-1.02	-0.50	-0.90	0.3048	0.6146	0.3691
		Government nunicipal school distance	0.99	0.70	1.30	0.58	0.83	0.77	1.70	0.84	1.68	0.0904	0.3992	0.0942
		Public library distance	-0.25	-0.16	-0.16	0.35	0.55	0.43	-0.70	-0.30	-0.36	0.4814	0.7632	0.7147

** Significant at 0.01 level; * Significant at 0.05 level

Sig. .10) and Balwadi distance only had a low value.

The Step-wise Regression (Table 32) analysis accepted the variable Balwadi distance at a very significant level (Prob.> F = .003; Sig. .01) and the Municipal school distance at a low level of significance (Prob.> F = .14; Sig. .15) for the OS. For the LLI group Balwadi distance was again accepted at a highly significant level (Prob.> F = .0009; Sig. .001).

No variable was accepted by the step-wise procedure in the case of the LMI group.

When the SFFRSC was regressed on the educational services location, it was seen that the Balwadi distance was very significant (Prob.> T = .007; Sig. .01) and Municipal school distance of a low significance. In the LLI and LMI groups, the same variable was again very significant (Prob.> T = .01; Sig. .01) and of low significance respectively. The Step-wise Regression Analysis accepted this variable, alone, at a very significant level for the OS (Prob.> F = .002; Sig. .01) and the LLI group (Prob.> F = .002; Sig. .01) alike. For the LMI group the variable was not accepted.

Again with regard to the ROFRSC, the same variable, Balwadi distance, was taken up by the Step-wise Regression for the total sample and the LLI at a very significant (Prob.> F = .004; Sig. .01) and highly significant level (Prob.> F = .001; Sig. .001).

With the above results, it may be stated that the null hypothesis was rejected for the physical factors characteristic

TABLE 32

STEPWISE REGRESSION ANALYSIS

EDUCATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variables)	Order of entry and df	OS		Order of entry and df	LLI		Order of entry and df	LMI	
				F Value	Prob>F		F Value	Prob>F		F Value	Prob>F
(1)	Characteristic Feature Frequency Score	Balwadi availability and distance	1	8.9523	0.0031**	1	11.5332	0.0009***	-	-	-
		Government Municipal school availability and distance	2	2.1640	0.1426	-	-	-	-	-	-
(2)	Situational Factor Frequency Score	Balwadi availability and distance	1	9.0368	0.0029**	1	10.0168	0.0020**	-	-	-
(3)	Respondents' Opinion Frequency Score	Balwadi availability and distance	1	8.3350	0.0042**	1	10.4056	0.0016***	-	-	-

*** Significant at 0.001 level; ** Significant at 0.01 level.

features, situational factors and respondents' opinion, with respect to all the three sample groups. It was also rejected partly for resource availability distance with regard to only the Balwadi distance for the LLI group and consequently the OS. As regards the other educational facilities' location, the null hypothesis was accepted for the LLI and OS. However, in the case of the LMI group, as, resource availability and location did not influence the use of educational facilities, with regard to any of the four facilities, the null hypothesis was accepted for this variable.

Hence, physical factors such as the features of facilities, situations faced by respondents and their opinions regarding educational facilities, apparently influence use of facilities by all the three groups in an emphatic way. Also availability and distance of the Balwadi, alone, influenced its use by the LLI and total sample in a very significant manner. Distance and location of other educational facilities, did not influence use behaviour of respondents in any of the sample groups, studied separately and combined.

Hypothesis 5 : Family utilization of recreational facilities and services, among both the income groups and the total sample, is not governed by the stipulated physical factors, including;
(a) housing and (b) neighbourhood.

The utilization of recreational facilities have been represented mainly by the services of parks, playgrounds and zoos and each of these services was regressed on the physical factors characteristic features, situational factors, and respondents'

opinions, represented as scores. Each service was also regressed on aspects of other physical factors like housing, neighbourhood and resource availability and location.

First combination

When each service was regressed on CFSC, by a single-variate regression (Table 33), for the total sample it was seen that the characteristic features of recreational facilities had a significant influence on 'use of play space in parks' (Prob.> T = .05; Sig. .05), very significant influence on 'quiet study in park (Prob.> T = .005; Sig. .01), pleasant view in parks (Prob.> T = .04; Sig. .05), use of recreational services (Prob.> T = .05; Sig. .05) and to some extent Safari in Zoo' (Prob.> T = .08; Sig. .10).

In the case of LLI group, characteristic feature score had a significant influence on only 'quiet study in the park' (Prob.> T = .03; Sig. .05). In the case of the LMI group, the variable had a very slight influence, on all the services at 10 per cent level of significance only.

When each service was regressed on SFFSC, it was found that it emerged extremely significant for all kinds of services' utilization, for the total sample and highly significant, very significant and significant for all kinds of services' utilization in the case of LLI and LMI groups respectively.

The regression of the 'use' variables on ROFSC revealed significant influence of the variable on 'use of play space in playgrounds' (Prob.> T = .02; Sig. .05) alone. No other kind

TABLE 33

SINGLE-VARIATE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Variables		Parameter Estimate			Standard Error			T for H0:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Play space park utilization.	Characteristic Feature Score.	0.02	0.01	0.05	0.01	0.01	0.03	1.90	0.99	1.78	0.0586*	0.3214	0.0769
(2)	Play space in playground use	-do-	0.01	-0.00	0.05	0.01	0.01	0.03	0.88	-0.13	1.82	0.3768	0.8901	0.0709
(3)	Quiet study in park utilization	-do-	0.04	0.03	0.04	0.01	0.01	0.03	2.78	2.19	1.41	0.0057**	0.0305*	0.1587
(4)	Safari in zoo utilization	-do-	0.02	0.01	0.05	0.01	0.01	0.03	1.72	0.85	1.65	0.0865	0.3929	0.1004
(5)	Pleasant view utilization	-do-	0.02	0.01	0.05	0.01	0.01	0.03	1.98	1.13	1.64	0.0478*	0.2605	0.1019
(6)	Use of recreational services	-do-	0.13	0.08	0.26	0.07	0.07	0.15	1.92	1.04	1.71	0.0560*	0.2996	0.0892
(1)	Play space park utilization.	Situational Factor Feature Score	0.08	0.07	0.09	0.01	0.02	0.02	4.72	3.24	3.28	0.0001****	0.0015***	0.0013***
(2)	Play space in playground use	-do-	0.07	0.07	0.07	0.01	0.02	0.02	4.08	3.01	2.57	0.0001****	0.0032**	0.0113**
(3)	Quiet study in park utilization	-do-	0.06	0.05	0.06	0.01	0.02	0.02	3.42	2.34	2.31	0.0007***	0.0208*	0.0224*
(4)	Safari in zoo utilisation	-do-	0.06	0.05	0.06	0.01	0.02	0.02	3.24	2.07	2.34	0.0014***	0.0401*	0.0206*
(5)	Pleasant view utilization	-do-	0.07	0.05	0.08	0.01	0.02	0.02	3.84	2.29	3.01	0.0002***	0.0233*	0.0032**
(6)	Use of recreational services	-do-	0.36	0.31	0.39	0.09	0.11	0.14	4.00	2.72	2.78	0.0001****	0.0075**	0.0063**

(continued...)

(Table 33... Continued)

Sl. No.	Variables		Parameter Estimate			Standard Error			T for HO:Parameter=0			Prob.> T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Play space park utilization.	Respondents' Opinion Feature Score	-0.02	-0.01	-0.07	0.03	0.03	0.05	-0.83	-0.32	-1.34	0.4044	0.7432	0.1815
(2)	Play space in playground use	-do-	-0.06	-0.06	-0.07	0.03	0.03	0.05	-2.18	-1.96	-1.28	0.0296*	0.0519*	0.2012
(3)	Quiet study in park utilization	-do-	0.01	0.04	-0.05	0.03	0.03	0.05	0.64	1.27	-1.05	0.5225	0.2040	0.2944
(4)	Safari in zoo utilization	-do-	-0.01	-0.00	-0.06	0.03	0.03	0.05	-0.53	-0.11	-1.11	0.5904	0.9118	0.2683
(5)	Pleasant view utilization	-do-	-0.02	-0.00	-0.07	0.03	0.03	0.05	-0.74	-0.25	-1.34	0.4553	0.7961	0.1815
(6)	Use of recreational services	-do-	-0.11	-0.04	-0.34	0.14	0.17	0.27	-0.75	-0.29	-1.26	0.4497	0.7699	0.2094
(1)	Characteristic Feature Frequency Score	Characteristic Feature Score	1.35	1.06	1.86	0.43	0.41	1.03	3.12	2.53	1.79	0.0020**	0.0126**	0.0745
(2)	Situational Factor Frequency Score	Situational Factor Feature Score	1.52	1.25	1.77	0.24	0.30	0.38	6.18	4.05	4.63	0.0001****	0.0001****	0.0001****
(3)	Respondents' Opinion Frequency Score	Respondents' Opinion Feature Score	-0.21	0.41	-2.07	0.40	0.44	0.74	-0.52	0.94	-2.78	0.5990	0.3480	0.0063**
(1)	RFRSC 1	RFSC 1	0.11	0.21	-0.30	0.06	0.08	0.08	1.72	2.34	-3.47	0.0865	0.0208*	0.0007***

**** Significant at 0.0001 level; *** Significant at 0.0001 level; ** Significant at 0.01 level
* Significant at 0.05 level.

of use was influenced by this variable in the case of the total sample. The LLI group showed significance of the variable on the same 'use' variable, 'play space in playground use' (Prob.> T = .05; Sig. .05) only. In the LMI category, the variable did not influence any of the 'use' variables.

From the above, it may be seen that, the null hypothesis was rejected for the physical factor characteristic features in case of almost all the services for the total sample, 'quiet study in park use' alone, in the case of LLI and partly for the use variables of LMI group. It was rejected for the factor situational factors faced by families which influenced the use of various services most significantly, in all sample groups. The null hypothesis was rejected for the factor respondents' opinion which influenced only the 'use of play space in playgrounds', for the total sample and LLI group. No other kind of use was determined by this factor, so the null hypothesis was partly accepted for the remaining uses for the first two sample groups and fully accepted for all the use variables in the case of the LMI group. In other words, the respondents' opinion did not influence any kind of use of recreational facilities, with regard to the LMI category.

Second combination

The different activities for which the parks, playgrounds and other recreational facilities were used, were each regressed on the characteristic features, situational factors and respondents' opinion by a Single-variate Regression Analysis (Table 34). The characteristic features of facilities were found to influence

TABLE 34

SINGLE-VARIATE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Variables		Parameter Estimate			Standard Error			T for HO:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Read/study in park	Characteristic Feature Score	-0.04	-0.04	-0.04	0.01	0.01	0.04	-2.75	-2.60	-1.02	0.0062**	0.0103**	0.3089
(2)	Play in park	- do -	-0.03	-0.03	0.00	0.01	0.02	0.04	-1.79	-1.80	0.03	0.0742	0.0735	0.9693
(3)	Relax in park	- do -	-0.04	-0.03	-0.04	0.02	0.02	0.04	-2.17	-1.69	-0.94	0.0305*	0.0924	0.3451
(4)	Get together in park	-do -	-0.04	-0.03	-0.04	0.02	0.02	0.04	-2.24	-1.77	-0.94	0.0257*	0.0779	0.3451
(5)	Play in playground	- do -	-0.05	-0.04	-0.04	0.02	0.02	0.04	-2.43	-2.03	-0.90	0.0155**	0.0443*	0.3697
(6)	Visit zoo	- do -	-0.03	-0.02	-0.01	0.01	0.01	0.04	-1.63	-1.37	-0.33	0.1034	0.1712	0.7365
(7)	Visit lakeview	- do -	-0.03	-0.02	-0.01	0.01	0.01	0.04	-1.57	-1.31	-0.31	0.1161	0.1900	0.7529
(8)	Extent of use of recreational services	-do-	-0.28	-0.25	-0.19	0.12	0.13	0.28	-2.24	-1.95	-0.68	0.0254*	0.0536*	0.4949
(1)	Read/study in park	Situational Factor Feature Score	-0.05	-0.04	-0.04	0.02	0.02	0.03	-2.17	-1.74	-1.17	0.0303*	0.0838	0.2419
(2)	Play in park	- do -	-0.07	-0.05	-0.09	0.02	0.03	0.03	-2.97	-1.69	-2.36	0.0032**	0.0933	0.0195**
(3)	Relax in park	- do -	-0.09	-0.05	-0.13	0.02	0.03	0.03	-3.57	-1.57	-3.46	0.0004***	0.1187	0.0007***
(4)	Get together in park	- do -	-0.10	-0.07	-0.13	0.02	0.03	0.03	-4.11	-2.27	-3.46	0.0001****	0.0248*	0.0007***
(5)	Play in playground	- do -	-0.12	-0.10	-0.13	0.02	0.03	0.03	-4.60	-2.90	-3.49	0.0001****	0.0044**	0.0007***
(6)	Visit zoo	- do -	-0.08	-0.05	-0.10	0.02	0.03	0.03	-3.37	-1.76	-2.86	0.0009***	0.0799	0.0050**
(7)	Visit lakeview	- do -	-0.08	-0.05	-0.11	0.02	0.03	0.03	-3.46	-1.78	-2.97	0.0006***	0.0761	0.0035**
(8)	Extent of use of recreational services	- do -	-0.62	-0.44	-0.77	0.16	0.20	0.25	-3.77	-2.15	-3.05	0.0002***	0.0332*	0.0028**
(1)	Read/Study in park	Respondents' Opinion Feature Score	0.02	-0.02	0.16	0.03	0.03	0.07	0.58	-0.68	2.17	0.5604	0.4964	0.0315*
(2)	Play in park	- do -	0.03	0.01	0.08	0.04	0.04	0.07	0.73	0.37	1.10	0.4656	0.7123	0.2699
(3)	Relax in park	- do -	0.04	0.02	0.13	0.04	0.04	0.07	1.10	0.43	1.78	0.2722	0.6682	0.0766
(4)	Get together in park	- do -	0.01	-0.01	0.13	0.04	0.04	0.07	0.45	-0.35	1.78	0.6477	0.7223	0.0766
(5)	Play in playground	- do -	0.02	-0.01	0.14	0.04	0.05	0.07	0.47	-0.38	1.85	0.6332	0.6985	0.0656
(6)	Visit zoo	- do -	0.00	-0.02	0.13	0.03	0.04	0.07	0.23	-0.62	1.78	0.8119	0.5321	0.0774
(7)	Visit lakeview	- do -	0.01	-0.02	0.13	0.04	0.04	0.07	0.32	-0.53	1.81	0.7441	0.5913	0.0715
(8)	Extent of use of recreational services	- do -	0.16	-0.07	0.93	0.26	0.29	0.49	0.60	-0.25	1.89	0.5450	0.7992	0.0608

**** Significant at 0.0001 level; *** Significant at 0.001 level; ** Significant at 0.01 level
* Significant at 0.05 level

negatively all the activities 'read/study in the park' (Prob.> T = .006; Sig. .01) very significantly, 'relax in park' (Prob.> T = .03; Sig. .05), 'get together in park' (Prob.> T = .02; Sig. .05), 'play in playground' (Prob.> T = .01; Sig. .05) and 'extent of use of recreational services' (Prob.> T = .02; Sig. .05). The variable 'play in park' was influenced to a somewhat significant degree (Prob.> T = .07; Sig. .10) and the activities 'visit Zoo' and 'visit lakeview' were slightly influenced by the variable (Prob.> T = .10 and .11; Sig. .15 respectively), in the case of the OS. For the LLI group the activities 'read/study in park' (Prob.> T = .01; Sig. .01), 'play in playground' (Prob.> T = .04; Sig. .05), and 'extent of use of recreational facilities' (Prob.> T = .05; Sig. .05) was significantly influenced by characteristic features. The other activities were only somewhat influenced by this variable at a low significance of 10 and 15 per cent. The activities 'visit lakeview' and 'visit Zoo' were not influenced by characteristic features. All the activities that were influenced, were negatively influenced by the characteristic features in all cases. In the case of the LMI group, none of the recreational pursuits were influenced by the variable characteristic features.

The Single-variate Regressions of each activity on situational factors, revealed a very high level of influence on all the activities in the case of the OS, and the influence of this variable was of a negative nature for all the activities. In the LLI category, the situational factors influenced, negatively, the activity 'get together in the park', at a significant level (Prob.> T = .02; Sig. .05) and the 'extent of utilization of recreational facilities' also,at a significant level (negatively),

(Prob.$>$T = .03; Sig. .05). 'Play in the playground' was very significantly influenced (negatively) by the situational factors (Prob.$>$T = .004; Sig. .01). The activities 'read/study in the park, play in the park, visit Zoo and visit lakeview', were only somewhat influenced by the situational factors, as the level of significance was only 10 per cent. The situational factors influenced the activity 'relax in the park' at a very low level of 15 per cent only. Hence, one might say that the last five mentioned activities were not very significantly influenced by this factor, though the influence of the variable was of a negative nature.

As regards the LMI group, the activities, 'relax in the park, get-together in the park, play in the playground', were influenced by the situational factors, at a highly significant level, (Prob.$>$T = .0007; Sig. .001), for all the three activities). The activities 'visit zoo' (Prob.$>$T = .005; Sig. .01), 'visit lakeview' (Prob.$>$T = .003; Sig. .01), 'the extent of utilization of recreational facilities' (Prob.$>$T = .002; Sig. .01), and'play in park' (Prob.$>$T = .01; Sig. .01) were again influenced by the variable, at a very significant level, all in a negative way, as in the other two sample groups. The only activity that was not influenced by the variable was 'read/study in the park'.

The respondents' opinion regarding the facilities, did not seem to have any influence on the various activities in question with regard to the OS and the LLI group. However, in the case of the LMI group, 'read/study in the park', was influenced in a positive way by the respondents' opinion regarding the same. All other activities, except, 'play in the park' (which was not

influenced) were influenced only to some extent (10 per cent level) by respondents' opinion regarding the facilities.

The above outcome reveals that the null hypothesis was rejected for most of the activities and partly for three activities, in the case of the OS, for the factor characteristic features. It was rejected for the activities 'read/study in the park, play in the playground and extent of use of recreational facilities', and partly for the other activities with respect to the LLI group. The null hypothesis was accepted for the factor characteristic feature when studied for its influence on the activities 'visit Zoo and visit lakeviews'. It was accepted for the factor, regarding all the activities concerning recreational facility use, with respect to the LMI group.

The null hypothesis was rejected for the situational factors with regard to all activities in the OS and all, but 'read/study in the park' in the LMI group. In the LLI group, it was rejected for the activities' get together in the park, play in the play ground, and extent of use of recreational facilities', and partly for the other activities.

The null hypothesis was accepted for the factor respondents' opinion with regard to all activities in the case of the OS and LLI group. In the LMI category, it was rejected for the factor related to the activity 'read/study in the park' and partly for all other activities, except 'play in the park' for which it was accepted.

The above revelations show that the characteristic features, in general, had a strong negative influence on the

activities concerning recreational service use for the total sample and LLE but not for LMI, and the situational factors had a high negative influence on almost all the activities for the two income categories, studied separately and combined. The respondents' opinion, on the other hand, affected the use of recreational services, to a small extent, positively, only in the case of the LMI group, but not in the case of the total sample and LLI groups.

Second combination

The influence of the physical factors, CFSC, SFFSC and ROFSC was also studied on the corresponding frequency score variables through Single-variate Regression Analysis (Table 33). It was observed that the influence of the CFSC on the frequency score was not very significant for the LMI group (Prob.> T = .07; Sig. .10), but very significant for the OS (Prob.> T = .002; Sig. .01) and the LLI group (Prob.>T = .01; Sig. .01). The influence of SFFSC on its corresponding frequency score was found to be extremely significant in all three groups, (Prob.>T = .0001; Sig. .0001). However, the ROFSC was not significant in its influence on the frequency score, with respect to the OS and LLI group, but very significant with regard to the LMI group (Prob.>T = .006; Sig. .01). This reveals that the features of facilities do have a significant influence on their use by all categories, except in the case of ROFSC, with respect to the OS and the LLI.

The results of the Principal Component Analysis of the frequency and feature variables of recreational facilities for

the OS (Appendix VI), reveal that in this case too the Eigenvector Coefficients are of the same order as shown below :-

EIGENVECTORS FOR RFRSC 1

	OS	LLI	LMI
CFFRSC	0.572437	0.563404	0.578336
SFFRSC	0.579559	0.583964	0.577134
ROFRSC	0.580024	0.584433	0.576579

This reveals again that the three variables of a single family are given equal importance. The first Principal Component has an Eigenvalue of 2.85, out of three standardized variables. Hence, the first Principal Component itself has a variance of 2.85, that is 95.2 per cent of the total standardized variation. This indicates that, the first component is, therefore, a very good summary of the three scores, summarized into a single score, and no other components need to be thought about.

The second set of Eigenvector Coefficients (feature scores) show a slightly varying form.

EIGENVECTORS FOR RFSC 1

	OS	LLI	LMI
CFSC	0.709342	0.700369	0.426409
SFFSC	0.111607	0.187719	0.522935
ROFSC	0.695973	0.688654	0.738047

Here again, the three variables can be meaningfully combined. Since the Eigenvalue is 1.66 and the cumulative percentage is 55 per cent, the first component may be used as an acceptable

summary of the three scores. The first and third Eigenvectors are given similar importance, being 0.70 and 0.69 respectively, while the second one is given much less importance, with a value of 0.11. Nevertheless, they are considered more or less equal, and hence they can be summarized into a single score.

The Principal Component Analysis for the LLI group reveals a similar trend, while the LMI group is somewhat different. The Eigenvectors for the feature scores show the SFFSC with a negative value, and the three values do not seem to be much in order. The first Principal Component has an Eigenvalue of 1.24 with a cumulative percentage of variation as only 41 per cent. However, the other two components (not calculated) would have together explained around 59 per cent, that is, on an average about 29.5 per cent. Hence it is reasonable to use the first component alone, as representing all the three scores together.

The Canonical Correlation Analysis for recreation variables, for the entire sample, shows that the chances of getting an F, as large as, or larger than 8.5166, is only .0001, that is one in 10,000. Hence the HO of zero correlation is not accepted, that is, the first Canonical Correlation is to be taken as not zero, and hence, whatever is obtained is an estimate of the correlation between the two sets. In the second Canonical Correlation, the chances are 9 out of 100 (9 per cent), that is a reasonable chance of getting the F value 1.9854, or larger, when the hypothesis is true. Therefore the HO is accepted, that is, the second and higher order correlations are zeros.

The first Canonical variate for the 'Var' set has the

highest correlation with the Canonical variate of the 'with' set. Thus, the two sets of variables do have a correlation and the miximum such possible correlation is 0.48, which is achieved by the combination of the first set with the weights -.008, 0.300 and -.154 and the second set with the weights 0.357, 0.380, and -.766. The Canonical Structure shows that the correlation of each single variable in the set with the first Canonical variate are 0.79, 0.94 and 0.79, that is a high correlation.

A scrutiny of the figures on the Canonical Correlation Analysis for the LLI and LMI groups (Appendix VII) reveal a similar trend, including a high correlation between each single variable in the respective sets with the first respective Canonical variates, for both income groups.

In the Single-variate Regression of the summarized scores for the OS, LLI and the LMI groups (Table 33), it was seen that the Recreation Feature Score, which was the new summarized version of the original separate scores, had a significant (Prob.> T = .02; Sig. .05) ~~and~~ and highly significant negative influence (Prob.> T = .0007; Sig. .001) over the Recreation Frequency Score in the case of the LLI and LMI groups respectively. When the groups were combined, the influence was only somewhat significant (Prob.> T = .08; Sig. .10), showing that, the influence was moderately significant, when the sample was taken as a whole. Perhaps the negative influence of the LMI group counteracted the effect, as its feature score prompted non-use rather than use of the facilities. Also, the Single-variate Regression of the original scores, had shown non-significant Prob.> T values for respondents' opinion, with regard to the OS and LLI groups, which indicates the slightly

lower significant level in the summarized scores for the same. However, as a marked causal effect is seen in the LLI groups, and a somewhat significant causal impact on the OS, the summarized scores seem effective.

The influence of other physical factors such as housing, neighbourhood and resource availability and the location was studied on the use of recreational facilities.

First combination

Two-variate Regression Analysŝs were computed with two independent variables each, under housing and neighbourhood (Table 35). It was seen that, under the factor housing, the space utilization inside and outside the house significantly influenced (negatively) the use of parks, playgrounds, for play, study, pleasant view and the 'Safari' facility in the Zoo, as well as the overall use of recreational services (all significant at .05) for the OS. Only in one case, that is, 'use of play space in parks' was somewhat influenced by space utilization outside the house for play in the two-variate regression.

In the case of LLI group, it was seen that the housing space utilization inside for play by children, significantly influenced all the kinds of recreational facility use (all significant at .05). However, the space utilization outside the house for play did not significantly influence the use of any services. In the case of the LMI group, there was no influence whatsoever, of the housing space on the services' utilization.

TABLE 35

BI-VARIATE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Variables		Parameter Estimate			Standard Error			T for HO:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Play space in parks used	Space used inside for play	0.29	0.42	0.15	0.12	0.20	0.16	2.32	2.09	0.91	0.0209*	0.0381*	0.3639
		Space used outside for play	-0.18	-0.23	-0.09	0.10	0.18	0.12	-1.85	-1.32	-0.79	0.0650	0.1865	0.4288
(2)	Play space in play-ground used	Space used inside for play	0.29	0.42	0.14	0.12	0.20	0.16	2.30	2.09	0.88	0.0223*	0.0381*	0.3800
		Space used outside for play	-0.20	-0.23	-0.13	0.10	0.18	0.12	-1.99	-1.32	-1.04	0.0472*	0.1865	0.2972
(3)	Quiet study in park used	Space used inside for play	0.31	0.46	0.14	0.12	0.19	0.16	2.51	2.35	0.88	0.0125**	0.0200*	0.3800
		Space used outside for play	-0.22	-0.25	-0.13	0.10	0.17	0.12	-2.19	-1.47	-1.04	0.0291*	0.1431	0.2972
(4)	Safari in zoo used	Space used inside for play	0.31	0.46	0.14	0.12	0.19	0.16	2.52	2.37	0.87	0.0123**	0.0193**	0.3850
		Space used outside for play	-0.21	-0.24	-0.14	0.10	0.17	0.12	-2.14	-1.37	-1.13	0.0328*	0.1715	0.2601
(5)	Pleasant view used	Space used inside for play	0.32	0.46	0.15	0.12	0.19	0.16	2.55	2.37	0.91	0.0114**	0.0193**	0.3639
		Space used outside for play	-0.19	-0.24	-0.09	0.10	0.17	0.12	-1.95	-1.37	-0.79	0.0516*	0.1715	0.4288
(6)	Use of recreation-al services	Space used inside for play	1.54	2.23	0.74	0.60	0.94	0.81	2.53	2.37	0.91	0.0119**	0.0194**	0.3612
		Space used outside for play	-1.02	-1.22	-0.60	0.48	0.84	0.60	-2.10	-1.44	-0.99	0.0364*	0.1515	0.3239

(Continued ....)

(Table 35 ... Continued)

Sl No.	Variables		Parameter Estimate			Standard Error			T for HO:Parameter=0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Play space in parks used	Play with neighbourhood children	0.21	0.47	0.08	0.15	0.21	0.22	1.33	2.14	0.36	0.1821	0.0338*	0.7134
		Neighbourhood provides play space	-0.12	-0.19	-0.06	0.13	0.17	0.20	-0.93	-1.06	-0.31	0.3513	0.2902	0.7504
(2)	Play space in play-ground used	Play with neighbourhood children	0.21	0.59	-0.08	0.15	0.21	0.22	1.33	2.74	-0.36	0.1822	0.0071**	0.7158
		Neighbourhood provides play space	-0.14	-0.32	0.07	0.13	0.17	0.21	-1.04	-1.83	0.36	0.2957	0.0695	0.7130
(3)	Quiet study in park used	Play with neighbourhood children	0.16	0.42	0.83	0.15	0.21	0.22	1.05	1.97	0.36	0.2920	0.0505*	0.7157
		Neighbourhood provides play space	-0.09	-0.10	-0.10	0.13	0.17	0.21	-0.68	-0.60	-0.47	0.4932	0.5459	0.6362
(4)	Safari in zoo used	Play with neighbourhood children	0.05	0.42	-0.20	0.15	0.21	0.22	0.32	1.96	-0.91	0.7496	0.0521*	0.3618
		Neighbourhood provides play space	0.06	-0.08	0.25	0.13	0.17	0.21	0.49	-0.48	1.21	0.6203	0.6273	0.2265
(5)	Pleasant view used	Play with neighbourhood children	0.30	0.54	0.25	0.15	0.21	0.22	1.97	2.55	1.11	0.0497*	0.0119**	0.2690
		Neighbourhood provides play space	-0.22	-0.22	-0.24	0.13	0.17	0.20	-1.60	-1.26	-1.17	0.1092	0.2102	0.2422
(6)	Use of recreational services	Play with neighbourhood children	0.94	2.46	0.12	0.75	1.03	1.10	1.24	2.38	0.11	0.2136	0.0185**	0.9103
		Neighbourhood provides play space	-0.52	-0.92	-0.07	0.66	0.84	1.02	-0.78	-1.10	-0.07	0.4348	0.2727	0.9395

** Significant at 0.01 level; * Significant at 0.05 level

However, in the Step-wise Regression (Table 36), done on the above significant variables, it was observed in the case of the OS, that space used outside the house for play significantly influenced 'quiet study in parks, Safari in zoo, pleasant view and overall use of recreational facilities' in a negative manner (all significant at .05). Space used outside the house for play, only somewhat influenced the use of play space in parks (Prob.>T = .06; Sig. .10). The space used inside the house for play influenced the use of services only very moderately at a 15 per cent level of significance only. In the case of the LMI group, the space utilization inside the house influenced significantly, only the use of Safari in zoo, pleasant view, and the overall use of recreational services (all significant at .05). 'Quiet study in parks, use of play space in playgrounds and parks' were influenced to a fairly significant level, by space used inside the house for play (all significant at .10). Space used outside the house for play, negatively influenced, to a low significant level, the activity 'quiet study in park' that is the park was not used for this activity, as, study was done in the outside space of the house, in some cases.

The use of parks, playgrounds and other facilities was not influenced by housing space within and outside, in the case of LMI respondent families, as was evident from the Bi-variate Regression Analysis.

The above dependent variables each of which, when regressed on the two aspects of the physical factor 'neighbourhood' viz., 'play with neighbourhood children' and 'neighbourhood provision of play space ' (Table 35), revealed, expectedly, a significant

TABLE 36

STEP-WISE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variable)	Order of Entry and df	OS		Order of Entry and df	LLI		Order of Entry and df	LMI	
				F Value	Prob.>F		F Value	Prob.>F		F Value	Prob>F
(1)	Play space in parks used	Space inside house used for play	1	2.1989	0.1394	1	2.6860	0.1039	-	-	-
		Space outside house for play	2	3.4378	0.0650	-	-	-	-	-	-
(2)	Play space in playgrounds used	Space inside house used for play	1	-	-	1	2.6860	0.1039	-	-	-
		Space outside house used for play	2	-	-	-	-	-	-	-	-
(3)	Quiet study in parks used	Space inside house used for play	1	2.1030	0.1483	1	3.4603	0.0654	-	-	-
		Space outside house used for play	2	4.8171	0.0291*	2	2.1738	0.1431	-	-	-
(4)	Safari in zoo used	Space inside house used for play	1	2.2436	0.1355	1	3.9399	0.0495*	-	-	-
		Space outside house used for play	2	4.6078	0.0328*	-	-	-	-	-	-
(5)	Pleasant view used	Space inside house used for play	1	2.8559	0.0924	1	3.9399	0.0495*	-	-	-
		Space outside house used for play	2	3.8263	0.0516*	-	-	-	-	-	-
(6)	Use of Recreational Services	Space inside house used for play	1	2.3907	0.1234	1	3.6408	0.0588*	-	-	-
		Space outside house used for play	2	4.4289	0.0364*	-	-	-	-	-	-
(7)	Play space in parks used	Play with neighbourhood-children	-	-	-	1	4.2200	0.0422*	-	-	-
(8)	Play space in playgrounds used	Play with neighbourhood children	-	-	-	1	4.2200	0.0422*	-	-	-
		Neighbourhood provides play space	-	-	-	2	3.3572	0.0695	-	-	-
(9)	Quiet study in parks used	Play with neighbourhood children	-	-	-	1	5.4209	0.0216*	-	-	-
(10)	Space in zoo used	Play with neighbourhood children	-	-	-	1	5.9827	0.0159**	-	-	-
(11)	Pleasant view used	Play with neighbourhood children	-	-	-	1	5.9827	0.0159**	-	-	-
(12)	Use of recreational services	Play with neighbourhood children	-	-	-	1	5.6406	0.0192**	-	-	-

** Significant at 0.01 level; * Significant at 0.05 level

influence of only the former aspect, on all the service utilization of recreational facilities, by the LLI sector of the sample alone. Of all the activities 'play with neighbourhood children' had a very significant influence on 'use of pleasant view, use of recreational services in general (Prob.>T = .01; Sig. .01) and 'use of play space in playgrounds' (Prob. >T = .007; Sig. .01), all others being significant at 5 per cent.

Provision of play space in the neighbourhood, did not seem to influence any kind of recreational service use, except somewhat significantly, the use of play space in playgrounds.

Identical results were seen in the Step-wise Regression Analysis of the same variables (Table 36). There was a significant influence of the variable 'play with neighbourhood children' on use of play space in the parks, playgrounds, quiet study in parks (all significant at.05) and a very significant influence on use of Safari in zoo, pleasant view and on the general use of recreational services (all significant at .01) in the case of the LLI group alone. The aspect of 'neighbourhood provides play space' seemed only somewhat significant in influencing (negatively) the use of playspace in playgrounds, as seen by the Bi-variate regression also. (Prob.> F = .06; Sig. .10). There was no influence of the physical factor 'neighbourhood' on the use of any of the above recreational services in the case of the entire sample nor the LMI group.

Therefore, the null hypothesis was rejected for the aspect of space used outside the house for play with regard to most of the recreational services use for the total sample, but accepted

for this aspect, for the LLI group. The hypothesis was rejected for the aspect 'space used inside the house for play' with regard to most of the recreational services use for the LLI group, but partly accepted for this aspect for the OS, as there seemed to be a slight influence. However, in the case of the LMI group, the null hypothesis was accepted for the physical factor 'housing' in both its aspects,as, the space inside and outside the house, did not seem to have any influence on the recreational services use by this group.

In the case of physical factor 'neighbourhood' the null hypothesis was rejected for the influence of the aspect 'play with neighbourhood children' on all kinds of uses of the recreational services, but accepted for the other aspect of neighbourhood, viz., 'neighbourhood provides play space' which did not seem to influence any kind of service utilization, except somewhat significantly the use of play space in playgrounds, in a negative manner in the case of the LLI group. The null hypothesis was totally accepted for the physical factor 'neighbourhood' in both its aspects with regard to the use of all the types of recreational services, with respect to both the OS and the LMI group.

Hence, it is inferred that the space used inside and outside the house for play, did influence (the latter negatively) the utilization of recreational services, in one way or another, among the OS and LLI group only. Only the aspect 'play with the neighbourhood children', influenced positively, the use of services, for the LLI group alone. In other words, housing and neighbourhood did not influence the use of recreational services by the LMI group.

Second combination

The physical factor 'neighbourhood' was also studied for its influence on the various activities that recreational facilities were used for. In the Bi-variate regression the two aspects of the variable 'neighbourhood', viz., 'play with neighbourhood children' was very significant (Prob.>T = .002; Sig. .01) and 'neighbourhood provides play space' was significant (Prob.>T = .02; Sig. .05), the latter having a negative influence on the activity 'read/study in the park' only, hence table is not reported. In the Step-wise Regression (Table 37), both the aspects of neighbourhood emerged significant at 5 per cent level, having a positive and negative influence respectively on the activity, in the case of the LMI category alone. No other activity was influenced by this variable in any category.

Third combination

The frequency scores were also regressed on the variable 'neighbourhood' and in the Bi-variate regression, both aspects were not significant in relation to any (hence the results are not reported through Tables) frequency score variable for the three categories, even at 15 per cent, except in the case when the CFFRSC was regressed on the two aspects for the LMI group. Here, the aspect 'play with neighbourhood children' was very significant (Prob.> T = .003; Sig. .01) in its influence of CFFRSC and so also 'neighbourhood provides play space' was highly significant (Prob.> T = .0007; Sig. .001) having a negative influence on the dependent variable, showing influence of 'neighbourhood play space' on non-use of recreational facilities.

In the Step-wise Regression (Table 37), the aspect neighbourhood provides play space was surprisingly significant at 5 per cent, in influencing the behaviour associated with characteristic features, situational factors and respondents' opinion, for the LLI class. However, it emerged negatively significant only at 10 per cent in the case of the first dependent variable for the LMI group. 'Play with neighbourhood children' was also found to very significantly influence (Prob.> F = .003; Sig. .01) the use behaviour associated with characteristic features, for the same group. The total sample's use behaviour was not influenced by the variable 'neighbourhood' and so also the LMI group's use behaviour associated with situational factors and their opinions.

Therefore, the null hypothesis was rejected for the variable, 'neighbourhood' in both its aspects, which influenced the activity 'read/study in the park' only, for the LMI alone, but accepted for all other uses of recreational facilities with regard to the three groups. The null hypothesis was also rejected for the aspect neighbourhood provides play space, but accepted for the aspect 'play with neighbourhood children' with regard to all three use variables for LLI groups (CFFRSC, SFFRSC and ROFRSC). It was accepted for both aspects of neighbourhood with regard to the three use variables for the OS, and only for the use variables SFFRSC and ROFRSC with regard to the LMI group. The null hypothesis was rejected for the factor neighbourhood, as both its aspects influenced use behaviour associated with characteristic features of facilities, by the LMI group. This reveals that neighbourhood as a physical factor influenced the use of recreational facilities, in the case of the LLI group and partly in case of the LMI group.

TABLE 37

STEPWISE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variables)	Order of entry and df	OS		Order of entry and df	LLI		Order of entry and df	LMI	
				F Value	Prob>F		F Value	Prob.>F		F Value	Prob.>F
(1)	Read/study in park	Play with neighbourhood children	1	-	-		-	-	1	4.7971	0.0305*
		Neighbourhood provides play space	1	-	-		-	-	2	5.4788	0.0209*
(1)	Characteristic Feature Frequency Score	Neighbourhood provides play space	-	-	-	1	5.1121	0.0256*	1	2.7490	0.1000
		Play with neighbourhood children	-	-	-		-	-	2	9.2109	0.0030**
(2)	Situational Factor Frequency Score	Neighbourhood provides play space	-	-	-	1	4.9913	0.0274*	-	-	-
(3)	Respondents' Opinion Frequency Score	Neighbourhood provides play space	-	-	-	1	4.6618	0.0329*	-	-	-

** Significant at 0.01 level; * Significant at 0.05 level

The use of recreational services, in its various kinds was also regressed on the physical factor resource availability and distance with regard to the 'playground availability and distance and park availability and distance'. A Bi-variate Regression Analysis was computed to test the null hypothesis of no influence of the resource availability and distance on the dependent variable, use of services.

First combination

As seen from the results (Table 38) of the Bi-variate regression, low Prob.> T values were obtained for the aspect 'park availability distance' with regard to the variables 'use of play space in parks, quiet study in parks and pleasant view', the first and third significant only at 15 per cent in a negative form, for the OS. The same was found significant at 15 per cent only with regard to the OS, in influencing the above-mentioned dependent variables, in the case of the Step-wise Regression (Table 39). In no other case, did this aspect nor the second aspect of resource availability and location influence 'use'behaviour with regard to the income groups studied separately and combined.

Second combination

Again, the influence of resource availability was studied on the various activities for which, the recreational facilities were used, through a Bi-variate Regression Analysis, where, in all cases except three, for all sample categories, high Prob.>T values were obtained suggesting non-significance of the factor, hence not reported in the form of a table. However, in the Step-wise Regression, it was seen that the aspect 'playground

TABLE 38

BI-VARIATE REGRESSION ANALYSIS

RECREATIONAL FACILITY USE

Sl. No.	Variables		Parameter Estimate			Standard Error			T for HO : Parameter = 0			Prob. > T		
	Dependent	Independent	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI	OS	LLI	LMI
(1)	Play space in parks utilized	Play ground availability distance	-0.00	-0.00	-0.00	0.01	0.01	0.01	-0.42	-0.08	-0.34	0.6716	0.9304	0.7280
		Park availability distance	-0.02	-0.01	-0.11	0.01	0.01	0.09	-1.43	-0.95	-1.19	0.1529	0.3424	0.2335
(2)	Play space playground utilized	Play ground availability distance	-0.00	0.00	-0.00	0.01	0.01	0.01	-0.16	0.29	-0.40	0.8707	0.7688	0.6838
		Park availability distance	-0.00	0.00	-0.11	0.01	0.01	0.10	-0.12	0.31	-1.13	0.9012	0.7535	0.2600
(3)	Quiet study in park utilization	Play ground availability distance	-0.01	-0.01	-0.00	0.01	0.01	0.01	-1.10	-0.91	-0.40	0.2710	0.3614	0.6838
		Park availability distance	-0.02	-0.01	-0.11	0.01	0.01	0.10	-1.33	-0.80	-1.13	0.1842	0.4251	0.2600
(4)	Safari in Zoo	Playground availability distance	-0.01	-0.00	-0.01	0.01	0.01	0.01	-1.05	-0.47	-0.87	0.2943	0.6344	0.3855
		Park availability distance	-0.01	-0.01	-0.10	0.01	0.01	0.10	-1.09	-0.64	-1.08	0.2741	0.5201	0.2802
(5)	Pleasant view utilization	Playground availability distance	-0.00	-0.00	-0.00	0.01	0.01	0.01	-0.30	-0.17	-0.01	0.7630	0.8638	0.9888
		Park availability distance	-0.02	-0.01	-0.12	0.01	0.01	0.09	-1.50	-0.94	-1.21	0.1346	0.3450	0.2254
(6)	Use of Recreational Services	Playground availability distance	-0.03	-0.01	-0.03	0.05	0.06	0.07	-0.62	-0.28	-0.42	0.5297	0.7801	0.6735
		Park availability distance	-0.08	-0.04	-0.57	0.07	0.07	0.48	-1.13	-0.63	-1.18	0.2574	0.5292	0.2383

TABLE 39

STEPWISE REGRESSION ANALYSIS
RECREATIONAL FACILITY USE

Sl. No.	Dependent Variable	Factors (Independent Variables)	OS			LLI			LMI	
			Order of entry and df	F Value	Prob.>F	Order of entry and df	F Value	Prob.>F	Order of entry and df	F Value	Prob.>F
(1)	Play space in parks used	Park availability and distance	1	2.2139	0.1381	–	–	–	–	–	–
(2)	Quiet study in parks used	Park availability and distance	1	2.1082	0.1478	–	–	–	–	–	–
(3)	Pleasant view in parks used	Park availability and distance	1	2.3816	0.1241	–	–	–	–	–	–
(1)	Read/study in park	Playground availability distance	1	3.3499	0.0685	–	–	–	1	7.0234	0.0091**
(2)	Get-together in the park	Park availability and distance	1	2.3501	0.1266	–	–	–	–	–	–
(3)	Play in playground	Park availability and distance	–	–	–	1	3.4615	0.0653	–	–	–
(1)	Situational Factor Frequency Score	Park availability and distance	–	–	–	1	3.5945	0.0604	–	–	–
(2)	Respondents' Opinion Frequency Score	Park availability and distance	–	–	–	1	5.9105	0.0166**	–	–	–

** Significant at 0.01 level

availability and distance' which had a low Prob.>T value in the Bi-variate Analysis (Prob.>T = .05; Sig. .05) had a moderate negative influence on the use variables 'read/study in park' for the OS (Prob.>F = .06; Sig. .10) and a very significant influence for the same 'use' variable, with regard to the LMI group (Prob.>T = .007; Sig. .01) and (Prob.>F = .009; Sig. .01, Table 39).

'Park availability and distance' was significant at 15 per cent only in influencing the activity 'get together in the park' for the OS and not for other groups. The same variable was again significant in both the Bi-variate and Step-wise Analyses in influencing (negatively) 'play in playground' by the LLI category, at a moderate level of 10 per cent. In other words, the 'park availability and distance' somewhat influenced non-use of a playground for play by the LLI children. The influence of the variables was not observed for any use variable concerning the other two sample groups.

Third combination

Use behaviour through characteristic features, situational factors and respondents' opinion frequency scores, a_s dependent variables each, was regressed on resource availability and location by a Single-variate Regression Analysis, wherein the aspect 'park availability and distance' again assumed a low value (Prob.>T = .05; Sig. .05) in the Bi-variate Regression, (hence tables not reported) for the dependent variable SFFRSC, for the LLI group. The same variable emerged somewhat significant (Prob.>F = .06; Sig. .10) for the LLI category (Table 39) showing a slight positive impact of the resource availability and distance over the fre-

quency of use associated with situations faced by the families, which seems to be a natural cause and effect relationship. Again, the same aspect obtained a very high level of significance in the Bi-variate Analysis for the dependent variable ROFRSC (Prob.>T .01; Sig. .01), concerning the LLI group. This was picked up by the Step-wise Regression at a high level of significance (Prob.>F = .01; Sig. .01), showing that 'park availability and distance' had a positive influence on the frequency of use of recreational facilities associated with respondents' opinions regarding the same, which again is a natural cause and effect phenomenon. No aspect of resource availability and location influenced the use-behaviour of the total sample and LMI category.

As seen from the above, the null hypothesis was only partly rejected for the aspect 'park availability and distance', having a very slight negative influence on 'use of play space, quiet study and pleasant view, in parks', for the OS. It was accepted for this aspect of resource availability for all other use variables. The null hypothesis was accepted for the factor resource availability and distance with regard to all use variables for the two income groups. Again, the null hypothesis was partly rejected for the aspect 'playground availability and distance' with reference to use behaviour in terms of the activity 'read/ study in park', on which it had a negative influence, of moderate significance, with respect to the OS, and a very high significance with respect to the LMI group. It was accepted for all other activities that the facilities were used for, by all sample groups.

The null hypothesis was also partly rejected for the aspect

'park availability and distance', for its slight influence on the activity 'get together in the park' in the case of the OS and for the activity 'play in playground' in the case of the LLI group. It was accepted for all other activities for the three groups. The null hypothesis was again rejected for the aspect of resource availability, that is, 'park availability and distance' for its moderate influence on SFFRSC and its very significant influence on ROFRSC, for the LLI group alone. It was accepted for the dependent variable CFFRSC for the LLI group and in all three cases for the OS and the LMI group.

IX. Discussion Of Findings

The findings of the study are discussed below, in relation to the distinction or similarities studied between the two income groups, as well as, in relation to the variables, as determinants in the utilization of different community facilities and services.

As very scant investigations in the field of community facility use, had been carried out in the past, there are very few supportive studies, that could be quoted, to back the results of this study. The studies that exist, are mainly in the area of health facilities, and chiefly concerned with certain aspects of facility use alone.

The numerical and percentage figures through summary tables have been reported earlier in this chapter, and in the following paragraphs a discussion of the findings will be presented.

(IX.a) Demographic description of the sample

Age and education.- The demographic profile of the sample revealed that most of the homemakers belonged to the younger age group in both income categories, while the husbands belonged mainly to the middle and older age group. The LMI heads of families had a higher formal education than the LLI heads of households, perhaps, since, the latter were not as economically well off as the former, in order to be able to afford themselves a reasonably sound level of education, which seems to be necessary in enabling wise decision-making, being a predisposing factor in the use of facilities.

Awareness of facilities.- It was observed from the interviews conducted, that, due to a low educational status the LLI families, and also in many cases the LMI families were not aware of the community facilities and services available for their use as free or low cost resources, as is evident from the results on 'awareness' of facilities.

The LLI group as well as some of the LMI group families, were handicapped greatly, in knowing about available services, even though in some cases these services were available very close to their place of residence. They were even ignorant of the freely available health services in the government hospital and Municipal dispenseries, as well as services of government educational and recreational institutions, which are meant for them. Even though the LLI families did visit the government health facilities, for their health needs, their knowledge was mostly restricted to the out-patient department alone. They were

ignorant of the special departments in government hospitals. Undoubtedly, unawareness is the outcome of low educational status, most prevalent among the urban poor families. The correlation between literacy and awareness of care was brought out in the study by Murali and Kataria (1980). Though the LMI heads of households had a slightly higher educational level, many of them in this category too, were unaware of the resources available for their use, in the vicinity of health, education and recreation. Thus, lower educational-status, is a knowledge barrier or a constraint, for the lower socio-economic strata.

Occupation.- A majority of both the income category heads of families were unskilled workers, doing all kinds of odd jobs, while the rest were holding a variety of occupations, which gave them their daily bread. The occupations over which the sample was distributed may be enumerated as follows :

(1) Unskilled and skilled construction workers.

(2) Low paid jobs as unskilled workers, porters and loaders in the markets, shops and railway stations, rickshaw pullers, horse and bullock-cart drivers, domestic servants, cooks and hawkers, and other miscellaneous service occupations, requiring no specialized skills.

(3) Public undertakings:- Government and semi-government agencies and private offices as peons, watchmen, other unskilled office workers, semi-skilled, technical, and service personnel. Manual occupations— Mechanics, fitters,welders, metal workers, scooter, bus, auto, taxi drivers, electricians, plumbers, wiremen, moulders, painters, tailors and other manual occupations requiring some skill or vocational training.

(4) Hawkers, peddlers, wayside restaurant owners, beetle leaf shop owners, vegetable and fruit vendors, grocers and other petty retail traders.

(5) Traditional occupations and cultural trades as scavangers, leather workers, potters, carpenters, blacksmiths, basket-makers, weavers, doll-makers, washermen, barbers, and others occupied in various household and cottage industries.

(6) Employed in various industries and repair workshops as skilled, semi-skilled and unskilled workers.

(7) A very small proportion of the sample were semi-professionals or professionals like compounders, midwives, school teachers, and white-collar workers like clerks and accountants.

With such a cross-sectional variety of occupations, the two income categories of households, apparently obtained varying incomes which played a role in facility utilization.

Family type and size.- Data on family size, revealed the distribution of families as per the total number of adults and children present. Nuclear families were observed in a majority of both the income categories, which may be the reason for the presence of a smaller number of adults and children in majority of the cases of both income groups. Family type and family size, in terms of composition of members, as well as the age composition of children, seemed to have a definite bearing on the kind and frequency of utilization of community facilities. The presence of small children in a majority of families, and also a large number of 'other' members, naturally called for the use of facilities, as a generalization, though the results of utilization, do not quite support this general view.

Earners and income.- As regards the economic aspect of the families studied, there were mainly single-earner families in majority of cases who strived hard to earn an income. One thousand rupees was the maximum income earned by over fifty per cent of both income categories. Income also seemed to be a major barrier in consuming community services, particularly health services, which involved expenses on certain hospital services as well as medicines, which the poor could ill afford. Educational services too involved the expenditure of family income, and hence this seemed an important variable to be studied as a possible determinant of facility utilization.

Health status.- The health status of families seemed to be an important variable influencing utilization of health facilities and services. The sample studied seemed to have a fairly good health status as revealed by the data on various aspects of health. Both the income groups showed a majority of families with a 'good' state of health among adults and children, rarely falling ill, a majority in both categories, not catching ailments very easily, and finally a vast-majority of families not reporting a single member experiencing the feeling of exhaustion after having engaged in any kind of work. All these facts reveal an inclination towards sound health, by most of the families, which probably accounts for the apparent low utilization of health facilities and services.

Housing space and neighbourhood.- The physical amenity of space in and around the houses of both income categories, appeared to be of a meagre form, as, most of the LLI houses, especially, were of inferior quality with only one or two rooms. Some space

around the houses, did exist in most of the cases of both groups. In spite of congested living conditions, it was surprising to record that a majority of LLI households, reported play and study of children inside and around their houses. Nevertheless, the LMI groups too made use of the space inside and around the houses for play and study of children. Play in the outdoor neighbourhood space, ~~as also among the neighbourhood space,~~ as also among the neighbourhood children, revealed utilization in a positive vein, among a majority of LLI families when compared to the LMI families, who also showed a majority trend in neighbourhood play, among their children. This reveals that, play space within and around the dwelling unit along with provision of play space, and children in the neighbourhood, to play with, could be major determinants of low or non-use of recreational facilities such as parks, besides other influencing factors.

It was hypothesized that the utilization of health, education and recreation facilities would be influenced by the social variables, family type, family size in terms of number of total children and number of total adults, income, education, occupation, and health status of families with regard to the income groups combined and LLI and LMI groups, studied separately.

Health.- The results indicated that only the variables total adults and monthly family income (negatively) influenced the use of health facilities for the OS to a moderate degree of significance. For the LLI too, only total adults was found moderately significant. But no factor influenced the use of health facilities by the LMI group. It could be inferred from

this, that, the number of adults in the family could be mainly responsible for the decision taken on kind of facilities to be used since income had a negative influence which induced non-use of health facilities. Also, the more the adults in the family, perhaps, the more could be the chances of perceived morbidity by members.

The finding of this study, that there was no influence of socio-economic class on utilization of health services is supported by a study by Dutta. et. al. (1982). However, more of the LLI than the LMI category utilized the health services. This was in congruence with a few other studies, Anand and Srinivas, (1972), Aday (1976) and Mukherjee (1982). The findings of Sapru, et. al. (1975) and Yesudian (1981), revealed a different trend, that is, there was increased use with improvement in social class. The latter pointed out that the poor were deprived of medical care, the upper class using it more than the lower. However, several earlier studies show the influence of social factors like family type, size, education and occupation of head, and monthly family income - Anand and Srinivase (1972), Sapru et. al. (1975), Ram et. al. (1976), Quadeer (1977) Pathak (1981), Punia and Sharma (1981), Yesudian (1981), Dutta et. al. (1982), Mukherjee (1982) and Sholapurkar et. al. (1983), Devi (1986), and Jorapur (1989).

It was also hypothesized that health status of families would influence the use of health facilities and services. This was partly true in the case of LMI and the OS with regard to the influence of the factor, 'adults do not catch ailments

easily'. It may be inferred from this that since ailments are a rare phenomenon, it prompts the LMI group to seek care in a government hospital which is free. However, the principal determinant of use is the level of either real or perceived morbidity, and hence absence of morbidity would prompt non-use, Aday (1977), Kohn and White, Eds. (1977), Pathak (1981), Indian Institute of Population Sciences (1985) and Jorapur (1989). The LLI respondent families had a good health status, and hence, this former factor did not influence use of services. On the contrary, it was also found that the ease with which children catch ailments, also influenced non-use of facilities, associated with characteristic features of facilities and situational factors. This may mean controversially, that, for the LLI group, children catching ailments easily, made them over-cautious to avoid use of government facilities and resort to private medical aid, as otherwise a good health status was experienced by them. The most unfavourable opinion regarding health facilities, as seen in the data collected, also explains this controversial behaviour of facility use. Also, it was found that health status of adults too influenced use associated with the respondents' opinion, to a moderate extent for the LMI group, showing that they used the government health services when they experienced the need. The findings of this study reveal a negative influence of education of head on use of health facilities associated with respondents' opinion, with regard to the OS alone, meaning that education of head influenced non-use of facilities, so also occupation of head influenced non-use associated with the LLI category's opinions of

facilities, to some extent. The LMI remained unaffected by these personal factors. It may be inferred from this, that the education and occupation of the LLI category mainly, and therefore education of the total sample, which was of a lower level when compared to the LMI, naturally had an impact on non-use, as studies had shown that the higher and better the education and occupation, the better the use of the government health facilities. So in a way, this finding is in harmony with the findings of earlier studies, which show the influence of social factors like education and occupation on resource use, such as the studies by Anand and Srinivase (1972); Sapru et. al., (1975); Mukherjee (1982); Sholapurkar (1983), and Jorapur (1989).

It was also hypothesized that health service use would be influenced by physical factors. This was found to be absolutely true in the case of all the sample groups for the factors characteristic features, situational factors and respondents' opinion. This meant that, for all groups, the characteristic features or the typical features of health facilities, the situational factors faced by families which may/may not be the same from family to family, namely, locational distance of the facility from residence and also the respondents' opinion regarding facilities, which again may/may not be the same among families, all, positively influenced the use of health services in a highly significant manner. These results were strongly supported by several studies of the recent past. The influence of characteristic features such as nominal fees and good treatment, waiting time, quality of medicines, payment for

services, free clinics etc., on use were suggested by the Delhi TCPO survey, (1975) and other studies of Ram and Datta (1976), Gopalan (1979), Pathak (1981), Sholapurkar, Mouli and Gopal (1983), and Devi (1986). The influence of situational factors such as religion, caste, personal contact with staff and free medical aid, number of living children and several other factors faced by individual families, on the use of health facilities, were suggested by the studies of Ram et. al. (1976), Punia and Sharma (1981) and Sholapurkar (1983). Similarly the influence of respondents' opinions, regarding health services such as non-cordial behaviour of staff, time-consuming nature of services, lack of interest, non-availability of staff, medicines, long waiting, greasing of palms of staff, improper treatment, poor not treated well, lack of compatibility between providers and users and attitude of professionals, etc. on use of health services were clearly divulged in the studies of Anand and Srinivase (1972) Sapru et. al. (1975), Chuttani et. al. (1976) Government of India, Population Project - II (1981), Pathak (1981), Ray (1981), Mukherjee (1982), Das (1985), Indian Institute of Population Sciences (1985), and Bardhan (1989).

It was hypothesized that the physical factor resource availability and location influenced the use of the resource, viz. health facilities, but this did not appear so, in the results of the present study. The location of health facilities had no influence on its use by either income groups and therefore, not by the total sample also. Evidently, due to the poor opinions about the government health facilities, poor characteristic features and disadvantaged situational factors faced by the

respondents of both income groups, in most cases, even though a facility was located close to the residence of families, including the LLI group, who most needed these free facilities, they were never used. This reveals, that only those facilities which rendered good service and of which a good opinion was made by the respondents, were sought after, not withstanding the distance of location of the same. This also disclosed, the value of health that the urban poor had for their families, in that they would prefer good treatment even if it meant spending money, or travel time.

Khan et. al. (1982) disclosed findings similar to this, that 97.7 per cent of the respondents of their sample came on foot when the health facility was located at a distance of three kilometres, very clearly revealing that the physical factor resource availability and distance was not influential in the use or non-use of the facilities. On the contrary, several studies have brought out the impact of distance, on the use of health services, in that, greater use was associated with closer location of the facility with respect to residence. Andrews and Phillips (1970), Banwasi Seva Ashram (1970), Anand and Srinivase (1972), Sapru, et. al. (1975), Ram and Datta (1976), Ram et. al. (1976), Reddy (1980), Government of India, Population Project-II (1981), Mouli and Guruswamy (1982), Mukherjee (1982), Sholapurkar, Mouli and Gopal (1983) Devi (1986) and Jorapur (1989).

Education.- Data on educational facility use, show a different direction. Although the LLI heads of families were educated to a much lower level than the LMI heads, both the

groups had a very high value for education, and many of them sent the children to private schools, as government run educational facilities, were very poor by all standards, as opined by a majority of respondents. Most of them claimed several drawbacks in government schools, to mention a few, poor teaching, teacher absenteeism, untidy and small classrooms, no discipline, no school uniforms, school lunch or free books given, no importance given to children's education etc. Nevertheless, in spite of these drawbacks, utilization of schools was observed in less than 50 per cent of LLI families' children and less than 25 per cent of LMI families children, as most of them sent their children to private-aided schools.

It was hypothesized that utilization of educational facilities such as classrooms, training in crafts, display in museums and informative exhibitions would be influenced by social factors. The results of the study showed that in the case of the total sample, the factors total children in the family, education of the head, and occupation of head influenced the use of facilities. Education of the head negatively influenced the use, meaning that education of the head was instrumental for non-use of facilities. This may be perhaps due to the fact that literacy breeds awareness, (Murali and Kataria, 1980), that knowledge leads to awareness of quality of educational institutions. Total children, apparently had a positive influence, as the more the number of children, the higher would be the expenditure by the family on education, hence government institutions are the only resort. Occupation of the head, may be inferred to influence use, such that the income of the family depends on the kind of occupation of the head, and the income would be the

main determinant of choice of educational institution for the children. Hence, it has a direct influential role in educational service use.

For the LLI group, again total children, education of head were mainly influential (negatively) and to some extent family type and occupation of the head which again had a negative influence. The variable monthly family income negatively influenced use of informative exhibitions, that is, the LLI group having a low monthly income, may be incapacitated to spend money on attending informative exhibitions, hence income constrained use. Total adults too had a negative influence on use of educational facilities, perhaps by the fact that, the more the adults, the more the interactions in a family regarding the poor conditions of educational facilities, which therefore, led to non-use. Family type influenced use, perhaps by the number of school going children or, in the case of joint families, as there were more members, greater the use of educational facilities.

The LMI category showed that the variables total adults (to some extent), total children and occupation of head, positively influenced use. Total adults seemed only moderate in its influence, as the adults may have played a small role in influencing use of government run educational facilities. The variables monthly family income and education of head, had a negative influence, indicating non-use of government facilities and use of private facilities. Income played a role as LMI families were better-off financially and could afford private schools for children. Occupation of the head, had a negative influence on use of informative exhibitions, perhaps due to lack of

funds that must be spent to visit exhibitions, or it may be inferred that occupation of head, enabled judgement regarding the utility value of such exhibitions, as perhaps, having poor standards.

Again, the same hypothesis was made regarding use of educational institutions like library, museums exhibitions, attending educational lectures and use of educational facilities in general. It was found that all variables except education of head influenced the use of services, in the case of the LLI group mainly, and thereby the total sample. Since the framework of LLI families constituted all these variables which interacted in all decisions they took, it is not surprising to note that the same influenced use in a similar way, discussed earlier. Education of the head had no bearing on use of facilities, as obviously, there was no educational level or a barely low one, in the case of this category. In the case of the LMI group, occupation of the head had a prominent influence, perhaps, mainly due to the kind of occupation which decided the inflow of income, which in turn was the factor involved in choice of facilities. Also, occupation of head, leads to better and more varied contacts, by which information can be gathered on the standards of educational facilities, and therefore choice of one, best suited for their children. The frequency of use of educational facilities was governed by total children, total adults and significantly, by education of the head, all having an obvious role in the case of LMI group. Since this group had a higher educational level for the heads of households, it was natural that, this variable should play a role in influencing choice.

The use of educational facilities was hypothesized to be influenced by physical factors. This resulted to be true, as, the characteristic features, situational factors and respondents' opinion, greatly influenced the educational facilities use in a pronounced way, in the case of all groups, similar to the case of health. Again in the case of resource availability and distance, the hypothesis was partly proved,as, the Balwadi availability and distance influenced its use by the LLI families and thereby the total sample. This was the only facility, for which this factor proved essentially significant in influencing use, no other educational facility use was influenced by its availability and distance. Perhaps, this may be due to the fact that, the presence of very small children, necessitated the use of Balwadis, the location of which, influenced use, particularly by LLI families, as this was an almost free resource. The LMI group were not affected by the location of this facility, as well as other educational facilities, as they had the financial capacity, to some extent to use private institutions, or the money to spend on transport, to reach the government facilities which may be located at a far off distance.

Recreation.- It was also envisaged that the use of community recreational facilities would be influenced by physical factors including housing and neighbourhood with regard to the factor characteristic features,, it showed a strong negative influence on almost all activities concerning use of parks and playgrounds for the total sample and LLI, but no activity was influenced by this factor for the LMI. This reveals the fact that the characteristic features of facilities induced non-

use of the same for the different recreational pursuits by the LLI families and thereby the total sample. A couple of studies conducted abroad support this finding, in a way, that, the distance people are likely to travel is related to the quality of open space in terms of its size and variety and types of facilities offered, in other words, the characteristic features of the facilities (Greater London Council), (1968; Dee 1970). The type of facility and quality of attractiveness were significant in influencing use according to the North-west Regional Study (1972). Again, the hypothesis was proved true when it was found that the situational factors played a highly significant negative role in influencing use of almost all the activities of recreational facilities for the two income groups studied separately and combined. This enlightens the fact that the situations faced by individual families, deter rather than promote use of facilities, the main deterrent being distance of the facility, and lack of time, energy and persons to accompany members to the recreational site, as gathered through the interview of respondents. This was supported by the Delhi Pilot Project Study (1961) which showed that parks, playgrounds needed long walking hours to reach them, by some families and therefore, they were utilized by only a small proportion of the city's people, most of whom lived near the facilities, for the others the situational factor of long walking distance was a hinderance to use of the facilities. Another study by the Central Steering Group (1977) showed the impact of age (sixteen to sixty-four years) and physical handicaps as situational factors which made parks unattainable to eleven per cent males and nine per cent females of this age group, due to transportation and access problems. Again a Report (1977)

revealed findings of a study where transport was a problem, hence leisure facilities were taken to people on wheels. Other studies revealed weather conditions as situational factors influencing use of outdoor recreational facilities, Foley (1947), Duffel (1972) and Coppock (1975). Summertime and good weather conditions influenced maximum and non-local participation while windspread and rainfall showed fifty per cent variations in attendance at outdoor rural sites including urban parks. Though weather conditions as situational factors were not studied in this investigation, the above studies abroad, show a significant influence of this situational variable.

The respondents' opinion did not influence use of facilities in the case of the LLI, therefore the total sample, but did so positively for the LMI group. This meant that the opinion of LMI group households, regarding parks and other facilities were mainly favourable, thus promoting use of the same. Besides the LMI group also had a greater amount of money-resource, a small amount of which could be used for commutation to and from the facility.

The influence of feature scores on frequency scores of recreational facilities and services was also postulated and the trend here was slightly dissimilar from that for health and educational facilities. It was seen that the influence of the characteristic features on the frequency of use, was very significant for the LLI group, and thereby the total sample, but only moderately so, for the LMI group. This may imply that the LLI and total sample, had a favourable view of the quality of recreational facilities, which prompted their use, while, the LMI group were only moderately inclined to be influenced to use

these facilities, associated with the characteristic features typical of them. The situational factors, on the contrary, prompted both the income groups, to a significant degree, to use the facilities as well as the total sample, when both groups were combined.

However, it was found that the opinions held by the respondents of the LLI and thereby the total sample, regarding recreational facilities, did not significantly influence use of the same in both cases. This suggested that the LLI respondents' opinion regarding the facilities, in no way prompted use of the same, perhaps due to other constraints which acted as impediments, such as distance, non-availability of time, energy etc. This passive interaction was also seen in the total sample, which comprised both income groups. However, the opinions of LMI respondents' favouring recreational facilities, very significantly influenced their use of the facilities. In the results of the same interaction of summarized scores, a highly significant negative influence was seen of the recreation features over frequency of use by the LMI groups, meaning that, the features of facilities promoted non-use, on the whole by the LMI groups. However, the feature scores of facilities were seen to influence use scores of the same by the LLI respondents to a significant extent, and by the total sample to a moderately significant extent.

It was hypothesized that use of recreational facilities would be influenced by the indoor and outdoor housing space of families, and this turned out to be partly true, as, in the case of the total sample, the outdoor housing space had a negative

influence, such that, it hindred use of recreational facilities for almost all activities. This showed that the space outside the house of LLI (mainly) families was sufficient to cater to the needs of recreational pursuits and there seemed to be no need to utilize the distantly located government recreational facilities. In the case of the LLI families, the indoor housing space influenced use of facilities but not the outdoor space, while in the case of LMI families, housing space did not seem to influence use. The facilities were used by them whenever they found the need and time for using them.

The influence of the neighbourhood space and company of children in the neighbourhood, on use of recreational facilities was also brought to light through this study. It was seen that the aspect 'play with neighbourhood children' had a significant influence on the use of recreational facilities for various activities by the LLI group alone. The provision of play space did not affect use of services, except play space in playgrounds in a negative manner. This meant that play among the neighbourhood children, provoked use of recreational facilities for all kinds of activities, but the neighbourhood play space did not seem to influence use of facilities, meaning that whether there was space or not in the neighbourhood, LLI families, rarely used parks and playgrounds. However, the neighbourhood play space hindered use of playgrounds by the LLI families' children. But neighbourhood as a variable did not influence use of facilities by both LMI and the total sample. The results show a consistent non-influence of the physical factors housing space and neighbourhood in the case of LMI families. There were no

studies conducted earlier, that came by way of the investigators to support this finding.

The study also envisaged the influence of the variable resource availability and location, on the utilization of recreational facilities. The location of two facilities, parks and playgrounds were studied for this purpose. It was found that the location of parks had a negative influence on use of parks, only for play and pleasant viewing by the total sample alone. That is, the distant location hindred use of parks for these activities, in the case of the OS. It was also found that the location of parks significantly influenced the activity of having a'get together in the park' in a positive vein, for the total sample while it influenced non-use of pl aygrounds by the LLI group. This revealed that distance of the park did not hinder its use by the total sample and LLI families, whenever they needed to do so. Similarly, location of playgrounds, had a negative influence on park use for read/study by the total sample. This may mean that a playground nearby to the residence influenced non-use of a distant park for read/study, which is a naturally occuring phenomenon for poor families. Moreover, the location of a playground also had a very significant influence on park use by the LMI families for the same purpose. In the former case, the nearby playground was used for read/study by children and distant park thus avoided, while in the latter case, the park was used for the same activity, perhaps because of the noise of childrens' play in a nearby playground. This could be the reason why location of a playground influenced the use of a park, in the case of LMI families'

children. The results show that for activities like play and pleasant viewing, distance of resource location was a constraint, while, for serious activities like read/study and important activities like a 'get together', where a large space was required, (home space being insufficient), distance did not seem to be an obstacle. Several studies support both these findings. The Northwest Regional Study (1972) showed that seventy per cent of sports centre users came from within three miles, and twenty per cent over three miles-distance was not a constraint here.

The same study showed that the distance between an person's home and the nearest facility influenced participation. Studies also show the influence of distance on non-use, Burgess (1927), Delhi Pilot Project (1961), Dee (1970), where direct distance and number of road corssings between the facility and child's home, the latter being more significant, were related to attendance at playgrounds. Hence, there exists an inverse relationship between distance of location of a facility and its use. Increased distance would result in decreased participation and vice versa. Also, studies have shown how travel distance is related to quality of services, Greater London Council Study (1968), and the study by Dee (1970). Other factors like age and sex of members were also reviewed as crucial variables, though not taken up for this study. For instance, the Central Steering group (1977) found the fifteen to twenty age group to be the highest participants in virtually all types of out-of-home recreational pursuits both in terms of proportion and frequency of participation.

All the above findings of the study, so far, reveal several similarities and dissimilarities in the use of health, educational and recreational facilities by the two income groups, being directed by several similar and dissimilar variables. However, many exogenous variables which have not been studied for their impact on use of facilities, may also be responsible for this difference in use, or perhaps, the similarity in influence of variables over use of facilities, by the two income categories.

(IX.b) Availability and awareness of community facilities and services

The availability of a facility and its location was assumed to play a crucial role in its utilization by families. Since a wide majority of respondents' of the two income categories, reported non-availability of government hospitals and health centres, Balwadis and parks at walking distance, it could be inferred that, of this majority some did not utilize the same, while others used the facilities in spite of the constraint of distance. Lack of finance may have posed as a more serious constraint, for the latter. However, a majority of both income groups utilized services of a government hospital and health centre, more so the LLI.

A government pre-school and municipal school were available at walking distance from the residence of majority of families from both the income categories, and the reports on utilization of the same, show a corresponding high figure in the case of both income categories. This could lead to the generalization that non-availability of a facility at

walking distance did not necessarily constrain its use, as health and recreational facilities, though located far away, were yet utilized by a large number of the respondent families in the case of health, and by less than one-half of the LLI group and more than half of the LMI group in the case of recreational services. Hence, of all the facilities only educational facilities were available at walking distance to a majority of the respondents. In any case, major parks, playgrounds and hospitals are normally located away from residential areas, since they usually occupy a large land area. Access to facilities, in terms of utilization of its services may be influenced by its availability and distance of its location, though the latter did not seem to affect utilization.

Awareness of the existence of health facilities seemed very strong with regard to government hospitals, as, all the respondents were aware of the existence of more than one (over one-eighth of them even knew of about eleven to fifteen) government hospital. Awareness of other health facilities was a little over fifty per cent. This may be perhaps due to the reason, that, aid for any kind of perceived morbidity is generally sought in a hospital, hence the poor were aware of only that facility. Immunization, Family Planning Counselling centres and sanitary facilities were beyond their capacity of comprehension, mainly due to their low literacy levels, perhaps. Studies on health facility use have revealed low use due to unawareness of existence of facilities, Gopalan (1979), Public Systems Group (1985) and Jorapur (1989). Some studies also revealed that, awareness about the existence of facilities, and accessibility to the same, also fostered use of the same - Ram and Datta (1976);

Gopalan (1979), Sholapurkar, Mouli and Gopal (1983), Public Systems' Group (1985) and Devi (1986). However, Yadav's (1985) study exposed that, awareness of the existence of facilities, did not necessarily lead to utilization of community facilities.

As regards educational facilities the results show that facilities like Balwadis, Mahila Mandals, Public reading rooms, and public libraries were unheard of by a majority of respondents in both income categories, for the first two facilities, and by less than half and one-fourth of them for the latter two, respectively. Only government schools were known to the respondents, for the same reason, perhaps, as health facilities, the notion, that education can be provided only at schools, and other media for the same were not known by the low-literate poor. The provision of services, free of cost, in almost all educational institutions was also unknown to a large majority, in the case of Balwadis, Mahila Mandals and reading rooms mainly, as their mere existence was unknown to them. However, awareness of the existence of schools, did not necessitate its utilization, especially by the LMI group, a majority of whom did not utilize the services of government schools, even though existence was known to them.

However, the results pertaining to knowledge about the recreational facilities existing in the city was found to be more encouraging, as a large majority of the respondents were aware of all main facilities except swimming pools, boating and fishing sports as pointed out in the results. However, the corresponding results on utilization of the same were limited to less than fifty per cent in the case of LLI and about fifty

to sixty per cent in the case of LMI respondent families. This may be attributed to several reasons such as the LMI class being slightly higher in their educational level, earning a larger income, by which more funds are available at their disposal. Spending occasionally on transportation to reach these facilities, which are usually located far off, was fairly a prerogative of the LMI groups, while the LLI group was deprived of this asset.

(IX.c) Utilization of community facilities

Data pertaining to the core aspect of the investigation, namely, the utilization of community facilities, revealed that a large majority of both income groups used community facilities for over fifteen years. The John Hopkins University in their Rural Health Research Project in India (1967) found that only ten per cent used government hospitals and Bhatia (1969) found that only ten to twenty per cent used government hospitals, the rest used private ones. Aday (1976) found that the low income used government hospitals more than the high income groups, who saw physicians in private offices, while Yesudian (1981) found that the upper class used hospitals more than the lower class.

Educational facility use studies, recorded from the very early years' studies of Berelson and Asheim (1949) that twenty-five to forty per cent of the respondents used the public library. Gans (1968) found that the largest users of libraries were elementary and high school students who took fifty and sixty per cent of the books. Similarly, the few recreational facility use studies show the use of parks, playgrounds and other facilities subject to overcoming the distance factor, as quoted earlier.

It was seen that government health facilities were used by a large percentage of both income groups for innoculation but not for treatment, as majority of both groups used a private hospital/clinic for the purpose. It was unexpected to find, that a large percentage of even the LLI families went to a private hospital/clinic, as they had no faith in government hospitals. The John Hopkins University Study (1967) found that fifty-four percent of the sample studied used private hospitals and thirty-six per cent used home remedies, only ten per cent used government hospitals, as mentioned earlier, with other studies of Bhatia (1969), Aday (1976) and Yesudian (1981). Perhaps a large percentage of LMI families went to private hospitals, as more of them perceived morbidity sooner than the LLI group, as in Yesudian's (1981) study.

Utilization of hospitalization services was not a common phenomenon, as it involved expenditure of money, and since both income groups had a good health status, this step in the health system was hardly needed. The LLI who were occasionally prone to illness, would resort to this need only when everything else had failed and when all endeavours were in vain. This is so, because both groups had a very poor opinion of, and an unfavourable attitude towards, government health facilities, and they were more inclined to use the services of a private hospital or clinics, majority never used government health facilities. This presents quite a discouraging state of affairs, as, the sector which is in dire need of free health facilities, and not making optimum use of the same, makes a pointer to

the government's need of the hour, to improve health facilities and make them come on par with private facilities, so as to be optimally utilized by all classes of people, alike, irrespective of socio-economic strata, if not by the urban poor alone.

The utilization of community educational facilities too presents a similar picture. Nearly one-fourth of the sample children never went to school, and among those who did, most of them used private institutions. Government schools were cretisized by both groups, for many features, as mentioned earlier. Even so, the children of both income categories, in many cases, were being sent to government schools, in spite of poor prevailing conditions.

Educational facility use

On the whole, educational facilities were utilized by a larger percentage of LLI than LMI family children. Most of the services were never used by a large majority of both income groups, and if they were used, it was on very rare occasions. Education of the head seemed to play a very significant role in the utilization of servi œs, as already stressed. The impact of education of the head on service use, is obviously seen, in that, a higher percentage of the LMI group who had higher education than the LLI group, visited educative institutions like, museums, exhibitions and utilized services of a library, read newspapers etc. frequently, occasionally and rarely, the percentage respondents increasing with the decreasing frequency. The data revealed that the LLI families, out of no other choice were sending children to the government schools, but a large percentage of the LMI category sent

children to private schools, but yet due to their higher literacy level, made use of the other services such as library, reading rooms etc. to a much greater extent. The use of educational services were observed in a few studies conducted abroad and in India. Lynch (1967) in his study, found seventy per cent literate and of them eighty-three per cent read newspapers daily. The Agrindus Institute (1968) showed that the adult literacy schools attracted attention most regularly, of majority of the households studied. The Community Development Programme (1976) revealed that the Balwadi showed eighty-two per cent daily average attendance, and the adult literacy classes had an average attendance of twenty-three youths per day. This serves to show that the community educational facilities are, no doubt, patronized to some extent by the poorer classes and also by the slightly higher socio-economic strata of the population.

Recreational facility use

Among recreational facilities too, it was revealed that a larger percentage of the LMI category utilized the services than the LLI class. Parks, playgrounds, zoos and lakeviews were used relatively well by the LMI families, who though did not frequent the use of these services, did so in larger numbers than the LLI, on occasional and rare opportunities. This may be due to the expenditure involved in transportation to reach the facility, which as stressed already, only the LMI could more or less afford. Hence, the LLI again stood as the deprived lot, a majority of whom never utilized the free facilities of a park, playground or a zoo for that matter. Many LLI households were not aware of the existence of a zoo in the city,

which, as shown through some studies quoted earlier, could also be a drawback in use - unawareness resulting in non-use, again, commutation problem resulting in non-use.

Thus, the results on utilization of services present a very discouraging picture, when one sees that the poor who need the use of facilities most are not using the same, due to reasons out of their control, mainly due to faulty functioning or low standards, particularly in the cases of health and educational institutions. Lack of time and energy, perhaps, seem to be the main reason besides the constraint of distance, which prevented them from using recreational services, as otherwise, the opinions and attitudes of the sample towards recreational facilities was fairly favourable.

Factors influencing use

Data on the factors influencing use of facilities, which represented the main findings of the study, as it formed the theme of the study, were statistically analysed, and have already been discussed under the respective variables which were assumed to have a bearing on health, educational, and recreational facility-use. As was seen from the statistical computations and raw scores, characteristic features of health facilities, though poor, according to the respondents, had an overall strong bearing on utilization of the same, more by the LLI group than the LMI group. A higher use score in spite of the characteristic features, was obtained by the LLI than the LMI respondents, showing the forced need of free or low-cost treatment required by the LLI group. Similarly, though the situations faced by families, were hard and difficult,

yet these factors strongly influenced use of facilities, by the group who used the same, although interms of raw scores obtained, and frequency distributions calculated, a low frequency score was obtained. This shows that, health facility use, posed many situational problems which hampered use of the same, yet in many cases these situational factors did not act as obstacles or impediments to use the same, by which a significant influence of the same on use was obtained through the statistical computations. A similar effect was seen with respect to the respondents' opinion, which though unfavourable, yet influenced use of health facilities, mainly for the LLI group.

Factors influencing educational facilities' use displayed a likewise trend. Although the characteristic features of facilities were inferior in quality, the situations faced by families adverse, and the opinions, in most cases, unfavourable, yet the use scores were high, particularly in the case of the LLI families. Through the statistical computations, it was seen earlier that, again the features had an overall significant influence over the use of educational facilities, in both income groups as well as the total sample, signifying that, even though features were unfavourable, yet they had an influence over use. The raw scores prove this fact, that though feature scores were low, frequency scores were higher, more so for the LLI group. The LLI category inspite of having unfavourable views about educational facilities, were forced to send their children to these institutions, as the only positive feature seemed to be the free or low cost service, of these government institutions.

However, the recreational facilities' feature scores, showed a different direction, in that, both the income groups held similar views regarding the characteristic features, faced similar situations, and expressed similar opinions regarding these facilities. But in this particular area, the LMI group had a higher frequency score, suggesting better and more frequent use by this group than the LLI category. Perhaps, the LLI class had more important priorities in health and educational service use when obtained free and had no time for the recreational service use, while the LMI obtained these two basic needs for their families in government as well as private institutions and had the time and money to consume free/low-cost recreational services as well, in other words, they made the best use of recreational services. The statistical computations showed a different trend, where, though the raw feature scores were similar, the frequency scores were higher for the LMI group who, on an overall basis, were mainly influenced by the situations faced, and by their opinions about the facilities. Characteristic features of the facilities influenced use significantly only for the LLI group and only at a moderately significant level for the LMI class.

Hence, it may be remarked that frequency of use of recreational facilities, on an overall basis, was influenced significantly by the situations faced by both groups. However the characteristic features on the whole did not influence use by the LMI group, yet they obtained a higher frequency of use score, than the LLI which may be due to other influential factors, not captured in this study. Similarly, the respondents'

opinion feature score did not influence use by LLI (though they did so for the LMI), who therefore, did not use the facilities, perhaps due to the other reasons, as exogenous or uncontrolled variables, as mentioned before. These factors therefore, may or may not be the major determinants of use in all cases, certain other variables do also play a significant role.

(IX.d) Degrees of satisfaction in goal achievement

The data on degrees of satisfaction in goal achievement by the use of community facilities, reveal consistent results, in keeping with the responses given by the LLI and LMI families. The mean scores computed for the broad health, education and recreation goals, expose the fact that both income groups were only 'Satisfied' in the achievement of each health goal through the use of community health facilities, which is in harmony with their unfavourable views of the community health facilities. Since they had expressed a negative feeling about most of the features concerned with health facilities, they were bound to be only just 'Satisfied' with the services, since, inspite of the negative feeling, most of them did use the facilities, to achieve health goals.

Whereas, in the case of education, both income groups were thoroughly disappointed with the use of services in reaching educational goals, of their families. Almost 100 per cent of respondents of both income groups had expressed a negative view regarding almost all characteristic features of educational facilities and also unfavourable opinions regarding the working of the same. Due to this perhaps, the LLI group attained

an 'Undecided' degree of satisfaction mean score for most educational goals and 'Dissatisfied' degree of satisfaction mean score for two educational goals. The 'Undecided' degree of satisfaction denotes neither satisfaction nor dissatisfaction revealing an uncertain feeling about services rendered by educational facilities. The LMI group were totally dissatisfied with the services of educational facilities, and these facilities, in no way promoted the reaching of their educational goals. These goals were mainly achieved by the backing of private educational facilities, particularly in the case of the LMI group, who therefore expressed the 'Dissatisfied' picture. The LLI on the contrary, were only 'Undecided', as they were still using the facilities (out of no choice) inspite of not favouring their services, and hence, it left them with uncertainty with regard to goal achievement.

As regards recreation goals, both income groups were 'Satisfied' only, as they held favourable views regarding recreational facilities, but could not do full justice to their use, due to constraints of distance, transport, money, time, persons to accompany, energy etc. Hence, the facilities were used 'rarely' which led to only a 'Satisfied' degree of achievement of recreational goals. Nevertheless, recreational facilities provided both the groups with some satisfaction in being able to use the resources to achieve their family recreation goals.

(IX.e) Degree of desirability of significant features regarding community facilities

The data pertaining to the above information, give a clue to the gap between the features desired by respondents and the features available to them, through the use of health, educational, and recreational facilities. The results of this part of the investigation reveal that, a majority of the salient features of health, education and recreational facilities were 'Most Desirable' to majority of the respondents of both income groups, some were 'Desirable' to a smaller percentage of them and only a very few were found to be 'Not Essential' by a very insignificant percentage of the sample in the case of health and recreation only.

As regards educational facilities, about one-fourth of the LMI and a little over one-fourth of the LLI disregarded the 'provision of school bus facility' and claimed it as being 'Not Essential'. This seems a reasonable response by such a large number, who felt that this was too much to expect of a government school and hence it was put aside as 'Not Essential'. The clarity of wants, and priorities are very clear in these repponses from the urban poor. This shows that respondents had a sound knowledge base and awareness, regarding essential requirements for the proper functioning of these community facilities. It is when their just requirements and expected returns from government facilities, for which they pay as taxes, are not made available to them in unadulterated form, that they succumb to their desire and goals, and have to either look for support elsewhere, and achieve a high degree of

satisfaction by drawing upon their personal resources, or make do with the ordinary spurious services, and attain a minimum degree of satisfaction or total dissatisfaction in goal achievement. This is the direction that the line of events has taken, with regard to the use of community facilities in the acquirement of broad health, education and recreation goals, that were formulated by the poorer sections of the urban society. The moderate degree of satisfaction achieved in the case of achievement of the health and recreation goals and the dissatisfaction achieved in the case of realization of educational goals, is adducible enough to express the gap between what is 'wanted' and what is 'given' to the urban poor class of society.

In fact, several studies in the field of health and recreational have shown the importance given to certain necessary features of the respective facilities, such as the Northwest Regional Study (1972), studies by Ram and Datta (1976) Pathak (1981), Sholapurkar, et.al. (1983) and Devi (1986), to mention a few. Also, studies have shown how quality of services, influences the travel distance to and from the facilities, Greater London Council Study (1968) and the study by Dee (1970).

(IX.f) Range of service preferences regarding community facilities

Data pertaining to the maximum distances that the respondents were willing to travel, in order to avail of the services of facilities, showed similarities of requirements between the two income groups, in several cases. It was seen from the responses that among all the facilities mentioned

for health, education and recreation, the hospital was the only facility that a majority of both income groups, were willing to travel, to a distance of over one kilometre. The next facility for which the range of service was mentioned as over one kilometre, by almost one-fourth of the two income groups individually, was the park. Both these facilities, are rarely used by consumers, hence it seems practical enough to accept these responses as the clear-thinking minds of the poor consumers. All other ranges of service, were stated after careful thought about the practicality of the use of the services in question. Services to which the children have to commute by themselves, such as schools and perhaps a small playground, need to be located within walking distance or a short bus travel distance, while those to which adults may have to commute or accompany children, may be located a little further out and require a slightly longer travel time to reach.

Studies have revealed the impact of 'range of service' or 'catchment areas' of facilities on use of the same - Burgess (1927), Northwest Regional Study (1972), and Khan et. al. (1982).

As on many occasions, these distances were not attributed to the existing facilities, it posed as a constraint for the poor families, to find means of reaching them. Data also revealed that distance of location of certain facilities did not influence use of the same, while in some cases, it did. Since some facilities were located too far away, the LLI group particularly, were not in a position to reach these

services with ease. Nevertheless they did so, as their need was imperative and they had to overcome all constraints, in order to reach their destination.

It may thus be pointed out, that the ranges of service mentioned for the stipulated facilities, by the two income groups, seem to be realistic representations of their basic requirements, and in any case, seem to fall well within natural limits. Hence, these distances may well be accepted as true requirements and be used as guidelines by future planners, administrators and policy-makers.

The findings of the study indicate the significance of community facilities, which play a crucial role in the lives of the urban poor, who are, as such, already deprived of many of the niceties of life that the rich enjoy. These basic facilities are not being used optimally due to various reasons, as shown through this investigation, which both the poor and the poorer are in consonance with. In order to bring the best returns of these services, by maximum utilization, in terms of proportion of families utilizing them and frequency of use, the conditions of the facilities for health and education mainly, have to be undoubtedly streamlined, to come up on par with the private functionaries. It is only then, that the poor families would make the best use of these services, so essential to their living conditions and life styles.