Development Directions of Service Standards for Senior Congregate Housing*

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Abstract : The purpose of this study was to analyze the needs of future users for services at senior congregate housing and to look into the development directions of the service standards for senior congregate housing. A survey was conducted among middle-aged people in their fifties, who lived in Seoul, using the systematic random sampling method. The final sample included 498 respondents. The survey was conducted from November 3, 2003 to November 14, 2003. The results of this study were as follows. Firstly, as the need for housing services were high, it was quite clear that various services at senior congregate housing should be provided. Secondly, a service differentiation strategy should be proposed to meet the characteristics of the users. Thirdly, it was hereby suggested that service standards should be established in the following manner considering the relationship between the needs for services and the income level directly influencing the provision of services: 'Basic services' to be provided regardless of income, 'Optional services' to be selectable among the preferable services per income level, and 'Supportive services' to be provided for low-income people.

Key Words : needs for services, service standards, senior congregate housing

I. Introduction

As of 2002, the population of elderly people over the age of 65 in Korea was estimated to be about 3.77million, which was 7.9% of the total population and will be 14.3% by 2018. These figures suggest that Korea will step into an aged society(National Statistical Office of Korea, 2005). The rapid growth of the elderly population in Korea has been unprecedented in the history in the world. The Korean welfare policies for the aged have currently covered issues such as health, leisure, labor, and economy. Housing policies have not focused on the production of housing for the elderly because of housing shortages in Korea (You, & Hong, 2005b).

For senior citizens, having a safe and comfortable house is a basic need in addition to maintaining their income and being protected by appropriate medical care (Kahn & Kamerman, 1976). Moreover, since senior citizens spend more than 75% of their time indoors (Moos & Lawton, 1982), it is vital that elderly people have houses which meet their specific needs.

Residential space for the elderly has been developed in two ways, housing and care (Sherman & Forman, 1988). They want to live in an environment with home-like services. It is therefore disclosed that the services extended for senior congregate housing were the major factors for senior citizens moving into senior congregate housing from their own houses. A desire to be free from house maintenance (Butterfied &

Weideman, 1987; Free, 1995), and a residential manager's services (Eckert & Murrey, 1984) are very attractive reasons for them to move into senior congregate housing.

Accordingly, the purpose of this study is to analyze the desire of future users for services and to look into the direction of developing service standards for senior congregate housing. To accomplish this goal, the following studies were conducted. First, the users' needs for the supervising services for congregate housing were examined. Second, the differences of services' needs according to the characteristics of the respondents were analyzed. Third, the relations between income and the needs for services were figured out to develop a direction of supervising services for senior congregate housing.

Senior congregate housing is a house facility designed to support the autonomous life of senior citizens and to provide them with services. Features of the housing are that it be planned on a small scale of less than 20 households and individual residential space be equipped with a kitchen and a bathroom. Secondly, common spaces like living rooms and kitchens are used as a social gathering place and managers can assist with any safety concerns. Thirdly, an emergency call system and life-support services are operated within or within close proximity to the housing complex. In legal terms, they are not institutions but houses. Sheltered housing and retirement housing in the U.K., congregate housing and assisted living in the United States and silver housing and senior house in Japan are of similar concept.

II. Research Background

One reason for moving into senior congregate housing is freedom from maintenance work (Butterfied & Weideman, 1987; Free, 1995) and management efficiency (Reynolds & Beamish, 2003). A survey showed that 23% of the tenants of sheltered housing had experienced an emergency situation (Butler, *et. al.*,

1983), indicating that emergency service was an important aspect for sheltered housing. The emergency bell of the British sheltered housing is connected with a community call center which takes appropriate measures when a user rings the bell (Age Concern, 2004). In case a resident fails to ring the bell in an emergency, the warden's role is really vital (Butler, *et. al.*, 1983).

Meanwhile, extending various services at senior congregate housing is an ongoing trend. Category 2.5 shelter housing in the U.K. is equipped with a 24-hours-a-day protection service and medical care. In America, many assisted living locations are supplied with care services. According to the survey, 91% of the occupants moved into assisted living for the purpose of receiving their health care (Randolph Hills Nursing Center, 1994). Care services at senior congregate housing keep elderly people from going to protective facilities as long as possible.

The elderly people moving into sheltered housing want to have more services as they become weaker with age. Therefore care service should be developed to a high level and in a flexible manner (Clapham & Munro, 1988), but still continuous studies have to be conducted in the area of care services extended to the assisted living (Zeisel, 2002).

There are several researches dealing with service in Korean elderly housing. Hong & You (2003) proved that elderly with positive attitudes toward work and leisure recognized the importance of senior congregate housing providing social and leisure programs. In other research, groups selecting different planned housing alternatives showed statistically significant differences for some features of senior housing; therefore, it was proposed that various designs based on the levels of work opportunities, leisure activities, and services for senior housing be provided to satisfy those demands (Hong, *et al.*, 2004).

Another study revealed that demand for service matched health conditions. When healthy, higher interest was given to entertainment gathering facilities, cultural programs, and information services, while as their health deteriorated, medical service, care service,

housekeeping service, and meal service were more preferred (Oh & Lee, 1993). Accordingly, taking into consideration that an elderly person's health was often precarious, it was stressed that the services at senior congregate housing should be developed to the extent of the Category 2.5 sheltered housing (including care services) in the U.K. (Hong, 2001b).

Services at the congregate housing are also directly connected with cost. Private housing requires expensive rent and management fees from its occupants who are often well-educated and come from a high socio-economic status (Parr, *et al*; 1988; Sherman, 1971). Occupants of public sheltered housing, in the meantime, are mostly low-income people, and therefore, in advanced countries, a supportive system to provide services for the low-income is in operation. In Japan, the government and communities support management fees for low incomers living in the silver housing (Japan Elderly Housing Foundation, 1998).

III. Research Method and General Characteristics of Respondents

1. Methods and Procedures

This study used social survey research combined with a questionnaire. 500 people out of of 539,207 who were in their 50's residing in Seoul as of 2003 (NSOK, 2003) were selected for sample. The sampling probability was $(500/539,207) \times 100 = 0.09272$. A three-staged stratified systematic random sampling according to location, gender, and housing type was used[1]. A total of 500 questionnaires were distributed. 498 of them were used for final analysis. The survey was conducted from November 3 to 14, 2003. The data was analyzed using the SPSS 11.0 Windows Program. For the statistical analysis, a frequency, percentage distributions, t-test, analysis of variances(ANOVA), factor analysis, and multiple regression analysis were used.

2. General Characteristics of Respondents

Among the subjects, 62% claimed some form of religion and most of the interviewees (96.8%) had children. 86.1% of the interviewees lived with their spouses and 53.2% answered they were healthy. In terms of socio-economic characteristics, 84.2% had graduated from high school, the average monthly income per household was 3,657,100Won ($3,657) and the average total assets of each household amounted to 478 million Won ($478,000). Single detached and multi-household housing accounted for 48.6%, apartment 33.9%, and row houses took 17.5%. Regarding ownership of houses, 83.9% of interviewees owned their houses under their own names or their spouses'. Size of the houses varied but those from 25.7 pyong (one pyong equals 3.3 sq.m.) to 40 pyong made up the largest portion.

3. Services at Senior Congregate Housing

Thirteen types of services had been proposed from preceding and foreign studies. Needs for services were measured on a four-point scale (Point 1: absolutely not necessary/point 4: very necessary). To understand the types of services preferred, a factor analysis (major component analysis and Varimax Rotated Factor) was performed and each result of this study was categorized as 'hobby & counseling service', 'individual life service', 'daily life service', and 'emergency & health service' <Table 1>.

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1) Details of the sampling process were as follow.
1. Step 1: Determine the number of sampling by Gu (administrative district) depending on the rate of population in 50's by Gu
2. Step 2: Distribute questionnaires with the male-female ratio being 6.5:10 for each Gu, and by the ratio of housing type
(1) Conduct sampling with the ratio of male and female being 6.5:10
(2) Conduct sampling according to housing type of house owners in their 50's in each Gu
3. Step 3: Select three Dongs (administrative district subordinate to Gu) randomly from each Gu

<Table 1> Result of Factor Analysis of Services at Senior Congregate Housing

Category	Items	1	2	3	4
Hobby & counseling service	Hobby & leisure service	0.468			
	Chatting & shopping service	0.612			
	Information service	0.865			
	Counseling service	0.832			
Individual life service	Work assistance service		0.730		
	Transportation service		0.632		
	Nursing service		0.677		
	Showering service		0.590		
Daily life service	Housekeeping service			0.642	
	Meal service			0.821	
	Residential management service			0.655	
Emergency & health service	Emergency call service				0.762
	Health care service				0.640
Eigen value		2.218	1.999	1.931	1.561
Percentage (%)		17.058	15.374	14.852	12.010
Cumulative Percentage (%)		17.058	32.432	47.285	59.294

IV. Results and Discussions

1. Needs for Services

As a result of the analysis, necessity for emergency call service received 3.62 points followed by health care service with 3.55, nursing service with 3.40, transportation service with 3.29, housekeeping service with 3.24, meal service with 3.20, hobby & leisure service with 3.19, residential management service with 3.08, work assistance service and information service with 3.01, counseling service with 2.99, showering service with 2.93, and chatting & shopping service 2.79. Looking into the positive necessity of 2.79-3.62 points, future-senior citizens also are believed to have demand for these services <Table 2>.

Emergency call service and health care service corresponded to the high demand for health service shown in the previous study (ref. Hong, 2001a: Hong & Jee, 2002). These results seemed to be based on the people in their 50s who were concerned about their health conditions. This group was found to need the most health care service and emergency call service. Daily life service category showed the importance of

housekeeping service (3.24), meal service (3.20) and residential management service (3.08) respectively. In individual life service, nursing service showed the highest demand with 3.40 points, followed by transportation service with 3.29, work assistance service with 3.01, and showering service with 2.93. Among these services, demand for individual life service differed by detailed service items, showing that individual life service would be more efficient when provided on an individual basis rather than as a package deal.

In terms of hobby & counseling services, hobby and leisure service scored 3.19 with information service (3.01), counseling service (2.99), and chatting & shopping service (2.79). Demand for these services were relatively low but the point for necessity was affirmatively high, implying that not only health care service but also opportunities for hobbies, leisure, and chatting were very important to the elderly.

2. Differences of Needs for Services by Respondents' Characteristics

For the efficient delivery of services, it is necessary to analyze the needs for services by characteristics of

<Table 2> Needs for Services

n=498

Category(mean)	Items	Degree of Needs mean
Emergency & Health Service (3.56)	Emergency call service	3.62
	Health care service	3.55
Daily life service (3.17)	Housekeeping service	3.24
	Meal service	3.20
	Residential management service	3.08
Individual life service (3.16)	Work assistance service	3.01
	Transportation service	3.29
	Nursing service	3.40
	Showering service	2.93
Hobby & counseling service (2.99)	Hobby & leisure service	3.19
	Chatting & shopping service	2.79
	Information service	3.01
	Counseling service	2.99
Total means		3.18

1) 4-point scale

the respondents. For this purpose, t-test and analysis of variance (ANOVA) were conducted to find out if there was a difference in the needs for services according to general characteristics of the respondents <Table 3>.

Women expressed more needs for residential management service, hobby, & leisure service than men. The group having a religious denomination had more needs for work and information services. The group having children had more need for emergency call service and residential management service than those without children. Those who living with their spouses needed more emergency call service, health care service, and transportation service than those who lived alone. The group with good health demanded higher meal service. This result indicated that even healthy housewives did not like to prepare meals due to longer periods of tedious housekeeping.

The group of middle school graduates expressed a higher need for work assistance service than that of college graduates. The group of college graduates had higher demand for information and counseling service than the group of middle school graduates. By jobs, housewives, the retired, and the unemployed had higher demand for work assistance service than other

groups but lower needs for chatting and shopping services as well as information & counseling services.

The group with a monthly income of less than 2 million Won indicated less interest for housekeeping service, but showed higher interest in work assistance service. The group with assets of more than 501 million Won had more demand for information and counseling services compared to other groups. In terms of socio-economic features, the group with a lower academic background, income, and assets, had more need for work assistance services and less demand for hobby and counseling services.

The group with houses had higher demands for emergency call service, but the group without houses preferred work assistance service, showering service, chatting, and shopping service. Those whose houses were bigger than 25.7 pyong (one pyong equals 3.3 sq.m.) were interested in work assistance services and transportation services but those with houses bigger than 40 pyong requested more information and counseling services.

Those living in the northeastern part of Seoul showed a higher demand for emergency call services and residents in the Kangnam (south of Han River) area had

<Table 3> Differences of Needs for Services according to Respondents' General Characteristics

n=498

Variables		Category items	Emergency & health service		Individual life service				Daily life service			Hobby & counseling service			
			Emergency call service	Health care service	Housekeeping service	Meal service	Residential management service	Work assistance service	Transportation service	Nursing service	Showering service	Hobby & leisure service	Chatting & shopping service	Information service	Counseling Service
			mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean
Socio-demographic charateristics	Gender	Man	3.61	3.59	3.19	3.15	2.97	3.09	3.27	3.39	2.93	3.11	2.72	2.99	3.02
		Woman	3.63	3.53	3.27	3.23	3.16	2.97	3.31	3.40	2.93	3.24	2.84	3.02	2.97
		t-value	-.330	1.096	-1.655	-1.269	-3.230***	1.759	-.590	-.211	.042	-2.058*	-1.705	-.404	.710
	Religion	With religion	3.65	3.55	3.24	3.23	3.10	3.07	3.33	3.37	2.92	3.20	2.78	3.08	3.01
		Without religion	3.57	3.55	3.25	3.15	3.06	2.93	3.24	3.44	2.93	3.16	2.82	2.91	2.96
		t-value	1.785	-.035	-.202	1.305	.680	2.009*	1.426	-1.217	-.138	.667	-.471	2.328*	.821
	Children	Having children	3.63	3.56	3.25	3.21	3.08	3.02	3.29	3.41	2.92	3.19	2.79	3.01	3.00
		Not having children	3.38	3.31	2.88	2.94	3.13	2.94	3.31	3.19	3.06	3.00	2.94	3.00	2.75
		t-value	-.1977*	-1.717	-2.701**	-1.641	.266	-.405	.107	-1.295	.711	-1.162	.769	-.065	-1.361
	Spouse	Living with spouse	3.65	3.58	3.26	3.22	3.10	3.03	3.34	3.40	2.92	3.20	2.78	3.04	3.02
		Not living with spous	3.48	3.41	3.15	3.08	3.06	2.94	3.03	3.39	3.03	3.21	2.91	2.93	2.88
		t-value	2.605**	2.280*	1.469	1.673	.433	.926	3.443***	.086	-1.095	-.112	-1.298	1.093	1.451
	Health condition	Frail	3.59	3.55	3.23	2.93^a	3.09	2.96	3.21	3.46	2.96	3.34	2.84	2.96	2.95
		Intermediate	3.59	3.59	3.18	3.29^b	3.07	3.06	3.36	3.41	3.02	3.17	2.80	2.99	2.94
		Good	3.64	3.55	3.28	3.19^b	3.09	3.00	3.27	3.37	2.86	3.17	2.78	3.03	3.03
		F	.621	.544	1.446	6.700***	.054	.497	1.219	.503	2.258	1.684	.148	.261	.964
Socio-economic charateristics	Education	Middle school	3.60	3.55	3.19	3.19	3.12	3.03^a	3.22	3.38	3.04	3.11	2.71	2.76^a	2.78^a
		High school	3.62	3.53	3.23	3.18	3.06	3.14^{ab}	3.36	3.45	2.92	3.19	2.81	2.98^{ab}	2.97^{ab}
		College	3.63	3.58	3.27	3.21	3.10	2.89^b	3.26	3.36	2.90	3.22	2.81	3.13^b	3.08^b
		F	.107	.393	.774	.099	.340	5.897***	1.470	.978	.923	.766	.583	6.479**	4.669**
	Occupation	Housewives, Retired, Unemployed	3.68	3.57	3.24	3.22	3.09	2.86^a	3.32	3.41	2.88	3.19	2.81^a	3.00^a	2.98^a
		Labor	3.50	3.44	3.22	3.08	2.94	3.11^{ab}	3.27	3.24	2.74	3.07	2.53^{ab}	2.77^{ab}	2.72^{ab}
		Company employee	3.61	3.58	3.27	3.16	3.11	3.14^{ab}	3.27	3.43	3.05	3.17	2.78^{ab}	3.05^{ab}	3.04^{ab}
		Professional	3.63	3.62	3.22	3.34	3.15	3.18^b	3.32	3.42	2.91	3.33	2.90^b	3.13^b	3.15^b
		F	1.865	.132	1.118	1.898	1.104	5.526***	.198	1.150	1.991	1.527	2.620*	2.302*	3.622*

<Table 3> Continue

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n=498

Variables		Category items	Emergency & health service		Individual life service				Daily life service			Hobby & counseling service			
			Emergency call service	Health care service	Housekeeping service	Meal service	Residential management service	Work assistance service	Transportation service	Nursing service	Showering service	Hobby & leisure service	Chatting & shopping service	Information service	Counseling Service
			mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean
Socio-economic charateristics	Income	2 million Won and less	3.59	3.56	3.23^a	3.24	3.05	3.13^a	3.35	3.45	2.98	3.06^a	2.75	2.88^a	2.90^a
		2.01-4 million won	3.65	3.49	3.19^{ab}	3.13	3.12	3.12^b	3.31	3.33	2.90	3.28^b	2.80	3.05^{ab}	2.95^a
		4.01 million Won or more	3.63	3.63	3.35^b	3.22	3.08	2.72^b	3.23	3.43	2.90	3.31^b	2.89	3.23^b	3.24^b
		F	.624	2.158	3.066*	1.294	.482	13.789***	1.080	1.657	.637	7.226***	1.118	7.416***	8.612***
	Assets	250 million Won and less	3.58	3.56	3.21	3.20	3.05	3.12	3.31	3.44	2.94	3.15	2.73	2.91^a	2.92^a
		251-500 million Won	3.65	3.50	3.25	3.26	3.14	3.09	3.34	3.44	3.02	3.24	2.84	3.03^{ab}	2.95^{ab}
		501 million Won or more	3.64	3.58	3.28	3.10	3.07	2.97	3.36	3.32	2.92	3.29	2.84	3.21^b	3.14^b
		F	.935	.656	.584	2.032	.912	1.759	.218	1.459	.712	1.948	1.122	5.457**	3.669*
	Housing type	Owned	3.64	3.57	3.57	3.21	3.09	2.98	3.29	3.38	2.89	3.18	2.76	3.01	3.00
		Rented	3.51	3.48	3.48	3.13	3.04	3.18	3.31	3.47	3.09	3.23	2.96	3.00	2.96
		t-value	2.172*	1.207	-.745	.992	.649	-2.120*	-.298	-1.013	-2.038*	-.612	-2.144*	.129	.372
Housing charateristics	Size of current dwelling (pyong)	25.7pyong and less	3.54	3.50	3.16	3.21	3.09	3.15^a	3.27^a	3.49	3.02	3.09	2.73	2.83^a	2.84^a
		25.7pyong-40 pyong	3.64	3.61	3.28	3.21	3.14	3.11^b	3.42^{ab}	3.43	2.94	3.23	2.81	3.05^{ab}	3.01^{ab}
		40pyong or more	3.65	3.52	3.25	3.17	3.01	2.83^b	3.19^b	3.30	2.86	3.21	2.83	3.11^b	3.10^b
		F	1.875	1.968	1.610	.192	1.796	9.238***	5.506**	3.056	1.512	1.781	.620	4.712**	4.539*
	Residential area	Kangnam(South of Han River)	3.56^a	3.61	3.29	3.14	2.98	2.56^a	3.16^a	3.36	2.86	3.15	2.85	3.09	3.10
		Northeastern part of Seoul	3.74^b	3.62	3.19	3.19	3.08	3.18^b	3.49^b	3.46	2.92	3.26	2.76	3.05	2.97
		Northwestern part of Seoul	3.54^a	3.54	3.19	3.20	3.14	3.00^b	3.16^a	3.30	2.98	3.09	2.74	2.96	2.96
		Southwestern part of Seoul	3.56^a	3.48	3.27	3.23	3.15	3.15^b	3.22^a	3.40	2.95	3.18	2.82	2.93	2.93
		Central part of Seoul	3.57^a	3.37	3.29	3.25	2.96	3.07^b	3.32^{ab}	3.36	2.96	3.11	2.74	3.04	3.11
		F	3.465**	2.097	.856	.305	1.460	13.308***	5.564***	.805	.283	1.030	.343	.806	1.075

*p<.05, **p<.01, ***p<.001

a, b : schéff test

less demand for work assistance services. A higher demand for transportation services was suggested by residents in the northeastern part of Seoul than those in the northwest, southwest, and Kangnam areas.

Summing up these analyses, four different service categories were needed in accordance with the respondents' characteristics. We logically conclude that individual characteristics involving gender, family, and health condition require a varying degree of services. Therefore, to enhance the preference toward senior congregate housing supplying various services to each individual would be an important factor.

From the socio-economic point of view, demand for work assistance services, hobby and counseling services were different. This means that the need for work and hobby service varies according to the socio-economic characteristics of the elderly. Therefore, to provide work assistance service and hobby service the users should be taken into consideration.

Analyzing the respondents' characteristics, which statistically influence the needs for service, twelve factors, excluding housing type out of thirteen independent variables showed different needs for services. This result implied that various services should be developed following the characteristic of the users. Also detailed and efficient operational methods should be sought to meet the requirements of the residents to provide them with appropriate services.

3. Direction to Develop Service Standards for Senior Congregate Housing

1) Relationship between Needs for Services and Income

Utilization of services was linked with cost, so an in-depth analysis was necessary. This study was to grasp the relationship between income and respondents' need for service so detailed direction could be proposed to develop service standards in relation to their income levels. To this end, a regression analysis was conducted with income as the dependent variable and the needs for services as independent variables. Through the regression curve, the estimated income possibility was analyzed from the needs for service position. Attention was paid to the F value of 5.17($p<.001$) in the curve. The R^2 which explains the model, shows 0.1168 indicates 11.68% of the total model. Even though it was too small to explain the relationship between income and demand for service, it had significant differences <Table 4>.

The results of the analysis can be summarized as follows: The higher the demand for housekeeping service, the lower the demand for residential management service, the lower the demand for work assistance service, the higher the demand for hobby and leisure services, the higher the demand for chatting & shopping service, the higher the demand for information service, which was a direct correlation with a higher level of income.

Higher-income groups had larger demands for housekeeping, hobby & leisure, chatting & shopping and information services. This was because the high-income group tended to enjoy hobbies and leisure in their spare time. It can be deduced that higher-income people have more demand for hobby & counseling service, while lower-income people have higher demand for residential management service and work assistance service. Since they are low income, they reside in the house even if it is uncomfortable. Thus, they demand residential management service. They also showed a higher demand for work assistance service, indicating that the lower their income, the more they sought opportunities to work on a continuous basis.

2) Direction to Develop Service Standard

Through the above analysis, we discovered that respondents' need for service was deeply related with income and that it was quite necessary to analyze in detail the relationship between the demand for service and income level so that a direction to develop the service criteria could be sought. This study suggests the

<Table 4> Result of Multiple Regression Analysis of Income vs. needs for services

Independent Variables	Dependent Variable	Income	
		B parameter	Standard error
constant		385.393*	164.862
Daily life service	Housekeeping service	96.007*	71.001
	Residential management service	-105.574**	41.897
Individual life service	Work assistance service	-144.032***	37.480
Hobby & counseling service	Hobby & leisure service	135.694**	43.100
	Chatting & shopping service	44.870*	41.520
	Information service	88.088*	69.183

*p<.05, **<p<.01, ***p<.001

Only statistically significant variables were recorded in the Table.

<Table 5> Service Standard for Senior Congregate Housing

Category	Items	Service Standard		
		Basic services	Optional services	Supportive services
Emergency & health service	Emergency call service	●		
	Health care service	●		
Daily life service	Housekeeping service		●	
	Meal service	●		
	Residential management service			●
Individual life service	Work assistance service			●
	Transportation service	●		
	Nursing service	●		
	Showering service	●		
Hobby & counseling service	Hobby & leisure service		●	
	Chatting & shopping service		●	
	Information service		●	
	Counseling service	●		

following criteria for service based on the result of the relationship between the needs for service and income level <Table 5>.

Firstly, services with no bearing on income level should be defined as "basic services." From the results of the statistical analysis ; Emergency call service, health care service, meal service, transportation service, nursing service, and showering service have nothing to do with income level and should be fully utilized regardless of income.

Secondly, the services of which demand became higher in relation to the increase of income should be defined as "optional services." Housekeeping service, hobby & leisure service, chatting & shopping service, and information service were demanded in accordance with a rise in income, and thus, should be defined as optional service to be utilized at cost.

Thirdly, the services whose demand increases due to lowering income should be defined as "supportive services." Residential management service and work assistance service sought after by lower-income individuals, so a network system should be established for the low-income group to utilize these supportive services.

From this point of view, service criteria at the senior congregate housing should be classified into basic service, optional service, and supportive service so each community can utilize the systemized services.

V. Conclusions

As the needs for the services were high in senior congregate housing, it was quite clear that a variety of services should be provided. A service strategy should be proposed to meet the characteristics of the respondents. That is to say, the services at senior congregate housing should be integrated and specific for each particular community.

It was hereby suggested that service standards should be established in the following manner in consideration of the relationship between the needs for service and the income level directly influencing the provision of services: First, basic services should be provided regardless of income. Second, optional services should be selectable among the preferable services per income level, and finally supportive services should be provided for low-income individuals.

It was expected that this study would provide detailed and practical research suggestions for service criteria. Future services at senior congregate housing should be classified into basic, optional, and supportive services, and they should be systemized to deliver various services to senior citizens. Also, a detailed operation system should be set up based on individual needs. In addition a specific study to establish a guideline on payment for the services is required.

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