

A Study of Living Space for Elderly in Urban Area of Nepal

(Comparative analysis of spatial structure between traditional & new residential area)

Lata Shakya¹, Ueno Katsuyo², Fujimoto Naohisa³

¹ Graduate Student, Dept. of Urban and Environmental Engineering, Kyoto University

² Professor, Dept. of Environmental Design, Kyoto Prefectural University, Ph.D

³ Lecturer, Kurume Univ. ,Kyushu Women's Univ & Aichi Shukutoku Univ. Dr..Eng.

Abstract

The purpose of this study is to clarify the status of living space for the elderly of urban area by a comparative analysis of a traditional residential area and new residential area. And to examine in detail the living space characteristics through daily life activities of the elderly with different types of health conditions. The questionnaire & field survey is undertaken among the elderly of 65years and above of the ward no.22 of Patan city. The results are as follows: 1)Three generation households are the largest no. of household types however elderly who live alone or with his/her spouse although they have children. 2) The spatial structure in new residential area is changing from a traditional spatial structure, to a new structure which limits daily activities mostly to indoors, is convenient for dependent elderly but which lacks space for social contact and this results in limitations on the quality of life of the elderly.

Keywords: Nepal, Urban Elderly, New-Residential Area, Traditional-Residential Area, Daily Activities

1. Introduction:

In recent years, the elderly population has recorded a high growth rate not only in developed countries but also in the developing countries of Asia. Nepal also recorded 6.5% (over 60years of age) elderly population in 2001 and a growth rate of 3.79% per annum which implies that the number of the elderly population is expected to double in less than 27years. The life expectancy rate in Nepal has also increased from age of 39years in 1960 to 60years old in 2001. Moreover, the elderly population of over 70years of age is also increasing rapidly. Therefore it indicates the serious problem of population and social security in the near future¹⁾.

In 1996, the first old-age allowance program in Nepal was implemented with a distribution of monthly allowances of Rupees 175 for the elderly of 75 years and above. For the first time in 1997, Nepal envisaged a detailed outline of specific goals, policies and strategies for senior citizens under the component of "Social Services and Social Security" of its Ninth National Plan (1997-2002). From 1999, Nepal also begins to participate in international conventions²⁾ and receives relevant knowledge. As a result of this, the 'Ministry of Women, Children and Social Welfare' (MWCSW) made public the "Senior Citizens Policy and Working Policy 2002" which has largely followed the conventional welfare approach rather than the right-based approach. In this way, it can be said that Nepal has only recently initiated policies for the elderly³⁾.

For housing facilities, there is only one government-managed elderly home in Kathmandu with 210

are managed by the private sector or by NGO/NPO which provide services like accommodation, day care or health center⁴⁾. Private elderly care homes which require monthly fees can also be seen in urban areas however these remain mainly unused due to the high costs. The majority of the elderly who demand shelter are poor people who have no other choice for survival.

Due to modernization and the migration of the younger generation to foreign developed countries, the nuclear family and households of 'elderly living alone' are increasing in urban areas. Therefore, it can be said that building elderly homes alone are not the solution for the

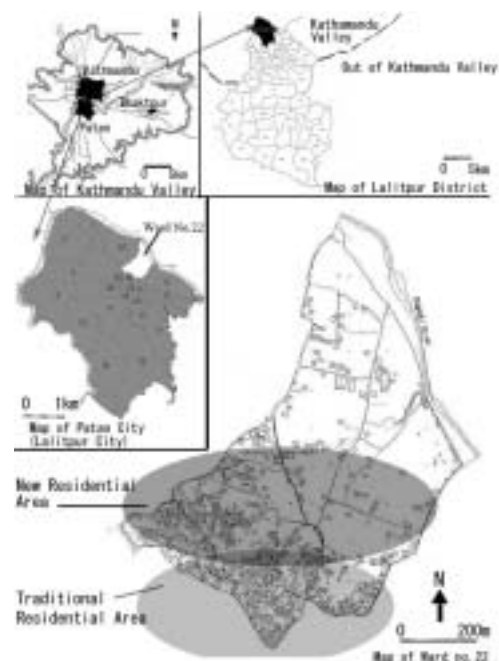


Fig. 1 Location of Kathmandu valley, Patan city and Ward no.22

elderly population, but that there should be suitable living arrangement and social security to the ‘elderly living alone’ and to families who take care of elderly people living in general residential areas. In order to achieve this more in-depth research is needed.

In previous studies, research has been undertaken on the status of the elderly and investigations on the sociological point of view which have been mainly done by non-government organizations. NEPAN⁵⁾, & H.N.⁶⁾ did a survey in 15 rural districts and clarified that the minimum standard of living which included food, clothing, shelter and medical service are the main problems and also asserted that the elderly need the respect of the family and a secure environment⁷⁾. CWDC⁸⁾ did a survey in an urban area and clarified that there are problems in relation with family issues such as: lack of respect and love of the family, changes in custom of being taken care of by their own children. Such problems have given rise to changes in the elderly mental health status⁹⁾. UNESCAP¹⁰⁾ purposed the status of the elderly of the country which mentions about living arrangement of the elderly, however this was only based on house owner and spouse or family and does not clarify about elderly household types and the status of it¹¹⁾.

Thus, this study is a primary research on the elderly living space of Nepal which intends to achieve the following points.

- 1) To clarify the status of living space for the elderly living in an urban area by a comparative analysis of a traditional area and new residential area.
- 2) To examine in detail the living space characteristics through daily life activities of the elderly with different types of health conditions.

2. Outline of the Survey Area

To examine the spatial structure of a traditional area and a new residential area, ward no.22 of Lalitpur district is selected. Lalitpur city, also called Patan city, contains the traditional residential area of Newar which is a World Heritage Site, along with other hamlets of Kathmandu valley. The south area of ward no.22 is a traditional area and the north area is a new residential area which was developed about 2 decades ago(Fig 1).

The traditional residential area (TR-area) is inhabited by Newars who have their own traditional dwelling system, which is vertically orientated. The space utilization is as follows: the 1st floor is space for toilet and store room that opens onto the courtyard which provides security and

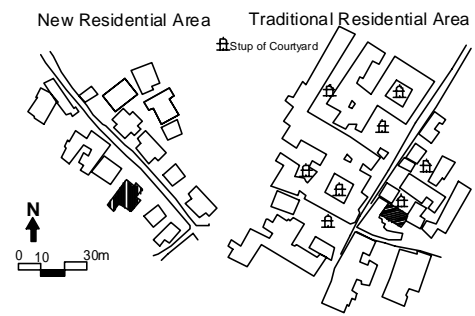


Fig. 2 Characteristics of the Residential area

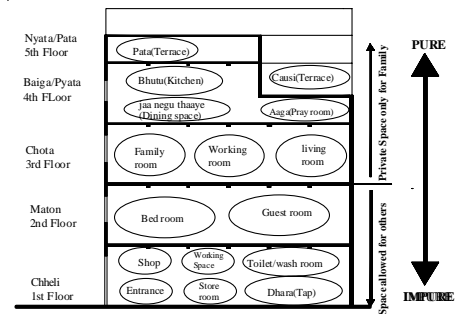


Fig. 3 Spatial structure of Traditional Residence

Table 1 Respondents of Questionnaire Survey

	Traditional Residential Area		New Residential Area		Total
	Male	Female	Male	Female	
Elderly no.	210		61		271
Average age	73.5		72.4		73.2
	Male	Female	Male	Female	Total
65-74years old	54	76	18	24	172(63%)
75years old & above	29	51	8	11	99(37%)
Total	83	127	26	35	271(100%)

privacy; it is also a playground for children, and serves as a washing area and an open area for sitting. The 2nd floor is space for sleeping/guest rooms, the 3rd floor is for living or family room/working room and the 4th floor is for dining/kitchen/pray room/terrace. This concept is determined by privacy and pureness of space, according to tradition it is considered that the higher the distance from the ground floor level the more private and ‘purer’ the space is (Fig 2) (Fig 3).

The new residential area (NW-area) is inhabited by Newars as well as other ethnic groups from outside the valley. These new residences are influenced by modern housing system like 2~3storey houses in which almost the 1st floor is for living/dining/kitchen, the 2nd floor is for bedrooms and sanitary facility is arranged in every floor; such spatial layout is totally different from the traditional spatial concept.

3. Research method

- 1) In order to investigate the status of elderly living in an urban area with aspects of living space, a questionnaire interview survey was undertaken among the elderly of

65years and above of the ward no.22. 271 answer sheets were collected. Table 1 shows the characteristics of the elderly for this survey.

2) In order to investigate in more detail elderly living space, field survey was done in 23 residences which were selected by different health conditions and different households. Table 2 shows selected cases for this survey.

The survey of questionnaire was undertaken in September 2005 and field survey was undertaken in November 2006.

4. The status of elderly of ward no.22 (Results of questionnaire survey)

4.1. Health & Economic condition

16% of the respondents answered “very healthy” whereas 25% answered almost unhealthy, 7% answered totally unhealthy and 54% answered none of the above (meaning that they have some kinds of disease). About ADL(activities of daily life) level, 65% are independent (do not need someone’s help for ADL), 16% are partly dependent and 8% are dependent. The notable result is that NW-area records 41% of partly and dependent elderly whereas TR-area only records 20%.

With regards to the economic condition, 24% answered ‘good’ whereas 11% answered ‘poor’. In comparison, the new area records 65% of good and very good, while TR-area records 50%. Therefore, it can be said that elderly of NW-area are better of economic condition but there are more dependent compared to TR-area (Table 3).

4.2. Household condition

To verify household condition, the survey divided it into ‘living with someone’ (3 generation household, 2 generation household, living with relatives) and living separate (‘living alone’ or with spouse). The result of the survey shows that 3 generation household (71%) is the largest number. Other households are small in number like, 4 generation household (7%), living alone (3.6%) and with spouse (5.1%). In more detail on separation households, elderly as “living alone or with spouse” who are separated with children records 5.9% and 2.8% of elderly who do not have children. This verifies that there is still a large number of elderly staying with their children but it is important to note that there are almost 6% of elderly living alone or with their spouse although they have children (Table 4).

4.3. Living Space condition

1) Residence type

94% of TR-area and 85% of NW-area are staying in their own home and 2.9% of TR-area and 6.6% of NW-area

Table 2 Characteristics of the Elderly of Field Survey

Case No.	Age	Gender	Household Type	ADL	years of living in residence	No. of stoerys in residence	Residence type		no. of Family member
							Owned	Rented	
1	75	Female	LMC	D	before 50years	5			5
2	88	Male	LMC	PD	50	6			11
3	88	F	LMC	PD	50	5			5
4	73	F	LMC	ID	10 to 20	6			5
5	80(71)	M(F)	LMC	D (ID)	50	4			7
6	75(71)	M(F)	LMC	ID (ID)	30 to 50	4			8
7	65	F	LS	ID	31 to 50	6			1
8	73 (70)	M(F)	LS	ID (ID)	10 to 20	4			2
9	79 (76)	M(F)	LS	PD (ID)	50	4			2
10	75	M	LUC	ID	50	4			2
11	94	M	LUC	D	50	4			2
12	67	F	LR	UD	50	5			7
13	93	F	LMC	D	10 to 20	4			10
14	83	F	LMC	PD	10 to 20	3			6
15	80	F	LMC	PD	2	4		*	6
16	70	F	LMC	ID	1	3		*	4
17	68(67)	M(F)	LMC	ID (D)	1	4			6
18	70(68)	M(F)	LMC	ID (ID)	10 to 20	3			13
19	72(65)	M(F)	LMC	ID (ID)	2	4			10
20	65	F	LS	ID	30	3			1
21	70	M	LR	ID	10 to 20	4			12
22	77(68)	M(F)	LUC	D (ID)	6 to 10	1			6
23	65(65)	M(F)	LUC	PD (ID)	10 to 20	4			3

NOTE: Res:Residence
 ADL:Activity of Daily Life (specially means feeding, excreting, bathing).
 : unmarried elderly
 Age·ADL (): about wife
 Household LUC : living with unmarried children, LR : living with relatives,
 LS : living separate, LS : living with relatives but economically independent
 A D L D : Dependent elderly, PD : Partly Dependent elderly, ID : Independent elderly
 Residence type * : rent residence with flat system

Table 3 Status of Elderly & Their Residence

Particular		Traditional Residential Area	New Residential Area	Total
Health condition	very healthy	30(14.8%)	14(23%)	44(16.2%)
	almost unhealthy	50(23.8%)	18(29.5%)	68(25.1%)
	totally healthy	16(7.5%)	3(4.8%)	19(7.1%)
	none of them	113(53.8%)	26(42.6%)	139(51.3%)
	unanswered	1(0.5)	0.0	1(0.4%)
ADL (Activity of daily life)	Independent	146(69.5%)	29(47.5%)	175(64.6%)
	none of them	23(11%)	7(11.5%)	30(11.1%)
	partly dependent	26(12.4%)	17(27.9%)	43(15.9%)
	dependent	14(6.7%)	8(13.1%)	22(8.1%)
	unanswered	1(0.5)	0.0	1(0.4%)
Economic condition	very poor	23(11%)	8(13.1%)	30(11.4%)
	poor	55(26.2%)	12(19.7%)	67(24.7%)
	good	83(39.5%)	19(31.1%)	102(37.6%)
	very good	44(21.0%)	21(34.4%)	65(24.0%)
	unanswered	5(2.4)	1(0.6)	6(2.2%)
Types of Residence	owned	191(91%)	47(77%)	238(87.8%)
	himself / herself	8(3.8%)	5(8.2%)	13(4.8%)
	children	6(2.9%)	4(6.6%)	10(3.7%)
	relative	3(1.4%)	0	3(1.1%)
	detached house	0	3(4.9%)	3(1.1%)
	rented Flat	1(0.5%)	1(1.6%)	2(0.7%)
	1 & 2room	0	1(1.6%)	1(0.4%)
others	0	1(1.6%)	1(0.4%)	
unanswered	1(0.5%)	0	1(0.4%)	
Years of living in residence	this year	4(1.9%)	10(16.4%)	14(5.2%)
	2 to 5years	16(7.6%)	9(14.8%)	25(9.2%)
	6 to 10years	10(4.8%)	12(19.7%)	22(8.1%)
	11 to 20years	12(5.7%)	14(23%)	26(9.6%)
	21 to 30years	28(13.3%)	4(6.6%)	32(11.8%)
	31 to 40years	26(12.4%)	2(3.3%)	28(10.3%)
	50years	114(54.3%)	10(16.4%)	124(45.8%)

Table 4 Household Types

Household Types		Traditional Res. Area	New Res. Area	Total
Living with someone	3 generation household	141(69.5%)	41(77.4%)	182(71.1%)
	3generation household (family of daughter)	3(1.5%)	0	3(1.2%)
	4 generation household	17(8.4%)	2(3.8%)	19(7.4%)
	2generation household	9(4.4%)	2(3.8%)	11(4.3%)
	2 generation(with daughter)	6(3%)	2(3.8%)	8(3.1%)
Living separate	living with relatives	9(4.4%)	2(3.8%)	11(4.3%)
	Living alone (separated from children)	6(3%)	0	6(2.4%)
	Living with spouse (separated from children)	6(3%)	3(5.7%)	9(3.5%)
	Living alone (don't have children)	2(1%)	1(1.9%)	3(1.2%)
	Living with spouse (don't have children)	4(2%)	0	4(1.6%)

are staying in their relative’s home. 1.9% of TR-area and 6.5% of NW-area are staying in rented houses. With regards to years of staying in residence, 54% of the respondents in

TR-area have stayed for more than 5 decades whereas in NW-area it shows that a large number have stayed for 1 decade. In TR-area, almost 30% of the residences were built before the earthquake disaster of 1934 whereas most residences in NW-area were built after 1985. In TR-area, it was found that most residences are 4 and 5 storeys, while '2 or 3 storeys' and '4 storeys' residences are mainly found in NW-area (Table 5).

2) Construction type

Before the historical earthquake disaster of 1933, all of the residences were built using brick construction. With time, reinforced construction is developed from 1950s and at present all of the residences are built using reinforced construction (Fig 3).

3) Differences on utilization of living space

When comparing the utilization of living space between TR-area and NW-area, it is clearly shown that TR-area has the traditional style of spatial structure (vertically oriented). Dining/kitchen space and shrine space which are preferred to be placed in the upper floor according to traditional aspects, TR-area shows 50% of Dining/kitchen space in the 4th floor, and 70% of praying space in 4th and 5th floor together. But NW-area shows 47% of Dining/kitchen space in 1st floor and Praying space is found 33% in 3rd floor and 28% in 1st floor. Toilet facilities which are preferred to be placed in the 1st floor according to the traditional configuration, in the TR-area over 78% are found on the 1st floor however NW-area records more than 40% found on the 2nd & 3rd floors. Moreover, NW-area shows numerous sanitary space including toilets & washing space in single resident. Therefore it can be said that the concept of living space is changing in NW-area (Table 5).

5. Spatial structure and Daily life activities of the elderly (Results of field survey)

5.1. Case of independent elderly

Fig. 1 illustrates the daily activity & residence plans of independent elderly of each area. Case no. 6 of TR-area is of an elderly couple who spend the morning outdoors to wash their face in a Hiti (natural Nepalese tap), to visit a shrine and to go shopping and in the evening they spend their free-time talking with neighbors. On the other hand, an elderly couple of NW-area would also spend the morning outdoors to visit a shrine and go shopping, however would spend most of time on the 1st floor and the garden. When comparing the 'activity line' shown on the figure, the elderly of NW-area, show the distance of activity to be shorter and limited to private spaces as opposed to public ones that there

is a lack of opportunity for communication with neighbors.

5.2. Case of partly dependent elderly

The elder of Case no. 3 of TR-area has knee-pain and as a result finds it very difficult to use stairs; she however continues to worship in the morning in the upper floor and

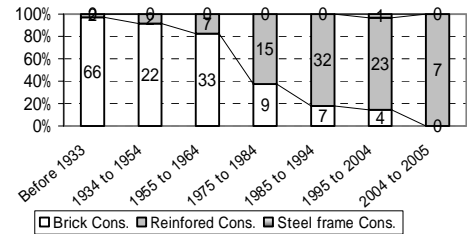


Fig.3 Construction trend of Residence

Table 5 Differences of living space between Traditional residential area & New traditional area

		Traditional Residential Area(%)(n=210)	New Residential Area(%)(n=61)	Total(%)
Year of dwelling constructed	before 1933			25.2
	1935 to 1954	29.7	9.84	8.9
	1955 to 1964	10	4.92	14.8
	1975 to 1984	17.7	4.92	8.9
	1985 to 1994	5.57	6.56	14.8
	1995 to 2003	8.61	36.1	10.4
	2004 to 2005	6.7	23	2.6
	don't know/unanswered	0.96	0	13.7
No. of floors of the residence	7th storeys	0.48	0	0.4
	6 storeys	8.1	1.64	6.6
	5 storeys	28.1	4.92	22.9
	4 storeys	24	39.3	41.7
	2to3 storeys	20	49.2	26.6
	1storeys	0.95	4.92	1.8
Floor of family room	6th floor	0.5	0	8.6
	5th floor	1.8	0	35.9
	4th floor	10.9	5.8	44.1
	3rd floor	49.3	27.5	9.7
	2nd floor	33.5	43.5	1.4
	1st floor	4.1	23.2	0.3
Floor of dining/ kitchen	6th floor	1	0	16.8
	5th floor	12	5	9
	4th floor	49.5	16.7	20.9
	3rd floor	21.2	20	42.2
	2nd floor	82	11.7	10.4
	1st floor	82	46.7	0.7
Floor of praying space	6th floor	1.3	0	7.5
	5th floor	21.3	5.6	7.5
	4th floor	52	22.2	19.4
	3rd floor	16	33.3	46.2
	2nd floor	6.7	11.1	18.3
	1st floor	2.7	27.8	1.1
Floor of toilet	5th floor	0.4	1.1	70.2
	4th floor	5.5	3.4	12.4
	3rd floor	8.1	13.8	9.6
	2nd floor	6.4	28.7	5.0
	1st floor	77.9	49.4	0.6
	outside(in own land)	1.7	3.4	2.2
Floor of bathroom	6th floor	0.4	0	50.7
	5th floor	1.8	1.4	10.4
	4th floor	11.1	5.5	8.1
	3rd floor	4.9	17.8	9.7
	2nd floor	4	30.1	1.7
	1st floor	53.3	42.5	0.3
outside(in public tap)	24.4	2.7	19.1	
Floor of washroom	6th floor	0	0	45.3
	5th floor	3.3	1.4	16.6
	4th floor	15.3	4.1	14.2
	3rd floor	13	17.8	12.5
	2nd floor	10.7	33.8	2.8
	1st floor	46.5	41.9	0.0
outside(in public tap)	11.2	1.4	8.7	
Floor of elderly room	5th floor	0.95	0	8.9
	4th floor	12.9	4.92	44.3
	3rd floor	37.6	23	34.3
	2nd floor	42.9	49.2	11.1
	1st floor	4.76	23	0.7
unanswered	0.95	0	0.7	
No. of toilet	1	90.9	66.7	85.5
	2	7.7	21.7	10.8
	3	0.5	11.7	3
	4	11	0	0.7
No. of bath room	1	82.3	78.6	81.5
	2	17.7	8.9	16.5
	3	0	0	2
No. of wash room	1	84.3	81	83.5
	2	12.4	10.3	11.9
	3	2.2	8.6	3.8
	4	3.4	8.6	0.7

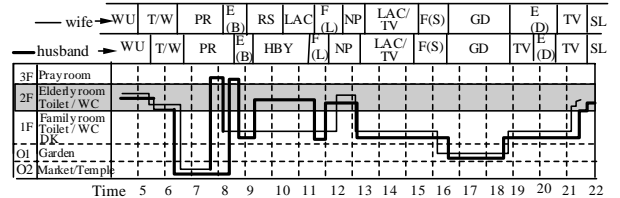
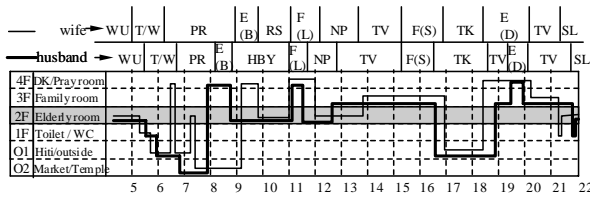


Fig. 5 Daily Activities of Independent Elderly and plans of the Residence (Case no.6 and Case no.18)

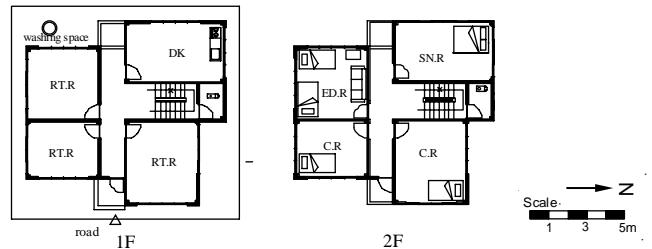
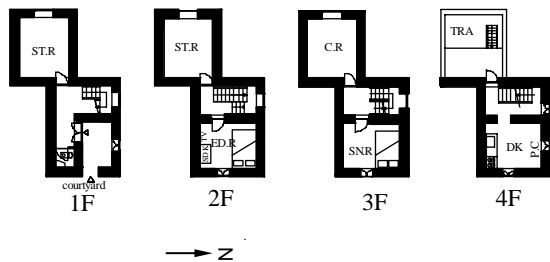
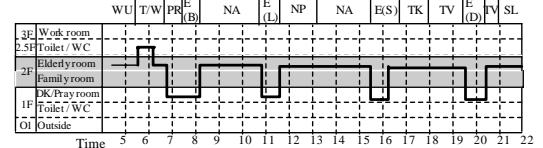
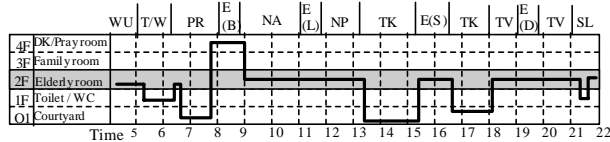


Fig. 6 Daily Activities of Partly dependent Elderly plans of the Residence (Case no.3 and Case no.14)

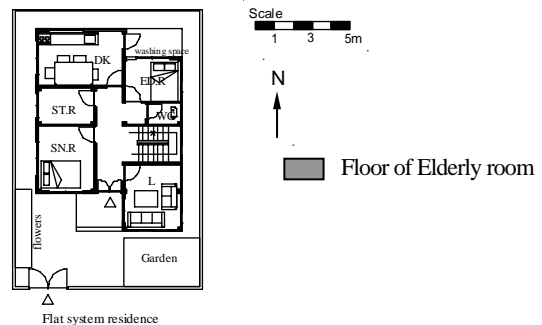
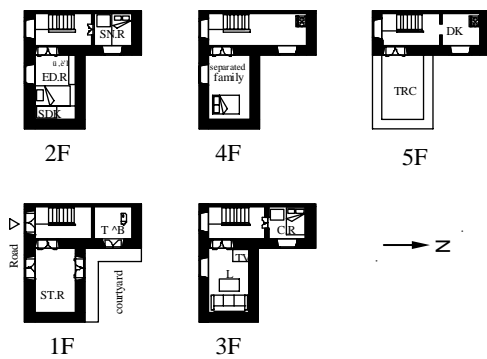
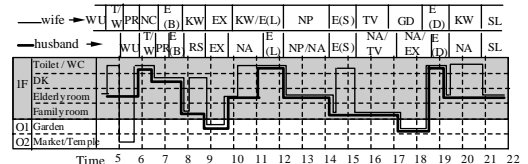
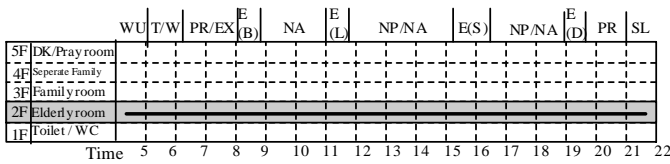


Fig. 7 Daily Activities of Dependent Elderly plans of the Residence (Case no.1 and Case no.23)

<Legend of daily activities>			<Legend of drawing of plans>		
wake up: WU	talking: TK	nursing care: NC	Elderly room: ED.R	Terrace: TRA	Sanduk: SDK (safety box)
toilet/washing: T/W	sleeping: SL	exercise: EX	Living: L	Working room: WK.R	Toilet/washroom: WC
praying: PR	hobby: HBY	breakfast: E(B)	Kitchen: K	Store room: ST.R	Toilet: T
rest: RS	look after child: LAC	lunch: E(L)	Praying Corner: P.C	Shop: SP.R	Rent room: RT.R
kitchen work: KW	gardening: GD	snack: E(S)	Room of son: SN.R	Dhukuti: DKT (safe deposit)	Guest room: G.R
napping: NP	no activity: NA	dinner: E(D)	Children room: C.R		

talking with neighbors during the day time. Although she is staying with her son's family, she feels lonely because all the members of the family are not often at home but go to work. Therefore spending time with neighbors is the only solution to spend her days. In case no.14, this resident doesn't have a private garden therefore the person spends all day inside her dwelling; the family noted that the condition of dementia worsens from day to day. On the other hand, the sanitary space and dining/kitchen space is nearer to the elder's room, allowing for the elder and her family feel comfort for their daily activities.

5.3. Case of dependent elderly

Elder of case no.1 has been a stroke patient for 4 years and is totally dependent. Therefore there is a limited 'activity line' in her bedroom. It also indicates the extensive family support needed for any small activities such as excreting, bathing, feeding etc. The traditional vertical spatial arrangement furthermore emphasizes the support for mobilizing the person. As the living room or dining room is in the upper floor, it is difficult for the elder to spend more time with family. Therefore she feels lonely and feels a burden to her family. On the other hand, it seems that the family also feels tired of care taking for 4 years. In NW-area, Elder of case no. 23, also had a stroke condition for 2 years and is also a dependent person, however it can be seen that there is a more active line compare with elderly of TR-area. The residence of case no.23 is flat system and all living space is arranged in a single floor; therefore the elder who has paralysis is able to move to every living space for daily activities with support of his family. The elder does not feel bored because he can have dinner with his family and spend time in the living room & gardens.

6. Conclusion

In case of ward no.22, only a few numbers of elderly people are dependent for ADL(daily activities), however the Elderly who has some kind of disease recorded much more. In household, there are still a large number of 3 generation households however elderly who live alone or with his/her spouse (although they have children) also exists. This issue should be considered to plan the living arrangement for the elderly. The result of questionnaire also clearly showed the spatial construction of the traditional residence and the new modern residence is different. Whilst the 1st floor in the traditional residence is always considered as impure and not a private space, in the New residence, the 1st floor is used for all living spaces. The reason for this is that the new residence is surrounded by its own private land which is

gated and which is mainly used as a garden. People can feel in a private space in the 1st floor as opposed to the traditional residence which directly accesses a semi-public space of a courtyard.

New residential area, the activities of two types of elderly(partly dependent, independent) are more limited in the indoor spaces whereas spending in open spaces with neighbors is the daily activity for elderly of Traditional residential area. Besides, for the case of dependent elderly, New residence where living spaces arranged in a single floor makes convenient for daily activities. As the result of field survey, it can be said that activity of elderly and their social contact is based on the spatial structure of the residence and its surrounding environment. Therefore spatial structure of outdoor like of Traditional area should be consider as well as indoor space of residence space New residential area for the convenient life of elderly.

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Notes:

- 1) Ref.1)&2)
- 2) Participated International conventions : Macau-Plan of Action on Aging 1999, Macau-Plan of Action on Aging 2001 (Philippine), Second Asian Regional Meeting 2001 (India), Second world Assembly on Ageing, Madrid 2002
- 3) Ref.3)&4)
- 4) Ref.5)
- 5) Acronym of Nepal Participatory Action Network, NGO, established on 1995
- 6) Acronym of Helpage Nepal
- 7) Ref.6)
- 8) Acronym of Child and Women Development Center, NGO, established on 1996.
- 9) Ref.7)
- 10) Acronym of United Nations Economic and Social Commission for Asia and the Pacific
- 11) Ref.8)
- 12)based on disaster of Big Earthquake of 1934

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- 3) NEPAN: Towards Secure Ageing, proceedings of the National Preparation for the Second World Assembly on Ageing, Nepal Participatory Action Network, Kathmandu 2002.
- 4) Sudip P. Bhattarai: The Status of Elderly in Nepal, Shradhaa – Suman Smarikaa 2003 pg 44-48, H.M.G of Nepal, MWCSW, Singhadurbar, Kathmandu, Nepal.
- 5) Samaaj kalian mantralaya: Bridhashram lists 2003
- 6) NEPAN: Elderly Voice, Participatory Research Report, Kathmandu 2001.
- 7) CWDC: Older People in Transition, Case Studies from Selected Urban Areas of Lalitpur Sub Metropolis, Elderly People Sharing &Caring Project, Lalitpur, 2003.
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