

# Factors Related with Residential Satisfaction of Urban Villages in Shenzhen, China

중국 심천시 어번 빌리지 주거만족도에 관련된 요소

장 계 한\*  
Zhang, Gui-Xian

이 연 숙\*\*  
Lee, Yeun-Sook

이 수 진\*\*\*  
Lee Soo-Jin

## Abstract

Residential satisfaction is one of the most studied topics in the field of housing. This paper is to find factors that correlate with residential satisfaction of the residents and study the satisfaction differences between different groups of residents in urban village in Shenzhen. A questionnaire of 61 satisfaction variables grouped into five components based on literature review and actual situation in targeted village was conducted to find out factors related with residential satisfaction in urban villages. These components are dwelling unit, building conditions, village environment, neighborhood environment, and neighbors. Factors were extracted from these components and the correlations between the factors and residential satisfaction were analyzed by using Pearson's correlation coefficient to find out factors that most correlate to residential satisfaction. Satisfaction differences of the five components between respondents with different characteristics were also studied. The result showed all the factors positively correlated with residential satisfaction and residential satisfaction correlated the most with the factors of perception and information exchange, room sizes, and air condition and quality. The characteristics of gender, unit type, and interaction frequency with neighbors contributed to different satisfaction with certain components.

키워드 : 주거만족도, 주거 요소, 어번 빌리지, 심천

Keywords : residential factors, residential satisfaction, urban village, Shenzhen

## 1. Introduction

### 1.1 Background & Purpose

According to China National Committee for Terms in Sciences and Technologies, urban villages in China refer to a kind of low-rent community in metropolis. These villages were changed from traditional agricultural villages into rental villages by village owners to rent to low-incomers who are usually migrants who came from less-developed areas of the country (Duan & Wang, 2006). Not being regulated by any regulations or policies, urban villages are outside of urban planning. Living conditions are poor in these villages comparing to other parts of the cities for landowners are profit-oriented and do not consider residents' residential quality (Ding, 2005).

Shenzhen, located in southern China, has experienced rapid economic growth and tremendous demographic changes since its foundation in about 30 years ago. Now there are more than 300 urban villages located all over the city (Luo, 2007). The city's population is more than 14 million and 12 million of them are migrants who came from other areas of the country (sznews, 2010). It was estimated that about nine million of migrants were living in urban villages. Taking a big number of the city's population, the residential satisfaction of migrants in urban villages make great contributions to the whole city's residential satisfaction. Residential satisfaction is an important factor of determining individual's living quality. High dissatisfaction among residents could result in poor health, stress, delinquency, maladjustment, and pathological conditions (Ukoha, & Beamish, 1997). Therefore this paper is to try to find factors that correlate with residential satisfaction and can be used as assessment of residential satisfaction in urban villages of Shenzhen.

The purpose of this study is to identify the residential

\* 교신저자, 연세대학교 주거환경학과 석사과정  
(teresazgg@yahoo.com.cn)

\*\* 연세대학교 주거환경학과 교수

\*\*\* 연세대학교 주거환경학과 연구교수

satisfaction of migrants who live in urban villages in Shenzhen. The research questions of the study are as followed:

- (1) What is migrants' satisfaction with their residential environment?
- (2) What is the relations between their satisfaction and residential environment factors?
- (3) How residents' satisfaction differs according to their demographic and residential characteristics?

## 2. Literature Review

### 2.1 Urban Village

Urban villages, as a special type of housing in metropolis, have the following features. First, Urban villages are usually lack of unified construction and distribution planning (Ma, 2007). Second, Urban villages are lack of infrastructures, sports and entertainment facilities and, green space. Third, Urban villages are poorly managed. They are considered "dirty", "disordered" and "bad" (Ding, 2005). Last, with a great amount of people living in the villages, bad security, safety is always an issue in urban villages (Li, 2007). Residents in these villages are from different parts of the countries having very different backgrounds like education level, culture and occupation etc.

### 2.2 Residential Satisfaction

As one of the most studied topics, residential satisfaction had generated wide research. Residential satisfaction is considered an important criterion describing inhabitants' quality of life and also a determinate factor of residential mobility (Amerigo & Aragones, 1997). Moreover, residential satisfaction, defined as the measurement of difference between inhabitant's actual and desired housing and neighborhood situations (Galster, 1987), is an indicator that planners, developers, architects, and policymakers can use in a lot of ways (Mohit, Ibrahim, & Rashid, 2010).

Research on housing is not just the study of physical, structural and functional features of inhabitant's territorial core called "house" (Lawrence, 1987) and residential satisfaction is not only affected by the physical housing itself, but also by comprehensive criteria including aesthetic and socio-psychological aspects, and surrounding environments (Ha, 1989). Lu (1999) also stated that residential satisfaction is a complex construct affected by various variables such as environment and socio-demography. Francescato, Weidemann, and Anderson (1989) introduced the idea that residential satisfaction depends on three elements- the design, the management

practices, and the surrounding social aspects. Varady and Carrozza (2000) stated that tenant satisfaction encompasses four types of satisfaction-dwelling unit, services provided, dwelling and service, and neighborhood area. Structural attributes of housing is considered to be a significant factor contributing to housing satisfaction such as physical characteristics of housing, housing quality, privacy, housing services provided by developers (Elsinga & Hoekstra, 2005, Hipp, 2010; Tan, 2012). Morris and Winter (1978) stated that difference between actual housing satisfaction and housing norms would result in a housing deficit which gives rise to residential dissatisfaction. In order to reconcile the difference, household may consider some kind of housing adjustment, such as revising their needs and aspirations, renovating their housing conditions or moving to another place (Gibson, 2007).

## 3. Methodology

### 3.1 Research Scope

In this study, one urban village was chosen to be the research subject. Yulongxin Village, located in Luohu district which is the first founded district and the financial and trading center of the city, was chosen to be the research subject. The village takes an area of 0.8 km<sup>2</sup> and has a population of 21,332 with more than 97% of them being migrants. There are 274 rental buildings and 373 stores in the village.

A questionnaire containing 61 variables was conducted to 140 migrants who lived in Yulongxin Village. To select the respondents for the questionnaires, systematic sampling was used. 28 buildings (about 10.0%) were chosen and 5 households of each building were respondents for the questionnaires. The questionnaire survey was conducted from 13nd November to 23rd November, 2011.

In the village, there are more than 9,000 units of households. According to the estate management statistics, half of these units are single room, 30% are One Bedroom One Livingroom type. The rest 20% are Two Bedroom One Livingroom type or others. Based on the result of the questionnaire, about 45% of the respondents were living in single room, 36% lived in One Bedroom One Livingroom type and about 19% lived in Two Bedroom One Livingroom type or others. Therefore, the results of the study could be seen as representative and valid.

### 3.2 Survey Instrument

As seen in Table 1, cases of residential satisfaction in several places in the world were shown. These six cases were conducted in Bangkok, Istanbul, Abuja, Hongkong, Penang and Terengganu, and Kuala Lumpur. The

components they used to study were checked in the table. The questionnaire used in this study was formed based on literature review, cases and the actual situation of Yulongxin Village. It was composed of six parts which were characteristics of respondents containing demographic features and residential features, satisfaction with dwelling unit, building conditions, village environment, neighborhood environment and neighbors. Factors that determine these components were extracted and the correlations between these factors and residential satisfaction were analyzed. The level of satisfaction was measured by using a five-point Likert scale - '1' for very dissatisfied, '2' for dissatisfied, '3' for fair, '4' for satisfied and '5' for very satisfied. The overall residential satisfaction of respondents was also measured by a single-item measure.

The component of dwelling unit referred to variables concerning space and support services in the unit. Building conditions included support systems in the building they lived. The component of village environment referred to environment inside the village. Neighborhood environment referred to services around the village. Neighbors contained three variables which were friendliness of neighbors, helpfulness of neighbors, and relations with neighbors.

Table 1. Factor Analysis of Dwelling Unit

components	cases					
	1	2	3	4	5	6
Miscellaneous				V		
Location	V			V		
Social environment				V		V
Neighbors	V	V				
Neighborhood / Public facilities	V	V	V	V	V	V
Environment conditions	V				V	
Dwelling units services			V	V	V	V
Dwelling units features	V	V	V	V	V	V

#### 4. Results

##### 4.1 Characteristics of Respondents

A total of 122 questionnaires collected were considered valid and were used for analysis. As seen in Table 1, of all the respondents, 56.9% were male while 43.1% were female. The average age of the respondents was 31.2 years old with more than 80% of the respondents in their 20s or 30s with corresponds with the demographic feature of the city. About 1/5 of the respondents lived alone and about 1/3 lived with their spouse. Two-generation-families and three-generation-families took 18.2% and 7.4%

Table 2. Demographic Features of Respondents

Demographic Features	F (n=122)	%
Age		
10s	1	0.8
20s	62	51.7
30s	35	29.2
40s	14	11.7
50s	7	5.8
60s	1	0.8
Gender		
Male	66	56.9
Female	50	43.1
Family member(s)		
Alone	25	20.7
With spouse	41	33.9
Two generations	22	18.2
Three generations	9	7.4
With other relatives	24	19.8
Occupation		
Housewives	7	6.0
Worker	91	77.8
Self-employed	13	11.1
Retired	4	3.4
Unemployed	2	1.7
Education level		
Lower than elementary school	2	1.6
Elementary school	6	4.9
Middle school	15	12.3
High school	37	30.3
Junior college	38	31.1
Bachelor's degree	24	19.7
Family monthly income (RMB)		
Not more than 1000	2	1.6
1001-2000	18	14.8
2001-3000	38	31.1
3001-4000	29	23.8
More than 4000	35	28.7

Note: 6.33 RMB = 1 US dollar

respectively. A total of 77.8% of the respondents were workers. The percentages of respondents graduated from high school and junior college were 30.3% and 31.1% which were the highest two of all the six education levels. The highest education level was bachelor's degree taking 19.7%. A total of 31.1% of the respondents had a family income between 2000RMB and 3000RMB while 23.8% between 3000RMB and 4000RMB and 28.7% had an income higher than 4000RMB.

In the residential features part, as shown in Table 2, 45.1% of the respondents lived in single room followed by OBOL (one bedroom and one living room) and TBOL (two bedrooms and one living room) types which took 36.1% and 15.6% respectively. The average of residency duration was 38 months which was slightly longer than three years. 27.9% of the respondents had lived in the village for less than a year followed by longer than five years, two to three years, one to two years taking 21.3%, 20.5%

and 18.0% respectively. About 60% of the respondents had a monthly rental fee between 501 to 1000RMB while 27.4% were not more than 500RMB. The rest respondents had a monthly rental fee higher than 1000RMB. About 30% of the respondents never interacted with their neighbors, while 23.7% of them communicated with their neighbors on a daily basis.

Table 3. Residential Features of Respondents

Demographic Features	F(n=122)	%
Unit type		
Single room	55	45.1
OBOL	44	36.1
TBOL	19	15.6
Others	4	3.3
Monthly rental fee (RMB)		
Not more than 500	32	27.4
501-1000	70	59.8
1001-1300	13	11.1
More than 1500	2	1.7
Residency duration		
Not more than 1 year	34	27.9
1-2 years	22	18.0
2-3 years	25	20.5
3-4 years	8	6.6
4-5 years	7	5.7
Longer than 5 years	26	21.3
Interaction frequency with neighbors		
Never	28	30.1
Once or twice a month	12	12.9
Once a week	17	18.3
More than once a week	14	15.1
Everyday	22	23.7

Note: 6.33 RMB = 1 US dollar

OBOL: one bedroom and one living room

TBOL: two bedrooms and one living room

#### 4.2 Factor Analysis

Factor analysis is a method to provide a relatively small number of factors construct as substitutes for a larger number of variables (Abdul, 2008). Factor analysis with principal component method and Varimax Rotation were used in this study to determine the main variables affecting the component they under. Factor analysis were conducted in the components of dwelling unit, building conditions, village environment, and neighborhood environment except the component of neighbors for there were only three variables under the component of neighbors.

##### Dwelling Unit

As seen in Table 3, four factors were extracted after the conduction of factor analysis. The values of factor loading higher than 0.4 were shown in the table. These four factors accounted for 65.10% of the total variance across 18 variables.

Factor 1 is room sizes. It contained variables concerning

sizes of space in the dwelling unit such as kitchen, living room, bedroom, toilet, dining area, and storage space. Factor 2 is utilities. It referred to television transmission, internet quality, insulation, and ceiling height. Factor 3 is energy supply. It concerned about the supply of electricity, water and gas. Factor 4 is air condition and quality. It referred mainly to the comfort of the dwelling unit including ventilation, day light, water proof, window quality, and drying area size.

Table 4. Factor Analysis of Dwelling Unit

	Factor 1	Factor 2	Factor 3	Factor 4
kitchen size	0.851			
living room size	0.786			
bedroom size	0.717			
toilet size	0.708		0.441	
dining area size	0.519			
storage space size	0.479		0.444	
television		0.821		
internet		0.639		
insulation		0.639		
ceiling height		0.577		
water supply			0.791	
gas supply			0.786	
electricity supply			0.721	
ventilation				0.723
day light				0.652
drying area size	0.541			0.596
window quality				0.579
water proof				0.557
variance explained	20.698 (3.802*)	15.466 (2.583*)	14.850 (2.499*)	14.082 (2.368*)

Note: Significance: 0.000

\* Eigen Value

##### Building Conditions

Factor 1 is privacy and support system. It concerned about variables related to privacy such as visual privacy, acoustic privacy, building distance, and anti-fire service, sewerage. This factor took about 28.02% of the total variance across ten variables. Factor 2 is architectural construction. It included the variables of stair width, corridor width, and construction quality. Factor 3 is safety. It referred mainly to the safety in the building including safety from accidents, and safety from criminals.

##### Village Environment

As shown in Table 5, four factors were extracted after factor analysis. These four factors accounted for about 68.85% of the total variance across all 20 variables.

Factor 1 is perception and information exchange. It concerned about physical features of the village environment such as crowdedness, cleanliness, odor level and noise level, and services that related to the outside

world such as internet bar, number of public phones and postal services. Factor 2 is security and estate management. It referred to safety and management of the village such as safety from accidents, safety from criminals, estate management, and trash disposal. Factor 3 is size and light of public space. It contained variables relating to public space in the village such as size of children's playground, size of exercise space, width of pedestrian walkway and size of green space. Factor 4 is convenience and public services. It included variables of convenience to food stalls, convenience store and police station in the village.

Table 5. Factor Analysis of Building Conditions

	Factor 1	Factor 2	Factor 3
visual privacy	0.792		
sewerage	0.769		
acoustic privacy	0.704		
building distance	0.675		0.451
anti-fire service	0.655		
stair width		0.918	
corridor width		0.888	
construction quality		0.786	
safety from criminals			0.878
safety from accidents			0.859
variance explained	28.017 (2.802*)	24.645 (2.465*)	19.713 (1.971*)

Note: Significance: 0.000

\* Eigen Value

### Neighborhood Environment

As shown in Table 6, two factors were extracted after using factor analysis. The two factors explained 62.35% of the total variance across ten variables.

Factor 1 is convenience to basic living facilities. It concerned about public communal such as clinic / hospital, public transportation, railway station, and school, and work place. Factor 2 is convenience to social facilities. It referred mainly to entertainment and cultural facilities such as parks, shopping malls, public library etc.

### 4.3 Residential Satisfaction

Respondents were asked about their perceived overall residential satisfaction. The distribution of their answers was shown in Figure 1. The average satisfaction was 3.05 indicating their moderate satisfaction. A total of 68% of the respondents expressed fair satisfaction followed by 18.9% of high satisfaction. This implies that about 87% of the respondents felt fair or high satisfaction. Respondents who felt low satisfaction took 12.3% and only one respondent expressed very low satisfaction while no respondent felt highly satisfied.

Table 6. Factor Analysis of Village Environment

	Factor 1	Factor 2	Factor 3	Factor 4
noise level	0.856			
crowdedness	0.788			
odor level	0.772			
parking space	0.717		0.448	
cleanliness	0.709			
public phones numbers	0.647			
internet bar	0.552			0.438
postal services	0.433			
estate management		0.784		
safety from accidents		0.722		
safety from criminals		0.700		
trash disposal		0.676		
size of playground			0.889	
size of exercise area			0.818	
pedestrian walkway		0.571	0.613	
size of green space	0.473		0.561	
public light at night		0.420	0.504	
convenience stores				0.878
food stalls				0.865
police station				0.470
variance explained	23.660 (4.732*)	17.011 (3.405*)	15.387 (3.077*)	12.788 (2.558*)

Note: Significance: 0.000

\* Eigen Value

Table 7: Factor Analysis of Neighborhood Environment

	Factor 1	Factor 2
workplace	0.755	
railway station	0.744	
clinic or hospital	0.742	
public transportation	0.731	
school	0.687	
entertainment facilities		0.895
parks		0.850
banks	0.435	0.670
public library		0.639
shopping mall		0.553
variance explained	32.344 (3.234*)	30.106 (3.011*)

Note: Significance: 0.000

\* Eigen Value

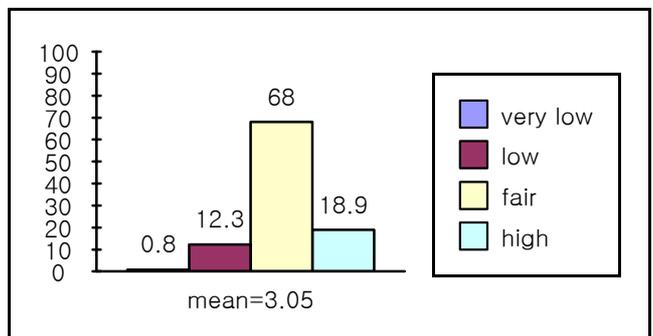


Figure 1. Overall Residential Satisfaction

Table 8. Pearson's r between Residential Satisfaction and Factors

Factors	r
room sizes	0.377**
utilities	0.308**
energy supply	0.272**
air condition and quality	0.364**
privacy and support system	0.328**
architectural construction	0.215*
safety	0.308**
perception and information exchange	0.407**
security and estate management	0.339**
size and light of public space	0.226*
convenience and public services	0.251**
convenience to basic living facilities	0.204*
convenience social facilities	0.301**
neighbors	0.286**

Note: \*p≤0.05  
\*\*p≤0.01

Correlations between overall residential satisfaction and respondents' satisfaction with the 14 factors were analyzed by using Pearson product-moment correlation coefficient. As seen in Table 7, all the 14 factors positively correlated with residential satisfaction. The factor that correlated the most with residential satisfaction was perception and information exchange. The factor of room sizes and air condition and quality are the factors that had the second and third highest correlation coefficients. The factors of convenience to basic living facilities, architectural construction, and size and light of public space had the lowest correlation coefficients.

#### 4.4 Satisfaction by Respondents' Characteristics

T test and F test were used to see the satisfaction differences between respondents with different characteristics. The mean value were shown on the 100-point scale. DU, BC, VE, NE, and N represent dwelling unit, building conditions, village environment, neighborhood environment, and neighbors.

As shown in Table 9, female respondents and male respondents had different satisfaction with dwelling unit, building conditions, village environment, and neighborhood environment. Females had higher satisfaction.

As seen in Table 10, 11, 12, 13, 14, F test was conducted to see the satisfaction difference between different age groups, education groups, occupation groups, income groups and groups with different family member(s). The result indicates that respondents did not show significant satisfaction differences within these groups.

Table 15 shows that dwelling unit and building

conditions had significant satisfaction differences between the unit type of single room, one bedroom one living room, and two bedrooms one living room. Respondents living in bigger unit types tend to have higher satisfaction.

As shown in Table 16, respondents in different rental fee group had different satisfaction with dwelling unit and building conditions. Those who had higher rental fee tend to had higher satisfaction. This result corresponds with the result in Table 9 because bigger unit types usually have higher rental fee in the village.

The result in Table 17 indicates that respondents with different residency durations did not show significant satisfaction differences with dwelling unit, building conditions, village environment, neighborhood environment or neighbors.

As seen in Table 18, respondents with different interaction frequencies with neighbors had significant satisfaction differences with their dwelling unit, building conditions, village environment, neighborhood environment and neighbors. Those who communicated with their neighbors more tend to have higher satisfaction with dwelling unit, building conditions, village environment, neighborhood environment and neighbors.

Table 9. Residential Satisfaction by Gender

Components	Male	Female	t	p
DU	56.30	61.87	2.494	0.014*
BC	51.82	58.69	2.714	0.008**
VE	48.52	55.77	2.994	0.003**
NE	50.68	57.68	2.995	0.003**
N	67.08	67.48	0.164	0.870

Note: \* p≤0.05, \*\*p≤0.01

Table 10. Residential Satisfaction by Age

Components	DU	BC	VE	NE	N
20s or younger	57.38	54.33	52.90	55.02	66.13
30s	60.65	55.01	50.87	53.03	69.52
40s	59.00	58.19	48.33	49.66	68.97
50s or older	60.26	56.75	52.27	54.57	68.10
F	0.555	0.330	0.516	0.724	0.579
p	0.646	0.803	0.672	0.540	0.630

Table 11. Residential Satisfaction by Education

Components	DU	BC	VE	NE	N
Elementary school	54.47	52.69	51.04	52.63	66.67
Middle school	61.12	59.83	53.28	55.25	63.56
High school	62.07	58.49	54.68	56.49	70.09
Junior College	55.66	52.75	50.52	52.50	69.10
Bachelor's degree	58.60	52.61	49.34	52.10	65.07
F	1.649	1.546	0.774	0.661	1.058
p	0.167	0.193	0.544	0.620	0.381

Table 12. Residential Satisfaction by Occupation

Components	DU	BC	VE	NE	N
Housewife	68.42	68.37	60.22	62.27	65.24
Worker	58.20	54.58	51.21	53.24	67.99
Self-employed	59.47	56.94	53.50	55.52	69.49
Unemployed or retired	60.91	55.00	54.54	56.32	70.56
F	1.504	2.253	1.130	1.234	0.230
p	0.217	0.086	0.340	0.301	0.875

Table 13. Residential Satisfaction by Income

Components	DU	BC	VE	NE	N
≤2000	56.85	57.22	53.25	55.11	67.17
2001-3000	57.97	55.07	51.53	53.38	64.65
3001-4000	59.44	56.87	52.92	55.07	69.75
>4000	60.20	53.26	50.75	53.07	70.00
F	0.387	0.505	0.218	0.204	1.317
p	0.763	0.680	0.884	0.894	0.272

Table 14. Residential Satisfaction by Family Member(s)

Components	DU	BC	VE	NE	N
Alone	54.25	51.91	53.25	55.24	70.13
With spouse	58.76	55.84	50.48	53.15	64.96
2-generation	62.49	58.41	54.31	51.76	68.18
3-generation	61.90	54.67	49.70	53.51	74.07
With others	58.92	55.46	51.64	53.98	67.08
F	1.483	0.669	0.417	0.254	1.243
p	0.212	0.615	0.796	0.907	0.297

Table 15. Residential Satisfaction by Unit Type

Components	DU	BC	VE	NE	N
Single room	54.84	52.00	52.50	54.48	68.73
OBOL	60.41	55.80	50.42	52.69	66.12
TBOL	65.04	62.41	53.40	55.23	68.57
F	6.598	4.946	0.470	0.372	0.537
p	0.002**	0.009**	0.626	0.690	0.586

Note: \*\*p≤0.01

Table 16. Residential Satisfaction by Rental Fee

Components	DU	BC	VE	NE	N
≤500	58.44	55.73	55.42	56.70	69.48
501-1000	56.29	52.58	49.97	52.25	65.51
>1000	66.80	63.39	51.50	53.96	72.31
F	4.848	4.166	1.843	1.317	2.101
p	0.010**	0.018*	0.163	0.272	0.127

Note: \* p≤0.05, \*\*p≤0.01

Table 17. Residential Satisfaction by Residency Duration

Components	DU	BC	VE	NE	N
≤ 1year	56.36	54.63	54.33	55.95	65.98
1-2 years	57.44	52.60	50.21	52.67	66.82
2-3 years	60.05	56.66	51.68	53.50	66.80
3-5 years	56.73	49.56	48.34	50.87	66.67
> 5 years	63.00	60.61	52.52	54.77	73.04
F	1.314	1.959	0.650	0.505	1.226
p	0.269	0.105	0.628	0.732	0.304

Table 18. Residential Satisfaction by Iteration Frequency with Neighbors

Components	DU	BC	VE	NE	N
Never	53.46	48.64	44.85	47.19	58.27
Once or twice a month	60.89	55.63	54.01	55.79	64.72
Once a week	54.08	51.96	49.43	50.28	70.00
Several times a week	58.45	55.14	51.06	53.98	69.76
everyday	67.24	62.68	55.87	58.23	76.35
F	5.457	3.638	2.624	2.860	7.374
p	0.001***	0.009**	0.040*	0.028*	0.000***

### 5. Conclusion

In general, respondent expressed moderate overall residential satisfaction. The result of correlations between residential satisfaction and factors showed all the factors positively correlated with residential satisfaction and residential satisfaction correlated the most with the factors of perception and information exchange, room sizes, and air condition and quality. This indicates that these factors could be used as assessment of residential satisfaction in urban villages in Shenzhen. Also, residential satisfaction can be enhanced by improving residents' satisfaction with variables under these factors that are noise level, crowdedness, odor level, size of parking space, cleanliness, number of public phones, internet bar, postal services, kitchen size, living room size, bedroom size, toilet size, dining area size, storage space size, ventilation, day light, drying area size, window quality, and water proof from leaking. The satisfaction differences of the five components were also studied. Female respondents had higher satisfaction than male respondents with the components of dwelling unit, building conditions, village environment, and neighborhood environment. Respondents living in bigger unit type had higher satisfaction with dwelling unit and building conditions. Respondents with higher rental fee also had higher satisfaction with dwelling unit and building conditions. Satisfaction by interaction frequency with neighbors showed significant differences as those who communicated more with their neighbors tend to have higher satisfaction with all the five components. Since the characteristics of gender, unit type and interaction frequencies with neighbors contributed to different satisfaction with certain components, future urban village reconstruction or planning should take these characteristics into consideration. Further research should be done to explore more factors that correlate with residential satisfaction in urban villages so that residents' residential satisfaction can be learned and improvement could be made accordingly to enhance their residential satisfaction.

본 연구는 2012년도 정부(교육과학기술부)의 재원으로 한국연구재단의 지원을 받아 수행된 연구임(No. 2012-0000609)

### References

1. Abdul, G. S. (2008). Neighbourhood factors in private low-cost housing in Malaysia. *Habitat International*, 32(4), 485-493.
2. Amérigo, M., & Aragonés, J. I. (1997). A theoretical and methodological approach to the study of residential satisfaction. *Journal of Environmental Psychology*, 17(1),47-57.
3. Ding, S. B. (2005). The problems and solutions for urban villages in Shenzhen. *China Opening Herald*, 120(3),39-42. (Written in Chinese)
4. Duan, C. R., Wang, Y. (2006). Housing problems of migrants. *Beijing Administration Faculty Transaction*, 6, 4-7. (Written in Chinese)
5. Elsinga, M., & Hoekstra, J. (2005). Home ownership and housing satisfaction. *Journal of Housing and the Built Environment*, 20,401-424.
6. Francescato, G., Weidemann, S., & Anderson, J. R. (1989). Evaluating the built environment from the users' point of view: an attitudinal model of residential satisfaction. In W.F.E (Ed.), *Building Evaluation (pp.181-198)*. NewYork: PlenumPress.
7. Galster, G. C. (1987). Identifying the correlates of dwelling satisfaction: an empirical critique. *Environment and Behavior*, 19(5),539-568.
8. Gibson, K. J. (2007). The relocation of the Columbia Villa community: views from residents. *Journal of Planning Education and Research*, 27, 5-19
9. Ha, M. K. (1989). *The determinants of residential environmental qualities and satisfaction: Toward developing residential quality indices* (Doctor's dissertation). Oklahoma State University
10. Hipp, J. (2010). What is the 'neighborhood' in neighborhood satisfaction? Comparing the effects of structural characteristics measured at the micro-neighborhood and trace levels. *Urban Studies*, 47,2571-2536.
11. Li, S. Z. (2007). *Study on Public Security Problems of 'The Villages of The Urban 'in Shenzhen* (Master'sthesis). Jinan University. (Written in Chinese)
12. Lawrence, R. J. (1987). What makes a house a home? *Environment and Behavior*,19(2),154-167.
13. Lu, M. (1999). Determinants of residential satisfaction: ordered logit vs regression models. *Growth and Change*, 30,264-287.
14. Luo, Q. H., Cai, T. F. (2007). Our reflections on the house-renting settlements in Shenzhen. *Journal of Shenzhen University*, 24(6), 27-31. (Written in Chinese)
15. Ma, H. (2007). Renewal of city village in Shenzhen from perspective of urban sociology. *City Planning Review*, 31(1), 26-32.(Written in Chinese)
16. Mohit, M. A., Ibrahim, M., & Rashid, Y. R. (2010). Assessment of residential satisfaction in newly designed public low-cost housing in Kuala Lumpur, Malaysia. *Habitat International*, 34(1),18-27.
17. Morris, E. W., Winter, M. (1978). Housing, family, and society. New York: Wiley.
18. Tan, T.-H. (2012). Housing satisfaction in medium- and high-cost housing: The case of Greater Kuala Lumpur, Malaysia. *Habitat International*, 36(1),108-116.
19. Ukoha, O. M., & Beamish, J. O. (1997). Assessment of residents' satisfaction with public housing in Abuja, Nigeria. *Habitat International*, 21(4),445-460.
20. Varady, D. P., & Carrozza, M. A. (2000). Towards a better way to measure customer satisfaction levels in public housing: a report from Cincinnati. *Housing Studies*, 15(6),797-825.
21. Zheng, Z. D., & Han, D. (2003).The difficulty and measures for the reconstruction of urban villages in Shenzhen. *Theory and Practice in Special Economic Zone*, 29-38. (Written in Chinese)

---

투고(접수)일자: 2012년 2월 24일  
 수정일자: (1차) 2012년 4월 13일  
 (2차) 2012년 5월 27일  
 게재 확정일자: 2012년 6월 1일