

A Study on the Differences of Determinant Variables to Enter the Senile Welfare Facilities for the Middle-aged and Senile Generations in China

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Abstract: The purpose of this study was to analyze the differences of determinants and intention to enter the facility in the subjects with middle-aged (40-60 years old) and senile generations (over 60 years old) in China. 320 data for the senile generation and 305 for middle-aged generation were used as the final analysis. For the determinants to enter the facility, the image of the facility was the most influential variable in both generations. It is necessary to consider the image of the facility was the important reason for the middle-aged generation not to enter the facility despite no difference on the image of the facility between the groups.

Key words: Determinants, intention, middle-aged, senile generations, china, senile welfare facilities

INTRODUCTION

The aged population over 65 years old in China was only 4.9% in 1982, however, its population was shared by 10.5% in 2015 and is anticipated to be over 400 million in 2033 (NBSC., 2016). This incremental rate is faster than that in Korea whose aging rate had never been seen in the world. Considering the global share of Chinese population, relative increase of Chinese aged population can be anticipated to become the global issue beyond China. Definite increase of Chinese aged population is continued by increasing demand that requires living assistants that is the problem of support to the aged people. The demand of living assistants will be increased by 142.36% in 2020 and by 204.12% in 2030 compared to that in 2010 which is anticipated to grow by double. This will be the most critical social problem in China considering the current problem of low birth rate (NBSC., 2016).

China has the ideas of filial duty and respect for the elderly in Confucianism traditionally like Japan and Korea. It recognized the practice of respect for the elderly with the type of extended families as the duty and the greatest virtue of human-beings. However, the values in China have been changed a lot due to industrialization, globalization and so on. The extended family system has been changed into the nuclear family system in China (Heo, 2002). Moreover, traditional role of family support has been weakened and support norm between parents and children is hardly implemented in the modern Chinese

families anymore since the share of Chinese women has been increasing in the labor market. Support old parents became the significant social problem in the family type of '4-2-1' in the Chinese society.

The changes of the society and values on the family support in China were continued by increasing the senile facilities. Chinese government selected "Socialization of social welfare" as the strategy of social welfare innovation in 1984 to counter the demand of social welfare system proactively which had been anticipated to be rapidly increased, since, Chinese economic reform. In socialization of social welfare it is crucial to shift from closed system that the nation monopolizes the social welfare projects into open system that three parties including government, private companies and individuals participate in the projects together and to apply competition of market economy into the social welfare (Tang, 2010; Won and Lee, 2015). Private senile facilities which had been responded at the first time to the governmental policy have been increased remarkably in late 2000 establishing from later 1990 (Shi, 2009). Chinese senile facilities have the integrated types of the senile facilities and elderly care facilities in Korea. Chinese central government is active to support the private senile facilities, too (Ringen and Ngok, 2017; Yang, 2016). As China supports the private senile facilities systemically like this, the number of aged population who are using the facilities is rapidly increasing. The number of beds in the public senile facilities was increased from 723, 000-1, 023, 000 in 1990 and 1999, respectively. Since, then the

government initiated to motivate operations of the private senile facilities to lower the financial burden. With the efforts of the political party and the government in China, tremendous progress has been made in terms of number of various senile facilities such as senile centers, local social senile centers and so on (Shi, 2009). Until the end of 2010, the number of senile institutions including senile care centers, senile facilities and senile welfare centers was over 40,000 equipped with 3,149,000 beds out of which 47,000 beds in senile facilities combined with medicine and pharmacy that had daily living supporters and 12,000 beds in senile facilities that had all day long living supporters. Amid these changes, Chinese senile projects have been progressed there have been aged people without three and with five conerved who entered the senile centers and facilities and also those who purchased the services operated in the senile centers and facilities or entered the centers with their own money.

Then, how about the intention of Chinese people to enter the facility. Due to rapid changes of Chinese society and the policies, demographic changes and change of value for family support, the intention to enter the facility might be different by the generations, however it aims to infer them based on the studies in Korea where this situation was faced earlier than China. The positive tendency to enter the facility is remarkable in the post-aging plan of young generation. With the economic ability, there is high probability to establish single person households with the aged and the demand to use senile specialized hospital or senile welfare facility is increased at the time to require long-term care services (Lee, 2005). However, preference on the intention to use the nursing facility showed differently by age, higher intention to use the facility services as the age was older in a study by Lee (2007). The difference of entering intention to nursing facility, senile welfare facility and so on by generations is anticipated to be remarkable in China where the changes of aging society and thinking are prevailed similar to Korea at the moment, therefore, this study aims to analyze the difference of intention to enter the facility in the subjects of middle aged and senile generations in China.

On the other hand, the decision-making factors to enter the senile welfare facility were known with sociodemographic characteristics, relationship with families and so on. Teresi *et al.* (1988) reported focusing on the family supporters in terms of decision making to use the institutional care services that they decided based on the characteristics of family supporters and the aged such as physical, cognitional and functional statuses,

the characteristics of informal support system like accessibility and so on and the characteristics of formal care system such as accessibility, qualification and so on. Collins *et al.* (1988) also, pointed out the importance of family supporter's role in the service utilization by the aged with dementia suggesting the model on the service utilization. Especially, they empathized the influences by the generations on the service utilization, highlighting rare cases to request the services by the aged people themselves and those to establish the desire to use the services by the families and the specialists in case of patients with Alzheimer disease. In addition, the factors to affect the intention to use the services were informal support system, health and capability of supporters, information on the services, requests, suggestion and so on. Based on this theoretical model, the determinant factors to enter the senile welfare facility were analyzed focusing on sociodemographic characteristics (including sex, age, education level and subjective economic status), subjective health condition, relationship with families and facility image.

Commonly, the old people have the sense of abasement to the senile facility, therefore, the responses and behaviors of their friends and neighbors will affect not only the decision making to enter the facility during the decision making and preparation stages but also adaptation after entering the facility directly (Lee, 2002). Hence, the image of the facility can influence the intention to enter the facility for both middle aged and senile generations. In addition, the highest response on the motive to enter the facility was lack of children's support with 29.4%, followed by voluntary selection with 25.9%, loss of family with 24.7% and loneliness of solitude with 20.0%, upon the survey results with the aged subjects who entered the charged facilities (Lee and Bae, 2004). Marital status was also influenced to enter the facility which had higher probability to use senile facility by single persons than those living with their spouses (Coward *et al.*, 1996; Miller and Weissert, 2000). Therefore, closeness with families and marital status were used as the variables for family relation. The purpose of this study was to analyze the differences of determinants and intention to enter the facility in the subjects with middle aged (40-60 years old) and senile generations (over 60 years old) in China. In detail, first, the intention to enter the facility were compared and analyzed between the middle aged and senile generations. Second, the determinants to enter the facility were compared and analyzed between the middle-aged and senile generations in China.

Table 1: Measurement tools

Variables	Measurement methods
Dependent variable	
Intention to enter facility	With respect to a questionnaire, 'do you have any intention to enter the senile welfare facility in your aged time?' They the can answer one of the followings; 'I will enter the facility when i need the ther's help due to my health problem'. 'I will decide it considering the location, cost and so on,' 'I don't want to enter the facility to live in only acceptable for temporary staying' and 'I will never enter the facility'
Independent variables	
Sociodemographic features	Sex, age, education level, occupation, subjective economic status, subjective health condition
Relationship with family	Closeness with families
Facility image	Three items are included with 'facility that poor old persons use', 'facility that the old persons with poor relationship with children use' and 'facility that lonely and solitude persons use' To prepare the measuring tools, reliability test was performed by a professor and a graduate school student in department of senile welfare. As the score was higher, the image of facility was negative and the reliability of the index was 727
Other variables	
	Motive to enter the facility, reasons not to enter the facility

MATERIALS AND METHODS

Study subjects and data collection methods: The subjects of this study were the middle-aged generation from 40-60 years old and senile generation over 60 years old living in China. The survey was conducted from June to August 2017 with the senile subjects in Shanghai, Xuzhou, Hefei, Suzhou, Chuzhou, Wuhu, Maanshan and Lingbi Xian. The survey was performed by face-to-face interviews or survey requests to the aged persons who gathered and exercised in the parks mainly in the morning and afternoon. For the middle-aged generation, the survey was conducted in the parents of the students in H University by Wechat. QQ using cellphones or in the parents of the students in Huangshan University and Guangxi Teachers University by requesting survey. At that time, the professors of Huangshan University and Guangxi Teachers University assisted the study. The survey program was conducted with these multiple methods and 320 data for the senile generation and 305 for middle-aged generation were used as the final analysis (Table 1).

Analysis method: Frequency analysis, cross analysis, t-test and logistic regression were applied using SPSS Win 21.0 Version.

RESULTS AND DISCUSSION

Differences of sociodemographic characteristics between middle-aged and senile generations in China: There were significant differences in sex, marital status, occupation, subjective economic status and subjective health condition between middle-aged and senile generations in China (Table 2). Male population was higher in the senile generation while females were higher in the middle-aged one. Both generations had overwhelmingly more cases with spouses 92.2% of middle-aged generation. Education level showed the differences demonstrating even

distribution in the senile generation while higher education level in the middle-aged generation with 55.6% of university graduates or more. In terms of occupation, both generations had higher share of public officers, 27.4% of middle-aged generation had occupations for services, commerce and industry and 28.8% of senile generation had occupations of laborers. With respect to the subjective economic status, more share of middle-aged generation answered 'good' and more share of senile generation answered 'good' for the subjective health condition.

Differences of variables related to the entrance of facility between middle-aged and senile generations in China:

Upon the comparison results of intention to enter the facility, motive to enter the facility and reasons not to enter the facility between middle-aged and senile generations in China there were significant differences in intention to enter the facility and reasons not to enter the facility (Table 3 and 4). With respect to the intention to enter the facility, 'I will enter the facility when I need the other's help due to my health problem' and 'I will decide it considering the location, cost and so on' were recorded as 'Yes' to enter the facility while 'I don't want to enter the facility to live in only acceptable for temporary staying' and 'I will never enter the facility' were recorded as 'no' to enter the facility. 68.8% of senile generation showed no intention to enter the facility while 48.8% of middle-aged generation showed the intention, demonstrating higher intention to enter the facility in the middle-aged generation. For the reasons not to enter the facility, the most frequent answers in both generations were 'because his/her family can take care of' followed by 'because he/she doesn't like unfamiliar environment' with 25.5% in senile generation and 'because of the negative image of the facility' in the middle-aged generation. However, the difference on the motive to enter the facility or image of the facility was not significant between the groups.

Table 2: Differences of sociodemographic characteristics

Variables	Old age	Middle age	Chi-square (<N=525>)
Sex			
Male	177, 55.3%	82, 40.0%	11.721**
Female	143, 44.7%	123, 60.0%	
Marriage status			
With spouse	242, 75.6%	189, 92.2%	23.340***
Without spouse	78, 24.4%	16, 7.8%	
Schooling			
None+Elementary	75, 23.4%	14, 6.8%	47.569***
Middle school	75, 23.4%	44, 21.5%	
High school	78, 24.4%	33, 16.1%	
Over college	92, 28.8%	114, 55.6%	
Job			
None	13, 4.1%	23, 11.7%	54.081***
Workers in primary industry	47, 14.9%	14, 7.1%	
Laborers	91, 28.8%	16, 8.1%	
Public officers	121, 38.3%	90, 45.7%	
Services, commerce and industry	44, 13.9%	54, 27.4%	
Economic status			
Bad	61, 19.1%	17, 8.3%	11.572**
Middle	102, 31.9%	77, 37.6%	
Good	157, 49.1%	111, 54.1%	
Health status			
Bad	50, 15.6%	22, 10.7%	15.598***
Middle	173, 54.1%	146, 71.2%	
Good	97, 30.3%	37, 18.0%	
Total	320, 100.0%	205, 100.0%	

p<0.01, *p<0.001

Table 3: Differences of variables related to the entrance of facility

Variables	Old age	Middle age	Chi-square (<N=525>)
Intention to enter the facility			
Yes	100, 31.3%	100, 48.8%	16.283***
No	220, 68.8%	105, 51.2%	
Total	320, 100.0%	205, 100.0%	
Motive to enter the facility			
When I can't take care	42, 42.0%	43, 43.0%	6.009
When I need the other's	20, 20.0%	9, 9.0%	
To relieve child's burden	20, 20.0%	21, 21.0%	
So on	18, 18.0%	27, 27.0%	
Total	100, 100.0%	100, 100.0%	
Reasons not to enter the facility			
Negative gaze around	16, 7.3%	8, 7.6%	15.138**
Because my family can	103, 46.8%	69, 65.7%	
Negative image of the facility	45, 20.5%	19, 18.1%	
Unfamiliar environment	56, 25.5%	9, 8.6%	
Total	220, 100.0%	105, 100.0%	

p<0.01, *p<0.001

Table 4: Differences of image of the facility

Variables	N	M	SD	t-value (<N=525>)
Image of the facility				
Old age	320	2.517	0.864	1.324
Middle age	205	2.416	0.823	

Differences of determinants to enter the facility between middle-aged and senile generations in China: Binary logistic regression analysis was performed by the generations to compare the differences of determinants to enter the facility between middle-aged and senile generations (Table 5). First, the model was significant in the senile generation (Hosmer and Lemeshow's Goodness-of-fit test Chi square is 10.084, p>0.05) and explanatory power of the model was 16.0%. Age,

occupation, health condition and image of the facility were influenced to the intention to enter the facility significantly. That means the intention to enter the facility was higher as the age was younger with public service occupation, the healthier condition and positive image of the facility. Considering odds ratio, intention to enter the facility in the senile generation was shown to be increased by 1.047 times as the age was 1 year older by 1.730 times as the occupation was public officer compared to

Table 5: Differences of determinants to enter the facilityld age

Variables	Old age 1 = Yes, 0 = No			Middle age 1 = Yes, 0 = No		
	B	Wals	Exp(B)	B	Wals	Exp(B)
Demographic characteristics						
Sex ^a	0.015	0.003	1.015	-0.439	1.909	0.645
Age	-0.048	5.022*	0.953	0.026	0.908	1.026
Schooling ^a	0.595	3.188	1.813	0.384	0.911	1.468
Job ^a	0.548	2.872*	1.730	-0.165	0.169	0.848
Health stasus	0.191	1.543*	1.210	-0.114	0.245	0.892
Economic	-0.216	1.268	0.805	0.480	2.304	1.617
Family relationship						
Marrige	-0.166	0.256	0.847	0.268	0.215	1.307
Relatunship with adult children	-0.162	0.844	0.851	-0.111	0.275	0.894
Image of the facility	-0.485	8.380**	0.616	-0.546	6.878**	0.579
Consrant	4.015	5.247	55.446	-0.832	0.212	0.435
Hosmer and lemeshow's	10.084	12.061				
Nagelkerke R ²	0.160	0.116				

+p<0.01, *p<0.05, **p<0.01. ***p<0.001: a) Sex (1 = male), Schooling (1 = over college), Job (1 = Official), Marriage status (1 = with spouse)

the other occupations by 1.210 times as the score of health condition was one point higher and by 1.623 times as the image score of facility was one point higher.

The model was significant in the middle-aged generation (Hosmer and Lemeshow's goodness-of-fit Test Chi square is 12.061, p>0.05) and explanatory power of the model was 11.6%. Only image of facility was influenced to the intention to enter the facility significantly. Considering odds ratio, the intention to enter the facility was shown to be increased by 1.727 times as the image score of facility was increased by one point.

CONCLUSION

The purpose of this study was to analyze the differences of determinants and intention to enter the facility in the subjects with middle-aged (40-60 years old) and senile generations (over 60 years old) in China. To do so, the survey was conducted from June to August 2017 with the senile subjects from Shanghai, Xuzhou, Hefei, Suzhou, Chuzhou, Wuhu, Maanshan and Lingbi Xian. For the middle-aged generation, the survey was conducted in the parents of the students in H University by Wechat.QQ using cellphones or in the parents of the students in Huangshan University and Guangxi Teachers University by requesting survey. The 320 data for the senile generation and 305 for middle-aged generation were used as the final analysis.

The main study results are first, middle-aged generation showed higher intention to enter the facility than senile generation. The biggest reason why they did not have the intention to enter the facility was 'because his/her family can take care of' in both generations, followed by 'because he/she doesn't like unfamiliar environment' in senile generation and 'because of the

negative image of the facility' in the middle-aged generation. Nonetheless, the motive to enter the facility or image of the facility were not significantly different between the groups.

Next for the determinants to enter the facility, the image of the facility was the most influential variable in both generations. It is necessary to consider the image of the facility was the important reason for the middle-aged generation not to enter the facility despite no difference on the image of the facility between the groups. After all the intention to enter the facility was determined by the image of the facility in both generations, however, that means the middle-aged generation was more influenced by the image of the facility than the senile generation.

Currently, the aged population has been rapidly increasing in China and the number of the senile facilities has been increasing drastically, too. Intention to enter the facility in the middle-aged generation was higher than that in the senile generation and the image of the facility was the biggest and sole variable to influence the intention to enter the facility in the middle-aged generation. In consideration of small number of children view or weakened family supporting idea in China, it is critical situation not to support family anymore in China. The Chinese' family relationship did not affect the intention to enter the facility in this study which is consistent with the previous studies that had empathized on the importance of family relationship (Lee and Bae, 2004; Coward *et al.*, 1996; Miller and Weissert, 2000). In the situation that the senile facility can be an alternative as the last shelter for the aged population rapidly increasing, Chinese government requires to plan the educational programs to enhance the image of the facility or senile facility to be the role model in the subjects with current middle-aged population, proactively and preventively. It is suggested that image enhancement plans are required for the

preliminary consumers that will use the facility, not by the simple expansion scheme of the number of facilities or beds.

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