사회복지학석사학위논문

A Study on the Life Satisfaction of Urban Elderly: Exploratory Comparison between Community Living and Institutional Living

-Taking Panzhihua, China as an example -

도시 노인의 삶의 만족도에 관한 연구: 지역거주와 시설거주의 탐색적 비교

-중국 판즈화시를 중심으로-

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ABSTRACT

A Study on the Life Satisfaction of Urban Elderly: Exploratory Comparison between Community Living and Institutional Living

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The insufficient supply of family old-age resources and the increasing demand for the elderly are gradually making the aging problem in China a serious social problem. Due to the increasing needs of older adults and to alleviate the shortage, China has witnessed the coexistence of diversified old-age living modes, with the

primary modes being community living and institutional living. The health status and life satisfaction of the elderly are different under different living modes. However, there is still no consensus about the relationship between different physical health conditions and the choice of living modes. This limits our understanding of the relationship between old people's physical health and life satisfaction in different living modes, which needs further study. Therefore, the purpose of the study is to analyze the association among living modes, physical health and life satisfaction, and on this basis, physical health will be regarded as a moderating and mediating variable to further explore whether the influence of living modes on life satisfaction will change according to physical health.

The study conducted a questionnaire survey of 300 elderly people in Panzhihua City from February to March 2019. Among them, 150 were community living and 150 were institutional living. The research questions and hypotheses were examined by multiple regression analyses.

The main research results of this paper are as follows: 1) there are differences in life satisfaction between the elderly people in the community and those in institutions, and the life satisfaction of the institutional-living was lower than the community-living among the elderly; 2) there is a positive relationship between physical health and life satisfaction, which means that elderly people with better health will be more satisfied with their lives; 3) there is a significant moderating effect the relationship between IADL and life satisfaction: the elderly with a good IADL level in communities have a higher level of life satisfaction, while those with a bad IADL have higher life satisfaction in institutions; 4) the results also show that there is a significant mediating effect of IADL on living

modes and life satisfaction, which means that the effect of living modes on life satisfaction is achieved through the mediating effect of IADL.

Starting from the elderly people themselves, this paper achieves an understanding their true desire for different living modes, and physical health is used as a moderating/mediating variable for the first time to study whether the influence of living modes on life satisfaction was different due to physical health. Additionally, this study conducted a field survey in Panzhihua, Sichuan Province, using the method of questionnaire analysis. As the experimental development zone of national health-preservation and rehabilitation in China, the results obtained on this basis can more realistically reflect the actual situation.

This study has significant reference value for scholars in the field of elderly psychology and professionals such as providers of old-age services. Both communities and institutions should develop services and activities that are beneficial to the elderly's physical health and pay more attention to their mental health. Furthermore, the government should promote the establishment of long-term cooperative relationships between institutions and local hospitals, and further improving the construction of the pension-related system to provide a strong guarantee for the health of the elderly from an economic perspective.

However, there are some limitations in this study. Due to the insufficiency of Chinese domestic theoretical research and relevant scales, this study may ignore some characteristics of Chinese elderly people. The limitations of time and economic conditions also make the sample of this article only reflect the situation of the elderly in a period of time, and there are still some shortcomings in the representation and wide-scale promotion. Future research can use more diverse

research methods, strengthen theoretical support, and expand the sample size to make more meaningful points to the research conclusions.

Keywords: life satisfaction, physical health, community living, institutional living, living modes, moderating effect, mediating effect

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Table of Contents

TABLES

FIGURES

Chapter 1. INTRODUCTION

1.1 Problem Statement and Research Objectives.

China became an aging society in 1999 and the demographic trend has only become more and more serious since then. According to the Statistical Bulletin of Social Service Development published by the Ministry of Civil Affairs of the People's Republic of China, by the end of 2017, China's population of elderly people aged 60 and above was 240.90 million, accounting for 17.3% of the total population, of which 158.31 million were 65 years old and over, accounting for 11.4% of the total population[1]. China has become the country with the largest number of elderly people in the world. Unlike developed countries, China's population is "aging before it gets rich"[2] and the level of social security is far behind that of many countries. The huge population base and the serious shortage of old-age care resources in the whole society makes the problem of China's population aging more serious (Du & Yang, 2006).

In order to solve the serious problem, in 2011 the Central People's Government of the People's Republic China established the 12th Five-Year Plan for the Development of China's Aging Industry, which clearly identified the need to establish and support a socialized elderly care service system based on community and the elderly's own family and supported by institutions. Under the guidance of this policy, China has seen the coexistence of various living modes of old-age services. Diversified living modes can provide more choices to meet the

[1] According to the Statistical Bulletin of Social Service Development published by the Ministry of Civil Affairs of the People's Republic of China, the total population of mainland China was 1.39 billion by the end of China.

[2] That China is "aging before it gets rich" has become the consensus of all sectors of society on the aging of China's population.

different needs of the elderly. Given that the life span of the elderly is continuously extended and the demand for old-age care services is gradually rising, which means that the elderly no longer rely solely on family to live their later lives, diversified living modes can provide more choices to meet the different needs of the elderly. Based on the background of Chinese traditional culture and the degree of economic development, community living and institutional living have become the two most important living modes of life for the elderly in China at present.

There is a vigorous debate in academia about which living mode suitable to China's national conditions can best satisfy the needs of the elderly. In order to deepen the understanding for different living modes, scholars have conducted a lot of research in recent years. Studies on the community living mode mainly focus on the quality of services (Gui, 2005; Zhang, 2012; Wu, 2017), the supply and demand of services (Wang, 2016; Zheng, 2017), and the existing problems (Ding, 2013; Cong, 2017). Research on institutional living modes mainly focuses on the willingness to live in institutions (Long & Feng, 2004; Zhao & Wang, 2007; Jiao, 2010; Deng & He, 2011), the evaluation of service qualities (Wang & Xue, 2006; Ding & Xu, 2007), the dilemma and possible alternatives (Mu, 2012). In general, due to China's late economic growth, limited social accumulation, and weak popular awareness of old-age welfare, although the current social security system covers a wide range of areas, it still has a weak foundation and low standards. The elderly are the recipients and experiencers of the aged care services, and thus an analysis of the living mode from the perspective of the elderly themselves is indispensable. However, the existing literature pays little attention to the elderly themselves; the true thoughts and feelings of those receiving services under

different living modes have not attracted the attention of scholars. As an important index of gerontology research (Zhang, 1985), life satisfaction can reflect the subjective degree of satisfaction generated when the needs and desires of the elderly are satisfied, which can also reflect the living standards of later life to a certain extent.

Whether the elderly report a satisfactory evaluation of life is affected by many factors. The living mode is an important factor affecting the life satisfaction of the aged (Wang & Wang, 2014), and is closely related to the quality of life of the elderly in their later years (Zhao, 2003). There are various factors that influence the life satisfaction of the elderly under different living modes. Yu & Lin (2013) believe that occupation, housing area, educational degree and retirement wages are very important to life satisfactions of community living. Among the factors that impact the life satisfaction of the elderly in institutional living, whether the elders are respected in the institution is the most important factor, and secondly whether daily care needs are met and qualities of service provided by institutions (Zou, Lin & Tang, 2018). Additionally, the number and gender of children (Cong & Silverstein, 2014), marital status (Wu et al., 2015), the level of social medical cares and old-age security (Mcgarry & Schoeni, 2000; Cheng, 2014; Li, 2016) are also important factors that affect elders' life satisfaction. However, the classification of influencing factors for the elder's living mode selection is scattered in previous studies, and there are almost no studies comparing the life satisfaction of the aged under different living modes. In addition to the differences between regions and the limitations of research methods, there may be conflicts and contradictions in the conclusions drawn from the same issue. Therefore, the author of this study believes

that it is necessary to make improvements in this aspect, comparing the life satisfaction of the elderly under different living modes, also to make the findings more useful.

After reading a large amount of literature, the author of this study found that there is no established theory that can be accurately applied to analyze elderly people's life satisfaction in different living modes. Therefore, in this study I will determine the factors that may affect the life satisfaction of the elderly in the actual situation in China. In this study, the author mainly relies on the unique birth policy of China and the phenomenon of population trans-regional mobility.

The unique birth policy in China refers to the family planning policy that has been implemented for 35 years (1980-2015). The one-child policy was strictly enforced in the 1980s, meaning that most families had only one child, and Chinese families gradually formed a "4-2-1" family structure. In this kind of family structure, a young family usually has to provide for four elder people while raising a child, which is a heavy burden to them. In addition, after the two-child policy was fully opened in 2015, young single-child families of childbearing age began having a second child. The huge cost of childcare increases the pressure on young families. When it comes to parental care, future families tend to be under pressure from work and life, so they are willing to fail to take care of elderly parents. Parents of an only child are also not entirely expecting to get adequate care and support from their child (Cheng et al, 2011). The effects of this policy history have continuously weakened the traditional Chinese concept of old-age care, and the family's caring function has been weakened.

In addition, in the current situation of increasing pressure in the workplace and frequent professional mobility, young people leave their hometown and parents to other places in order to seek better personal development. Since most of the families are single-child families, when the young people leave, there are only elderly parents left in the family. These households are called "empty nest families." According to the China Family Development Report (2015) issued by the National Health Commission of the People's Republic of China in 2015, China's empty-nest elderly accounted for half of the total number of elderly people. Among them, elderly people living by themselves accounted for almost 10% of the total elderly population, and those only living with spouses accounted for 41.9%. When Mu (2002) discussed the problem of family emptying, he pointed out that the increase of empty-nest families will make more and more elderly people into "caring risks". The long-term separation of residence loosens family ties and reduces communication between children and the elderly.

Due to the family planning policy and large-scale population trans-regional mobility, the traditional family living mode has gradually been weakened. In consequence, parents' care problems, both economically and energetically, have become "unbearable weights" for the only-child families. Therefore, living in institutions has become an alternative choice for the elderly, given the longevity of the elderly and their increasing demand for services. Some scholars have proposed that institutional living will gradually become the main trend for urban elderly in the future (Li, 2013).

Because of China's particular history, from the perspective of institutional living, Chinese old-age service institutions are quite different from those abroad. In

most Western countries, the costs of professional institutions are often high, and older people living in institutions, especially nursing homes, due to a loss of independence and deterioration of physical health (Nesset al, 2004; Liu, 2018). In other words, whether the elderly live in institutions mainly depends on their health conditions. However, most of the elderly in China live in institutions for the aged due to family reasons (Gu & Liu, 2006). Old-age service institutions in China do not mainly adopt the elderly with poor health conditions, but rather provide services for those children who are living too far away or are too busy to accompany them (Zhang, et al, 2002; Ding & Xu, 2007; Bai, 2016), and also because the elderly do not want to cause trouble to their children (Wei, 2010). Research shows that nearly half of the institutions in China only accept or mainly accept self-care elderly (Zhang, Sun & Mou, 2011; Tu, 2019); most disabled elderly people are reluctant to choose institutions (Hao, 2015). That is to say, elders in China go to old-age service institutions not only because of poor health; reasons such as loneliness or the lack of anyone to take care of them due to the absence of children at home may also lead the elderly choose to go to institutions even if they are in good physical health.

The health condition of the aged is not only the reflection of their present physical condition, but also the result of the change and accumulation of their former health conditions (Xu, 2017). Having a healthy body is the most basic and most important factor for the elderly to enjoy their later life (Xu, 2012). Physical health is the most concerning thing for the elderly, and the health status is significantly related to life satisfaction (Larson, 1978; Bowling A, 1990; Xiang et al, 1995; Xiong, 1999; Pressman & Cohen, 2005; Xu & Roberts, 2010; Hao.,et al,

2012), and it is the most fundamental factor affecting the life satisfaction (Liu & Zheng, 2017). However, in most studies, the physical health condition of the elderly is only taken as one of the variables, without too much attention paid to it, and there are still some limitations in the method and depth of research (Hyun, et al, 2012; Li & Liu, 2015).

The health status and life satisfaction of the elderly are different under different living modes (Huang.,et al, 2012). However, after consulting a large number of writings, the author of this paper has found no consensus about the relationship between different physical health conditions and the choice of living modes. In the study of physical health and living modes. In the study of physical health and living mdoes, some scholars believe that the proportion of the elderly who choose institutional living will be more than that of the elderly who choose community living under the condition of declining self-care ability and physical condition (Jiao, 2010; Gao, 2012; Qu & Wu, 2013; Zhang & Huang, 2016; Zhang, 2018). However, some scholars put forward the opposite view that the elderly with better physical health are more willing to choose institutional living (Chu, 2007; Wang & Wu, 2008; Duan, Fu & Huang, 2016; Liu & Zhang, 2018). Other studies have confirmed that there are no significant differences pertaining to the the self-care ability (Zhang, et al, 2009) and the illness (Zhong, 2003) of the elderly between different living modes. The existing research shows different results about the choice of the living mode due to health conditions, as a result of differences in research design and sample. Academia has not reached a consensus on whether physical health is the decisive factor in choosing the living mode for the aged. This

limits our understanding of the relationship between old people's life satisfaction and physical health in different living modes, which needs further study.

To sum up, the purpose of the study is to analyze the association among living modes, physical health and life satisfaction, and on this basis, physical health will be regarded as a moderating and mediating variable to further explore whether the influence of living modes on life satisfaction will change according to physical health. It can help to better understand the real thoughts of the elderly as the subject that selects the old-age living mode and provide beneficial references for fields related to old-age care by improving the existing research deficiencies.

1.2 Research Questions

In general, this study aims to analyze the association among living modes, physical health and life satisfaction, and whether the influence of living modes on life satisfaction will change according to physical health. In addition, the factors influence life satisfaction of the elderly under different living modes are tested at the same time.

To serve these purposes, the research questions are made as follows:

Question 1: Are there any differences in life satisfaction between the elderly living in the community and those living in institutions?

Question 2: Does physical health affect the life satisfaction of the elderly?

Question 3: Are the effects of living modes on life satisfaction moderated by physical health variables - i.e., IADL and ADL?

Question 4: Do physical health variables mediate the relationship between living modes and life satisfaction (i.e., are the variance in life satisfaction explained by living modes be attributed to physical health variables?)

Chapter 2. THEORETICAL BASIS AND LITERATURE REVIEW

2.1 The development of the pension industry in Panzhihua and the classification and selection of the living modes.

2.1.1 The development of the pension industry[3] in Panzhihua

Panzhihua, the southern entrance to Sichuan province, is located at the junction of Sichuan and Yunnan in southwest China. It is the only city named after a flower in China. The total area of Panzhihua is 7440.398 square kilometers. Relying on its good natural conditions such as sunshine and an amenable climate and environment, Panzhihua has taken the lead in advancing the concept of "Health-Preservation and Rehabilitation", vigorously developing the " Health-Preservation and Rehabilitation +" industry. And it is listed as a development experimental zone of national health-preservation and rehabilitation along with Qinhuangdao city, Hebei province. As a national model city for aging service, the results of Panzhihua will become an effective reference for other cities in China to cope with the problem of aging.

Against this background, the Panzhihua municipal government has attached great importance to the health-preservation and rehabilitation industry and has issued a draft of the *Development Plan for Panzhihua to Create China's Health-Preservation and Rehabilitation Industry*. It refined the development ideas, blueprints, and implementation paths of the pilot area. The plan proposes to build a "5+N" mode compounding the health-preservation and rehabilitation industries.

[3] "Pension industry" is China's general term for undertakings related to the elderly people.

The plan focuses on five core industries and extends five industrial chains to build ten characteristic health-preservation and rehabilitation industry clusters of a guiding, exemplary nature. Specifically, the "5+N" health-preservation and rehabilitation industry system has at its core the aging service industry, health care industry, medical service industry, sports industry and leisure tourism industry, and it is supported by green agriculture, cultural creativity, finance and insurance, science and technology information, business services, real estate industry, education and health industry and other industries.

Developing the "5+N" health-preservation and rehabilitation industry system poses higher standards for the development of the aging business in Panzhihua. As for the overall strategic development plan of the city, Panzhihua has issued the documents *Business Development Plan for Aged in Panzhihua (2013-2020)* and the *Opinions on Accelerating the Development of the Aged Program and Aging Service Industry*.

Guided by demand, the existing resources of the community are used to vigorously develop and build a community services center for the aging, which integrates the functions of day care, home care, culture and entertainment, and whereby the closest aging service center should be not more than 15 minutes' distance. At present, there are 100 day-care centers in urban and rural areas, serving nearly 130,000 elderly people, with a coverage rate of more than 50%, with a coverage rate of community services in urban communities of 100%. In 2017, Panzhihua became a national pilot city for home and community aging service reform.

The existing social resources are made full use of to develop the aging service industry. Specifically, in order to better accelerate its development, the government will in principle no longer set up solely state-owned institutions for the aged. The decisive role of the market in allocating resources to elderly care services should be full utilized, encouraging and supporting social organizations and individuals to invest in setting up elderly service institutions, providing convenient and affordable services and products for the elderly. Moreover, increasing financial input and support are needed. In addition to central and provincial subsidies and public welfare lottery funds, the financial funds for the development of the aging service industry will be covered by the municipal and district governments at the ratio of 35% and 65% respectively. A system of purchasing services from non-profit social organizations for aging services will also be established. In the past three years, the municipal government has invested 119 million Yuan, and a total of 14.343 billion Yuan of various private funds has been accumulated. The investment is increasing at a rate of about 30% per year. A number of health-preservation and rehabilitation projects with an investment of 10 billion Yuan are under construction. With the help of the “Driving Force of the Revolution” of the rapid development of the health-preservation and rehabilitation industry, the the city's private aging service institutions have emerged from nothing. As of November 2018, 24 private aging service institutions have been approved, with 10037 beds for the aged and 36 beds for every 1,000 old people. In addition, in 2017, more than 150,000 aged citizens from all over the country went to Panzhihua to live out their later lives in retirement.

2.1.2 Classification and content of different living modes

At present, China's elderly service institutions do not have a unified classification standard. Based on the reference to government documents and Meng & Li (2018)'s research results, this study divides the elderly service institutions into three types: homes for the ages, nursing homes and hotels for the elderly.

Homes for the aged provide centralized living conditions for elders who are in need of mild or no care, and have relatively complete service facilities. According to the "Ability assessment for older adults" of the Ministry of Civil Affairs, the care level is divided into four categories: normal, mild, moderate, and severe. According to the description of each parameter, the normal care target is the elderly who can basically take care of themselves; mild care is for the elderly who are basically self-caring but need assistance from others.

Nursing homes providing a combination of medical caring and pension for those who are moderately and seriously unable to take care of themselves. Nursing homes provide accommodation, medical and health care, nursing facilities and rehabilitation for elderly people who have difficulties in self-care or who are unable to do so. Such services include certain special technical caring. The "Ability assessment for older adults" sets the basis of various parameters: moderate care is for the elderly who have difficulties in self-care, need help from others; severe care is for the elderly who are completely in need of other people's help and cannot take care of themselves.

Hostels for the elderly provide independent or semi-independent residential buildings for the old people with complete supporting service facilities. The target group is elders who can look after themselves and have certain economic ability.

Hotels for the aged are different from general real estate projects. Since the main target of services is the elderly, the configuration of many services and supporting facilities should be line with their characteristics and needs and requires supervision from the government.

In addition, based on the "Basic requirements for services of community day-care centers for the elderly" of Ministry of Civil Affairs of the People's Republic of China and the "Panzhihua City Community Home Care Service Specification" of Panhzihua Bureau of Quality and Technology Supervision, the author has identified two types of services presently offered by the community living mode. One is the door-to-door services center, another one is the day-care center.

Door-to-door services center provides care services for those staying in their own house who are in need of professionally trained service personnel. The main contents of the service include home service, meal preparation, bathing service, laundry and so on.

Day care enters provide services for the elderly in need in the community such as dietary supply, personal care, health care, entertainment, counseling and so on.

2.1.3 Selection of the living mode and its rationality in the study

Based on the substance of the different living mode, day-care centers will be selected as the representative of community living mode, and homes for the aged as the representative of institutional living mode.

The research subject of this study is urban elderly people. Firstly, most of them have pensions or participate in insurance so they have a certain economic

power. Secondly, considering the time when parents of the only child enter old age, this part of the population is mainly concentrated in the early end of the old-age spectrum, and their physical condition is relatively good. Finally, considering the advancement of medicine and the improvement of living conditions, the life expectancy of the only child's parents is prolonged, and the speed of physical dysfunction is relatively slow. From this perspective, it is also reasonable to exclude older people with serious physical disabilities from the study.

From the perspective of practical implementation, there are many limitations in the questionnaire survey for the elderly with serious physical disabilities. For such elderly people, such questions as "Do you think you are happy now?", "Are you satisfied with your life?" are not suitable in themselves. It is also difficult for the author of this study to reach out to the elderly who choose door-to-door services. It is difficult to understand the time and content of their service utilization, and they are more likely to face serious obstacles. Therefore, it needs to be excluded from this study. The elderly who choose to go to the day-care centers leave the home for the service, which can reflect to some extent the physical conditions of the elderly, as leaving home is almost impossible for older people with serious physical disabilities. In addition, based on the different target groups of old-age service institutions, the author believes that it is reasonable to choose homes for the aged to represent the institutional living mode.

According to the relevant documents of the Panzhihua Municipal Government, public nursing homes will no longer be built in principle after 2013, and the development of socialization of old-age service institutions should be vigorously promoted. At present, institutions in Panzhihua are mostly private and

receive government subsidies. These old-age service institutions are mostly comprehensive institutions. One organization provides both residential services and day-care centers. That is to say, the elderly who choose institutional living can participate in all kinds of activities in the day-care center together with the elderly who choose community living. At night, some of them go home and others stay in institutions. It means that the elderly who receive services in the institution only differ in their way of living and are relatively similar in economic, physical and mental conditions. So these elderly are a homogenous group that allows for further study. Additionally, the selection of homes for the aged as the representative of institutional living mode can more objectively reflect the choice of the general elderly and their families, because there are no "five-guarantees" [4] elderly people; they are all at their own expense, which represents the active choice of the elderly or their families.

2.2 Definition of terms

2.2.1 Life Satisfaction

Life satisfaction is an important standard to measure the elderly's mental health, which can reflect their quality of life. Foreign scholars began to study life satisfaction earlier, and advanced relevant concepts such as life quality, subjective well-beings and happiness according to their research needs. According to Neugarten (1961), life satisfaction is a subjective evaluation of how individual desires and demands are met. Veenhoven, et al. (1984) argue that subjective

[4] "Five guarantees" system, which means that their food, clothing, housing, medical care and burial expenses are taken care of and subsidized by the government.

well-being includes two parts: cognitive and emotional. Life satisfaction is the cognitive part of subjective well-being and helps people to better understand themselves (Diener, 1996).

Choi (1986) defines life satisfaction is an evaluation of past and present life and an affirmation of the overall outlook for future life. Park (2012) believes that life satisfaction can be taken as the subjective evaluation of one's personal achievement or desire satisfaction.

The study of life satisfaction in China began in 1985 and is similar to that of foreign scholars. Chen & Le (2001) and Veenhoven (1984) both believe that life satisfaction is a comprehensive indicator that theoretically includes at least two parts: cognitive and emotional. Some scholars also pointed out that compared with pure emotions, life satisfaction is more biased towards rational judgment (Duan, 2009), because cognition is a process of collecting and processing information from the outside world, while emotional experience refers to the emotional state that people feel or realize subjectively and is a physiological evaluation of behavior goals or processes. Therefore, life satisfaction is a relatively more objective and rational component of subjective well-being.

At present, academia does not have a unified definition of life satisfaction, and scholars define it according to their needs. This study has adopted the views of Diener (1996) and Duan (2009) who think that life satisfaction is the cognitive part of subjective well-being and can be used to measure the life quality of the elderly; it is also an overall cognitive assessment of the living conditions of individuals for a certain period of time according to their own standards.

2.2.2 Community Living

The concept of community living is generally referred to outside of China as community care for the elderly. In the 1950s, Britain was the first country to put forward Community Care and experienced the transformation from "Care in the Community" to "Care by the Community" (Guo, 2016). "Community care" focuses on setting up smaller-scale care institutions in the community, which provide formal and informal services, and emphasizes that the care environment is the service institutions in the community (Bayley, 1973). “Caring by the community” increases the responsibility of informal caregivers, namely, local governments, for-profit organizations, voluntary organizations, family, friends, neighbors and so on, with more emphasis on multi-source care resources (Means, Richards & Smith, 2008).

Chappell (1990) believes that community living is provided by the state, society, families and individuals, including life care, physiotherapy, and spiritual comfort for the elderly who need care. Moroney (1997) explains in detail three aspects of service requirements about community living. The first is traditional life-caring services, such as helping the elderly get out of or into bed, cooking and shopping; and the second is emotional or cognitive services, including emotional counselling, psychotherapy and making friends with the elderly; the third is the provision of medical and nursing services, including the provision of drugs, injections and dressing changes. Community living means the elderly can live at home, which allows the elderly to receive services in a familiar environment and satisfy their sense of belonging and reduce the psychological insecurity of the elderly; as such it is irreplaceable by other services (Quinn, 1993).

China's research on this aspect started late and is still in an exploratory stage. For this mode of community, the aged are to live separately in their own home (Yan, 2007; Zhao, 2009). In terms of the provision of resources, community living needs not only the care of the family, but also the help from the community and the government (Wang, 2000; Yan, 2007; Ding & Wang, 2011). In terms of services provided, the main services address the basic daily life difficulties, including life care, medical care and spiritual comfort (Ren, 2005; Chen, 2012). There are two main forms of services: one is to provide door-to-door care services for the elderly by professional trained service personnel; the second is to establish day care centers for in communities to provide day care services for the aged and also offer rehabilitation exercises and cultural and leisure activities to meet the diverse needs of the elderly with different physical conditions (Chen, 2012; Guo, Chen & Li, 2015). Community living provides most services other than financial security and improves the welfare of the elderly(Gu, 2017). In community living it is primarily the responsibility of the family to support the elderly (Li, 2013). When they are unable to receive services from their spouse or family members, they need to receive services provided by community and social professionals (Mou, 2007); the the quality of service is the key factor affecting the quality of community living (Xiong, Qian & Wang, 2016). In addition, the home care service also has the nature of a public product, so the government should bear the corresponding responsibility (Zhou, 2011).

Based on the previous studies by many scholars, the author of this study defines community living as a mode of living at home and receiving various old-age services in one's own community. This mode of living takes full advantage

of the resources provided by the community and the government to realize the integrated lifestyle of the family and the community together.

2.2.3 Institutional Living

Institutional living refers to the mode in which the elderly are concentrated in the institutions that provide comprehensive services, whereby old-age care institutions are the mainstay and supplemented by other social organizations, relying on state subsidies, family subsidies or the elderly themselves; these institutions provide medical, nursing, rehabilitation, daily life and mental care services to meet the short-term or long-term needs of the elderly who are not staying at home (Jiang & Zhang, 06; Dong, 2011; Mu, 2012; Liu & Li, 2017).

Some scholars have pointed out that the care services in institutions are for the elderly who cannot take care of themselves due to chronic diseases or physical and mental disabilities (Kim, 1986, as cited in Kim, 2001). This is similar to the views of Wu, et al. (2015), who believed that the service targets of old-age care institutions are the elderly in a broad sense, but the main service objects are disabled or semi-disabled elderly who cannot get the care services by themselves or their family members.

According to different development level of each country, there are different classification methods. Manuel (2009) found that American old-age institutions can be generally divided into three categories. The first type is the ordinary geriatric care institutions, which provide meals and general nursing services for the elderly who do not need medical services and round-the-clock care services. The second category is midlife geriatric care institutions, which provide services to older

persons who are not seriously ill but require full-time monitoring and living care. The third category is specialized geriatric care institutions, which provide regular and round-the-clock care for elderly people who require comprehensive medical and living care but do not need hospitalization.

Old-age institutions in China are hard to identify clearly because they have overlapping functions and target populations. Most institutions have elders who can take full care of themselves, as well as those who are completely unable to take care of themselves because of chronic diseases such as stroke and paralysis. In terms of where services are received, institutional living contrasts with the community loving mode, as institutional living means that the elderly leave home and live in the institution, enjoying the services provided by the institution (Mu, 2012). From the perspective of service content, it mainly provides life care, rehabilitation care, spiritual comfort, cultural entertainment and other services for the elderly living in the institution (Ministry of Civil Affairs, 2013). As far as current developments are concerned, the vast majority of institutions serve people who are able to take care of themselves, which has led many older people to view the old-age care institutions as a kind of leisure and entertainment service model (Zhang & Wei, 2014). At present, most old-age institutions in China are badly managed, and pay little attention not only to the service quality and efficiency of institutions, but also to the mental and spiritual concerns of the elderly.

In summary, this study believes that the institutional living mode refers to the elderly living in the institutions that provide comprehensive services to them, and receive financial support from the state, family or the elderly themselves. Common

institutions for the aged include homes for the aged, nursing homes and hotels for the elderly.

2.3 Living Modes and Life Satisfaction

2.3.1 Community Living and Life Satisfaction

The community is the main place of daily life for the elderly and an important way for them to integrate into society. The life satisfaction of old adults is related to the community environment they live in (Nahemow & Lawton, 1973). Elderly people living in the community feel less lonely (Zhang, 2015) and have a higher evaluation of life satisfaction (Ho,et al, 2003); the life satisfaction of the elders with community services is significantly higher than those without community services (Li, Chen & Li, 2009). According to a nationwide survey conducted by Song in 2006, more than 90% of the elderly prefer community living. Luo, et al. (2015) conducted a study in eastern China showing that life-satisfaction is significantly higher for those in the community living mode than for those in institutional living. In recent years, although the satisfaction of the elderly in community living has lost its absolute advantage, it is still higher than the satisfaction of institutional living (Bai, Wang & Cai, 2013; Bao, 2018).

2.3.2 Institutional Living and Life Satisfaction

Institutional services in China started later than in Western countries, and there is not much literature on elderly people living in institutions. Wang & Xue (2006), Xing, et al (2016) and Liu (2018) using national or local data shows that

the elders' life satisfaction in old-age institutions is significantly higher than the satisfaction of community living. Liu et al.(2012) found that elders in institutions are less lonely and quality of life than those in community living. In addition, after controlling for family and social support variables, the life satisfaction of institutional-living elderly was found to be higher than that of community-living elderly (Dong, et al, 2016). However, Ding & Xu (2007) found in a Beijing survey that the elderly with chronic diseases or poor health expressed dissatisfaction with the services provided by the institutions because some of them did not provide psychological counseling services. Jia, et al (2016) also found that compared with the general population, the institutional elderly in Shandong province have poor mental health. Although the current situation is that urban elderly prefer community living (Liu, Xiong & Yang, 2017; Jiang, 2018) and the satisfaction of community-living elderly is generally higher, with the concept of family care is decreasing in popularity and the concept of old-age care is increasing in importance, people's acceptance and satisfaction with institutional living are also improving (Chen & Xiao, 2007).

2.4 Physical Health and Life Satisfaction

Physical health is the most important factor influencing elderly life satisfaction (Gilman & Handwerk, 1990; Tang & An, 2015; Jia, 2016), and the basis of ensuring their quality of life (Li, 2014). Aging causes a decline in organ function, and the inevitable damage to the body can cause physical dysfunction and lead the elderly to become less able to withstand the adverse factors of themselves and the outside world (Zhang, 2007). Physical dysfunction and chronic disease will

limit the agility and social activity of the elderly and reduce their quality of life by increasing dependency (Lin et al., 2011). In severe cases, they will lose their independence and even die (Beswick., et al, 2008).

Activities of Daily Living (ADL) (Zhou, et al., 2012) and Instrumental Activities of Daily Living (IADL) (Cesari, 2008) are very important as a rough approximation of the health status of the elderly (Robine, Mathers & Bucquet, 1993), representing the degree of physical dysfunction in the elders (Spector&Fleishman, 1998). ADL and IADL reflect that the elderly can independently complete important tasks in life (Jackson & Jaffe, 1963) and the degree to which they can complete social functions (Zheng, 2000). Good physical functioning means that the elderly have the ability to proceed with their daily living independently, which can enable the elderly to enjoy life better and improve their quality of life (Oh, 2002). Physical dysfunction may prevent older people from living independently and reduce their life satisfaction (Noh&Kim, 1995; Hartman-Maeir, et al, 2007; Holst., et al, 2007), as well as increasing their depression (Gayman, Turner & Cui, 2008).

In general, IADL is more prone to obstacles than ADL (Ward, Jagger & Harper, 1998); although the level of physical health of both ADL and IADL are influential to life quality, the degree of social adaptation and integration will also affect their satisfaction with life. The existing literature has fully proved that physical health and life satisfaction are positively correlated. The better the health status, the higher the life satisfaction.

2.5 Living Modes and Physical Health

Research shows significant relationships between different living modes and health (Wang, 2008; Gao, Yan & Ji, 2012; Zhang, 2017); living type is an important factor affecting the health of older adults (Deng, et al, 2003; Qian & Ye, 2007; Peng, Song & Huang, 2017). Deng, et al (2002) used multivariate analysis to find that after excluding the influence of other factors, living mode is still an important factor affecting the life quality of the elderly. Liu, et al. (2011) used CLHLS data for regression analysis and found that living mode is a key factor affecting the health status of the aged. Zimmer (2005) found that physical functional limitations are more strongly correlated with the living environment than other health indicators. A study of the most elderly in China showed that living types have a significant association with ADL and mortality (Li, Zhang & Liang, 2009), and living modes have a significant impact on the health of the elderly (Qian & Ye, 2006).

The environment of community and family can help ameliorate health problems and manage illness in later life (Hays., 2002). Studies show that older adults who live with family members have the best health condition (Hughes & Waite, 2002; Lu, 2012), that intergenerational support can improve the survival rate of the elderly (Zhang Zhen, 2002), reducing the risk of death(Rogers,1996). Not only that, community environment is significantly related to health, and a good community environment can promote the health of the aged (Zhu, 2015).

Older people with better physical condition and relatively stronger self-care ability are more likely to prefer the community living mode (Li, 2016). Activities of daily living ability and general health of community-living elderly are better than those of institutionally living elderly (Ji, et al, 2014; He, et al, 2011). Health

status is also an important factor for the elderly in choosing the institutional-living mode (Liu & Zhang, 2018); under the expectation of weakening health status and self-care ability, the number of elderly people who choose institutional living is increasing (Zhou, 2012; Zhang, 2017). Although there are similarities in the health status of the elders under different living modes, in general, the physical health condition of the elderly under community-living is better than those under institutional living (Wu, Li & Xu, 2003). At different stages of the life cycle, the aged should choose different living modes and living in different places according to their physical health (Chen, 2012).

2.6 Demographic Variables and Life Satisfaction

Most studies are investigating personal information. It is generally believed that the elderly are less satisfied with lives with advancing age (George et al., 1985; Chen, 2001). However, the research by Blazer (1991) found that the older the age, the more likely people are to positively evaluate their life satisfaction. Due to differences in the life experience, mental maturity and living environment of each person, the evaluation of life satisfaction will be also different. Therefore, it is difficult to judge life satisfaction solely by the only factor of age.

Studies show significant gender differences in life satisfaction among older adults. Park (2004) showed that women reported higher life satisfaction than men in the study of 1818 elderly people in Seoul and Chuncheon. Liu (2015) conducted a nationwide analysis using the data from CHARLS, and the results also showed that the life satisfaction of women was higher than that of men.

Kim (2010) found in a study of elderly women that people with spouses were more satisfied with life. Elderly widowhood not only means the lack of the best family care resources, but also leads to the deterioration of the family's economic status, which causes great trauma to mental health (Burkanuser, 1991). After the elderly are widowed, they tend to feel lonely, and even lose interest in their lives, thus feeling less satisfied with lives (Feng, et al, 2005).

In addition, the number of children has a significant positive impact on the life satisfaction of the aged, the more children they have, the higher the life satisfaction (Gao, 2009; Zhang, 2017).

2.7 Living Modes, Physical Health and Association with Elderly' s Life Satisfaction.

Researches show that the living mode is a key factor affecting the health of the aged in China, and the elderly under different living modes will show different health levels and life satisfaction (Deng et al, 2002; Hays, 2002; Gu & Liu, 2006; Liu, Gao & Wang, 2011; Chen, Lv & Dai, 2018). The quality of life is different in different living modes, with the health condition being the main factor affecting the quality of life of the aged (Yin, Long & Xia, 2014).

2.7.1 The Moderating Effect of Physical Health

Zhan & Zhao (2018) showed that the interaction between community environment and service and physical health is significantly related to subjective well-being, which means that community environment and services have a

moderating effect on the relationship between physical health and subjective well-being.

Wang, et al (2018) studied on urban elderly in Beijing, showing that for the elderly with good physical health, community living has higher life satisfaction than institutional living; for the elderly with obvious physical dysfunction, life satisfaction in institutions is higher than that of community living.

He's (2019) research on the Naxi elderly also shows that compared with living in institutions, the elderly in good health living in the community will have higher life satisfaction. For the elderly with poor physical function, the choice of institutional living has higher life satisfaction than community living (Tang & An, 2015).

For healthy elderly people, community living means that they can live in a familiar environment and have a stable social circle (Zhou, 2017; Wang, 2018) and community activities, which are beneficial to self-esteem and life satisfaction of the elder peoples (Liu, Li & Xue, 2017). For the elderly with poor daily living ability, the daily life care provided by institutions (Liu, 2015; Yan, 2019), the graded care standard scheme based on self-care ability and basic medical services (Bao, 2018), and various activities held within the institution (Inal, et al, 2007; Wang, 2018) can alleviate the physical discomfort of the elderly and improve their life quality and life satisfaction (Yang & Dong, 2016). In addition, medical equipment and peer support are conducive to letting the elderly be more satisfied with lives (Cui & Qin, 2001; Carpenter B.D., 2002; Wang, 2018). That is, for older people with poor physical functioning, the old-age service institutions have important maintenance functions for their health; after a period of recuperation, the health condition of

some elderly people is improved compared with those in community-living mode, so that institutional living can play a positive role in protecting the health of the elderly (Zhou, 2010; Ji, et al, 2014) and to some extent eliminate health risks (Li, 2016). For the elderly who are in poor health but do not live in a old-age service institution, the life quality will decrease (Böckerman, Johansson & Saarni, 2012).

Existing studies have indirectly confirmed the moderating effect of physical health on living mode and life satisfaction from the interaction between community service and physical health and the moderating effect of living mode on life satisfaction of the elderly under different physical health conditions. However, no direct study has taken physical health as a moderating variable to study its moderating effect on living modes and life satisfaction, which limits our ability to accurately grasp the association between living modes, physical health and life satisfaction.

2.7.2 The Mediating Effect of Physical Health

Existing studies provide indirect evidence for the mediating effect of physical health in the impact of living modes on life satisfaction. On the one hand, the living mode is a key factor affecting the health of the elderly (Deng, et al, 2003; Liu, et al, 2011); the health condition of the elders in community living is better than those in institutional living (Wu, li & Xu, 2003). On the other hand, older people with good health are more satisfied with life (Holst., et al, 2007; Tang & An, 2015).

Additionally, Xue (2014) found that health condition and living modes are the main factors affecting elders' subjective well-being; the elderly with better health have a higher evaluation of subjective well-being than those with poor health under

the same living mode, so the influence of living mode on subjective well-being is achieved through the mediation of the health condition (Xue, 2014). The living arrangements of older persons play a key role in their health conditions and well-being (Hays, 2002).

Yin, Long & Xia (2014) found that under the same living mode, the score of life quality of elders is higher than that of the elderly who are disabled. In addition, under the same living mode, older people with poor health are less satisfied with housekeeping services than those with good health; semi-self-care older people are less satisfied with community medical services than healthy older people (Bai, Wang & Cai, 2013).

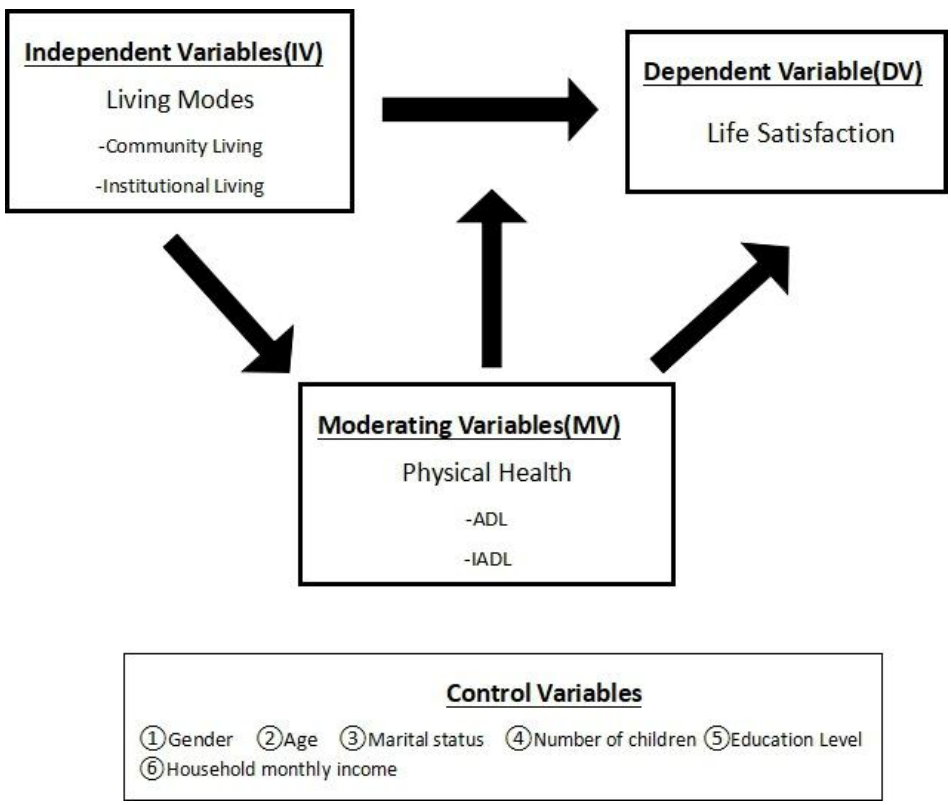
Existing studies have verified physical health has a mediating effect on the relationship between living modes and some dependent variables (subjective well-being and life quality), but no research has verified the mediating effect of physical health on the impact of living modes on life satisfaction, so there are limitations in the understanding of the associations among physical health, living modes and life satisfaction.

In summary, combined with the limitations of the existing research mentioned before, in order to clarify the association among living modes, physical health and life satisfaction, and to test whether physical health has a moderating or mediating effect on the influence of living mode on life satisfaction, this paper believes that further analysis should be carried out.

Chapter 3. CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

3.1 Conceptual Framework

[Figure 3-1] Conceptual Framework of the Study



3.2 Research Questions and Hypotheses

In order to test the main research questions in this paper, the following hypotheses are proposed.

Question 1: Are there any differences in life satisfaction between the elderly living in the community and those living in institutions?

Hypothesis 1: The life satisfaction of the elderly who live in the community is different from that of those who live in institutions.

Question 2: Does physical health affect the life satisfaction of the elderly?

Hypothesis 2: Physical health affects the life satisfaction of the elderly people.

Question 3: Are the effects of living modes on life satisfaction moderated by physical health variables - i.e., IADL and ADL?

Question 4: Do physical health variables mediate the relationship between living modes and life satisfaction (i.e., are the variance in life satisfaction explained by living modes be attributed to physical health variables?)

Chapter 4. RESEARCH METHODS

4.1 Research Subjects

When performing regression analysis, the sample size should be more than 20 times the number of independent variables that one wants to incorporate into the model (Zhang, 2004). This study plans to use the purposive sampling method to select 300 people aged over 60 in Panzhihua as the research subjects. Among them, 150 elderly people chose day-care centers that represent the community living mode, and 150 elderly people choose homes for the aged that represent the institutional living mode. All subjects who voluntarily accepted the survey and signed an informed consent letter will be sent a questionnaire, which will be independently answered by the subjects, and the elderly who cannot answer independently because of illiteracy will be asked directly by the investigator. Inclusion and exclusion criteria are as follows:

1) the age of the research subjects must be more than or equal to 60 years old;

2) gender unlimited;

3) the stay for the elderly who choose to live in institutions should be more than 3 months;

4) those who cannot complete the survey due to mental disorder or cognitive impairment are to be excluded.

4.2 Data Collection

Considering the impact of the Spring Festival, data collection will be done over approximately 3 weeks from February to March 2019.

The questionnaire survey will be conducted in Panzhihua Eastern District. There are three districts and two counties in Panzhihua. The Eastern District is the downtown area, the political, economic, cultural, financial and commercial center of Panzhihua. Almost all the urban supporting facilities are concentrated in the eastern district, and it is also the main activity area of the citizens. Having grown up in the Eastern District, the author of the study is familiar with the surrounding environment, which facilitates the collection of information. Other areas are a combination of urban fringe and rural areas, and there are very few qualified old-age service institutions and few people using them. In addition, Panzhihua covers an area of 7440.398 square kilometers, and its terrain is mostly mountainous. Transportation is not so convenient, so the outlying areas are not suitable to include within the scope of this study.

Before collecting the data, the author of the study obtained the relevant information about the old-age service institutions in the Eastern District of Panzhihua through acquaintances, and with the consent of these institutions, the author was allowed to conduct a questionnaire survey in the institutions after obtaining IRB qualification, which laid the foundation for the follow-up study. At present, there are 11 institutions in the Eastern District of Panzhihua that meet the standards of homes for the aged, namely, they operate as day-care centers while providing accommodation services. The author of the study will conduct a questionnaire survey in these 11 institutions.

Two weeks before the survey, the author will contact the person in charge of the institution for information relating to the institution and choose the day when the number of elderly people visiting the day-care center is the largest to conduct

the questionnaire survey in the institution. The author of the study expects to spend one day in every institution, from 9 a.m. to 18 p.m., to send out questionnaires to all elderly people who visit the day-care center in the institution. In addition, the list of the elderly living in institutions will be provided separately by the head of the institution so as to distinguish between community-living elderly and those living in institutions. For the purpose of minimizing the existence of missing data, the author of the study will find a conference room in the institution for the survey, and take 10 elderly people from the day-care center each time, explaining the relevant issues of this study carefully to them, and send questionnaires to them after ensuring that they fully understand the author's intentions and agree to participate in the study. In principle the elderly subjects will fill out the questionnaire by themselves. For the illiterate elderly, the investigator will do the questionnaire orally for them. After the survey, the questionnaires will be collected on the spot.

The questionnaire has a total of 49 questions including personal information, physical health, mental health and life satisfaction and will take 30-40 minutes for each subject to finish. The investigation will be completed under the supervision of the person in charge of the institution, and the elderly will be compensated with a small gift after answering the questionnaire.

4.3 Research Procedures

The investigator will strictly follow the confidentiality principles approved by the Seoul National University Institutional Review Board during the whole implementation process. And after the survey, questionnaires will be sealed and

stored immediately to secure and protect research subjects' privacy. All information will be kept in the researcher's own computer, and the information published as a result of the study will not reveal anything about the specific identity of the research subject. Following the Declaration of Helsinki, research data will be permanently deleted after three years of storage.

4.4 Measurements of Variables

4.4.1 Dependent Variable

The Life Satisfaction Scale (LSS) developed by Diener. et al (1985) was used in this study. Numerous studies show that the LSS is an effective and reliable tool to measure life satisfaction (Qiu & Zheng, 2005; Diener, et al, 1996; Matt, 2008). The scale includes five questions with which the elderly may agree or disagree; the first one is "In most ways my life is close to my ideal", the second one is "The conditions of my life are excellent", the third one is " I am satisfied with my life", the fourth one is "So far I have gotten the important things I want in life", and the last one is "If I could live my life over, I would change almost nothing". The scores for each item range from 1 to 7, so the total score ranges from 5 to 35. The higher the score, the higher the life satisfaction. Yuen (2002) of the University of Hong Kong revised and translated the Chinese version of the scale. The alpha coefficient between each item of this study is .763.

4.4.2 Independent Variables

The independent variables in this study refers to different modes. They are treated as dummy variables; the elderly who chose community living are coded as 0, and the elderly who choose institutional living are coded as 1.

4.4.3 Moderating/Mediating Variables

The study measures elders' physical health from the daily living ability (ADL) and the instrumental daily living ability (IADL).

The ADL refers to the activities that a person does every day in order to fulfil the requirements of daily living. The ADL was first introduced by Katz in 1963, so it is called the Katz ADL index. It includes 6 items such as bathing, dressing, going to toilet, transferring, continence, and feeding. As a supplement, Lawton and Brody established the instrumental activities of daily living (IADL) in 1969. The index includes eight items: food preparation, shopping, housekeeping, laundry, ability to use telephone, responsibility for own medications, ability to handle finances, and mode of transportation. It reflects higher levels of activities and mental health than ADL. There are 14 items of ADL and IADL to describe physical health. For each item, 1 signified without difficulty in doing this activity; 0 signified with difficulty in doing this activity (Shen, Chen & Wei, 2013). The minimum total score is 0 for both ADL and IADL, which means that the degree of physical disability is the most serious. The highest score of ADL is 6, indicating that the ability of daily living activities is the best, and the highest score of IADL is 8, indicating that the ability of instrumental daily living activities is the best. The higher the score, the better the physical condition and a lower score indicates more limitations of

physical condition. The alpha coefficient of ADL in this study is .837, and the alpha coefficient of IADL in this study is .867.

4.4.4 Control Variables

Due to changes in physical, psychological and social status, the satisfaction of older people in their later years is affected by many factors. Scholars from all over the world have studied them in a variety of ways. Based on previous studies, the author selected six items, namely age, gender, marital status, number of children, education level, and household monthly income, as control variables to test the elderly population.

Gender: male elderly coded as 0, female elderly coded as 1.

Age: the question of "When were you born" will be asked to describe elderly people's age. In this study, four groups "60-69", "70-79", "80-89" and "≥ 90"are coded from "1" to "4".

The number of children is coded as 0, 1, 2, 3 and above.

Marital status has five options, unmarried, married, divorced and widowed and others. In this study, "married" is coded are "1", and other types of marital status are all coded as "0 = all others"

Educational level: the education level here is divided into seven parts, namely no education, less than elementary school graduate, elementary school graduate, junior school or technical secondary school graduate, high school/junior college graduate, college graduate, graduate school graduate and above.

Household monthly income: according to the data released by the National Bureau of Statistics in China (2018), the median per capita disposable income of

2018 national residents is 24,336 yuan, or 2,028 yuan per month. This article divides the answers into 6 groups, namely <1000, 1000-1999, 2000-2999, 3000-3999, 4000-4999, ≥5000; all of them are measured by Chinese monetary unit, Yuan

The following figure [Table 4-4]shows the variables of this study.

[Table 4-4]Major Variables of the Study

Variables Type	Variable Name	Variable Definition	Measurement
Dependent Variable	Life Satisfaction	Satisfaction with Life Scale (5 items）	①strongly disagree ②disagree ③slightly disagree ④neither agree nor disagree ⑤slightly agree ⑥agree ⑦strongly agree
Independent Variables	Living Modes		Community Living = 0 Institutional Living = 1
Moderating/ Mediating Variables	Physical health	Activities of daily living（6 items）	①able to do it = 1 ②unable to do it = 0
		Instrumental activities of daily living（8 items）	
	Gender		0 = male； 1 = female
	Age		①60-69 ②70-79

Control Variables			③80-89 ④ ≥ 90
	Marital status		0= all others, 1= married
	Number of children		①0 ②1 ③2 ④≥3
	Education level		①no education ② less than elementary school graduate ③elementary school graduate ④junior school/technical secondary school graduate ⑤high school/ junior college graduate ⑥college graduate ⑦graduate school graduate and above
	Household monthly income		①<1000 ②1000-1999 ③2000-2999 ④3000-3999 ⑤4000-4999 ⑥≥5000

4.5 Planned Analysis

In order to provide a basic understanding of physical health and life satisfaction of the elderly, descriptive statistics (e.g., mean, standard deviation, frequency, and percentage) will be used for major variables including control variables, independent variables, moderating variables, and the dependent variable.

Then, Pearson correlation will be performed to examine simple correlations between the variables and to preliminarily diagnose possible multicollinearity among the variables.

In addition, independent sample t-tests will be performed to examine whether there are significant differences between community-living elderly and institution-living elderly in terms of major variables including control variables, independent variables, moderating variables, and the dependent variable.

Finally, the relationships among physical health, living modes and life satisfaction, as well as the difference of living modes in the relationship of physical health and life satisfaction, will be determined using multiple regression.

In the first step, control variables and then independent variables will be entered to address the first research question (Are there any differences in life satisfaction between the elderly living in the community and those living in institutions?), and a multiple regression will be performed to test whether life satisfaction of the elderly differs by living conditions such as community living and institution living and confirm the basic model of this study.

In the second step, physical health will be entered to address the second research questions (Question 2: Does physical health affect the life satisfaction of the elderly people?), and a multiple regression will be performed to examine

whether these independent variables are related to life satisfaction of the elderly, controlling for control variables and independent variables.

In the third step, to answer the last two research questions, multiple regressions will be performed involving interaction effects between physical health and living modes to examine whether the effects of living modes on life satisfaction vary by physical health. Before developing interaction variables, centering for continuous variables will be done to avoid possible multicollinearity between variables. Moderating effects and mediating effects will be examined following Baron and Kenny (1986), and the Sobel test will be used to test the significance of the mediating effect at the end.

Chapter 5. RESEARCH FINDINGS

This chapter presents the findings of the data analysis. The findings cover socio-demographic characteristics of all the participants of this survey, descriptive statistics, and correlations among major variables. In addition, outcomes of multiple regression analyses to test each model and hypotheses are reported at the end.

5.1 Socio-Demographic Characteristics of All Participants

This chapter describes the socio-demographic characteristics of all participants of the survey. These characteristics, namely gender, age, marital status, number of children, education level and household monthly average income, have been presented in [Table 5-1-1] as frequencies, percentages, means, standard deviations and the range of values.

Excluding data that does not meet the entry criteria, the total number of participants is 295. 45.1 percent (n = 133) of elderly people are male and the rest are female (54.9%, n = 162). The mean age is 74.78 years (SD = 7.84). 25.4 percent (n = 75) are aged 60-69, 43.1 percent (n = 127) are aged 70-79, 28.5 percent (n = 84) are aged 80-89, and only 9 elderly people (3.1%) are over 90.

The percentage of married people is 60.3 percent (n = 178), the rest said that they have another martial status (39.7%, n = 117).

In terms of number of children, 42.0 percent (n = 124) of elderly people have three children and above, followed by 32.9 percent (n = 97) with two children, 24.1 percent (n = 71) of them have only one children, and 1.0 percent (n = 3) of them

have no children.

Concerning education level, junior school/technical second school graduate (n = 111, 37.6%) occupied the majority, which is more than the proportion of elementary school (n = 67, 22.7%), followed by 13.2% (n = 39) of them graduated high school/junior college. However, there are still some of them who received no education (n = 36, 12.2%). In addition, 8.8 percent (n = 26) of them did not graduate from elementary school and 5.4 percent of them have a higher education level of college graduate and above (n = 16). No one's education level is above graduate school graduate school above, so this option was removed in this study.

Among total 295 participants, 32.2 percent (n = 95) of elderly people's household monthly average income is more than 5000 Yuan, followed by 20.0 percent (n = 59) with a range of 3000-3999 Yuan, 16.9 percent (n = 50) with a range of 2000-2999 Yuan, 15.6 percent (n = 46), and 15.2 percent (n = 45) with less than 2000 Yuan.

[Table 5-1-1] Socio-Demographic Characteristics of All Participants

Variables		Total	
		Frequency	Percentage(%)
Gender	Male	133	45.1
	Female	162	54.9
Age	60-69	75	25.4
	70-79	127	43.1
	80-89	84	28.5
	≥ 90	9	3.1
	Mean = 74.78 (SD = 7.84)		
Marital Status	Married	178	60.3
	All others	117	39.7
Number of Children	0	3	1.0
	1	71	24.1
	2	97	32.9
	≥ 3	124	42.0
Education Level	No education	36	12.2
	Less than elementary school graduate	26	8.8
	Elementary school	67	22.7
	Junior school/technical second school graduate	111	37.6
	High school/ junior college graduate	39	13.2
	College graduate and above	16	5.4
Household Monthly Average Income	< 1000	14	4.7
	1000-1999	31	10.5
	2000-2999	50	16.9
	3000-3999	59	20.0
	4000-4999	46	15.6
	≥ 5000	95	32.2
Total		295	100.0

Next, [Table 5-1-2] summarizes elderly people's characteristics by different living modes, community living and institutional living. Frequencies, percentages, means, standard deviations and the range of values are presented to describe the distributions of variables.

According to [Table 5-1-2], the proportions of female are above average in both living modes, which is 54.1 percent (n = 80) of community living and 55.8 percent (n = 82) of institutional living. The remaining part of them are male, 45.9 percent (n = 68) of community living and 44.2 percent (n = 65) of institutional living. In addition, the mean age of elderly who choose community living is 71.14 years, while the mean age of institutional living is 78.45 (SD = 7.06), which is older than community living elderly people.

In relation to marital status, the proportion of marriages for the elderly is 79.1 percent (n = 117) in community living, which is far higher than that of the elderly in institutional living (41.5%, n = 61). On the contrary, the community living mode (20.9%, n = 31) has less than the institutional living mode (58.5%, n = 86) of all other types of marital status.

In regard to number of children, elderly people with three children and above occupied the highest proportion of both community living (36.5%, n = 54) and institutional living (47.6%, n = 70). It is worth noting that the elderly who choose community living all have their own children, but three people (2%) who choose institutional living have no children.

In terms of education level, on the one hand, the elderly who have a junior school/ technical second school education level make up the largest proportion (n = 70, 47.3%), the proportion of other education levels are as follows: elementary

school (n = 29, 19.6%), high school/junior college graduate (n = 25, 16.9%), less than elementary school graduate (n = 9, 6.1%), college graduate (n = 8, 5.4%) and no education(n = 7, 4.7%) in community living. On the other hand, in institutional living, 27.9 percent (n = 41) of the elderly have an education level of junior school/technical second school graduate, with similar proportions of elementary schooling (n=38, 25.9%) and no education (n=29, 19.7%) and fewer elementary school graduates at 11.6% (n=17), which is higher than the proportion of high school/junior college graduates (n=14, 9.5%) and college graduates (n=8, 5.4%).

Considering the household monthly average income, in community living 39.2 percent (n = 58) of the elderly have a household monthly average income of more than 5000 Yuan, followed by 20.3 percent (n = 30) with a range of 3000-3999 Yuan, 14.9 percent (n = 22) with both a range of 2000-2999 Yuan and 4000-4999 Yuan, and 10.8 percent (n = 16) with less than 2000 Yuan. In institutional living, 25.2 percent (n = 37) have more than 5000 Yuan of household monthly average income, the proportion of people's household average income between 2000-4999 is similar, and 19.8 percent (n = 29) have less than 2000 Yuan.

[Table 5-1-2] Characteristics by Types of Current Living Modes

Variables		Total			
		Community living		Institutional living	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Gender	Male	68	45.9	65	44.2
	Female	80	54.1	82	55.8
Age	60-69	61	41.2	14	9.5
	70-79	66	44.6	61	41.5
	80-89	21	14.2	63	42.9
	≥ 90	/	/	9	6.1
		Mean = 71.14(SD = 6.84)		Mean = 78.45(SD = 7.06)	
Marital Status	Married	117	79.1	61	41.5
	All others	31	20.9	86	58.5
Number of Children	0	/	/	3	2.0
	1	50	33.8	21	14.3
	2	44	29.7	53	36.1
	≥ 3	54	36.5	70	47.6
Education Level	No education	7	4.7	29	19.7
	Less than elementary school graduate	9	6.1	17	11.6
	Elementary school	29	19.6	38	25.9
	Junior school/technical second	70	47.3	41	27.9

	school graduate				
	High school/ junior college graduate	25	16.9	14	9.5
	College graduate	8	5.4	8	5.4
Household Monthly Average Income	< 1000	7	4.7	7	4.8
	1000-1999	9	6.1	22	15.0
	2000-2999	22	14.9	28	19.0
	3000-3999	30	20.3	29	19.7
	4000-4999	22	14.9	24	16.3
	≥ 5000	58	39.2	37	25.2
Total		148	50.2	147	49.8

5.2 Descriptive Statistics of Major Variables

Before verifying the hypotheses of the study, in order to determine whether the main variables used in the analysis obey the normal distribution, the mean, standard deviation, skewness and kurtosis of main variables are measured in advance. Results are presented in [Table 5-2].

In the study, the mean of life satisfaction is 25.72 (SD = 4.54). Living modes as independent variables have a mean of .50 (SD = .50). Considering moderating/mediating variables, the mean of ADL is 5.52 (SD = 1.20), the mean of IADL is 6.22 (SD = 2.29). In general, when the absolute value of skewness does not exceed 3, and the absolute value of the kurtosis does not exceed 10, then it can be considered that there is no violation of the normal distribution (Kline,R.B, 2010). The main variables in this study generally conform to the normal distribution.

[Table 5-2] Descriptive Statistics of the Major Variables

	Variables	**Mean**	**SD**	**Skewness**	**Kurtosis**
DV	Life Satisfaction	25.72	4.54	-.70	.53
IV	Living Modes	.05	.50	.01	-2.01
MV	IADL	6.22	2.29	-1.16	.24
	ADL	5.52	1.20	-.3.05	9.29

5.3 Correlation Matrix of Major Variables

In this part the correlations among major variables for elderly people are examined by Pearson coefficients. The correlation matrix shows the correlation coefficients between the variables including gender, age, martial status, number of children, education level, household monthly income, IADL, ADL, living modes and life satisfaction in [Table 5-3-1].

Multicollinearity may occur when the relationship between independent variables in the regression model is highly correlated (Kim, 2006). If the correlation between variables exceeds 0.8, there may be multicollinearity between variables (Gujarati, 2010). The correlation coefficient of variables in this study is not too high, so there is no possibility of inducing multicollinearity problems.

Moreover, in general, when the value of tolerance is below 0.4, or when the value of VIF is above 2.5, there may be a problem of multicollinearity (Kim, 2006). The VIFs in all models are well under 2.5, ranging from 1.057 to 1.918, except the variable of IADL. All tolerance coefficients range from .521 to .946, all of which are thus well above 0.4, except for IADL. Therefore, there is no significant multicollinearity in this study. The multicollinearity problem between coefficients is shown in [Table 5-3-2] below.

[Table 5-3-1] Correlation Matrix of Major Variables

	GDR	AGE	MTS	NCL	EDL	HMI	IADL	ADL	LVM	LSF
AGE	-.024	1								
MTS	-.122*	-.251**	1							
NCL	.043	.519**	-.172**	1						
EDL	-.151**	-.247**	.142*	-.206**	1					
HMI	-.199**	-.010	.339**	-.080	.491**	1				
IADL	-.047	-.397**	.339**	-.210**	.332*	.304**	1			
ADL	-.038	-.131*	.140*	-.126*	.136*	.129*	.645**	1		
LVM	.017	.449**	-.384**	.161**	-.263**	-.157**	-.571**	-.192**	1	
LSF	-.010	-.007	.081	.056	.042	.096	.402**	.356**	-.140*	1

*<.05, **<.01(two-tailed)

Note: **GDR**: gender, **AGE**: age, **MTS**: martial status, **NCL**: number of children, **EDL**: education level,

HMI: household monthly average income, **IADL:** Instrumental activities of daily living,

ADL: activities of daily living, **LVM**: living modes, **LSF**: life satisfaction

[Table 5-3-2]Collinearity

Coefficients	Collinearity Statistics	
	Tolerance	VIF
Gender	.946	1.057
Age	.543	1.842
Martial status	.733	1.364
Number of children	.704	1.420
Education level	.633	1.508
Household monthly income	.620	1.614
Living Modes	.542	1.846
IADL	.326	3.064
ADL	.521	1.918

5.4 Test of Hypotheses

The hypotheses of this research can be divided into four major parts. The first part examines the relationship between living modes and life satisfaction, the second part examines the relationship between physical health and life satisfaction, the third part examines the moderating effect of physical health on the relationship between living modes and life satisfaction, and the last part examines the mediating effect of physical health on the relationship between living modes and life satisfaction.

In the study, multiple regressions are designed to examine the relationship between living modes, physical health and life satisfaction. The mediating effect and the moderating effect of physical health (IADL & ADL) on the association between living modes and life satisfaction have both been tested by Baron & Kenny (1986). Additionally, the Sobel Test is used to test the mediating effect after

the implementation of the above regression. And the interaction items are respectively denoted as living modes × IADL and living modes × ADL to test the moderating effect.

In addition, independent sample t-tests are performed before the hierarchical regression analysis to examine whether there are differences between community-living elderly people and institutional-living elderly people in terms of major variables. All results are presented in [Table 5-4].

According to [Table 5-4], there are significant differences in ADL ($t = 3.34$, $p < .001$), IADL ($t = 11.88$, $p < .001$) and life satisfaction ($t = 2.42$, $p < .05$) between community living and institutional living.

[Table 5-4]Difference in Life Satisfaction Between Living Modes.

Variables		Community Living		Institutional Living		
LSF	5-35	Mean 26.35	SD 3.865	Mean 25.08	SD 5.063	t = 2.42*
IADL	0-8	Mean 7.52	SD 1.140	Mean 4.91	SD 2.407	t = 11.88***
ADL	0-6	Mean 5.75	SD .856	Mean 5.29	SD 1.425	t = 3.34***

*p< .05, **< .01, ***< .001(two-tailed)

Note: **LSF**: life satisfaction, **ADL:** activities of daily living, **IADL:** Instrumental activities of daily living

5.4.1 The Moderating Effect of Physical Health.

1）IADL

In this part, multiple regression is conducted to understand the effect of independent variables (living modes) and the effect of the moderating variable (IADL) on the dependent variable (life satisfaction), as well as to test the first three research questions and hypotheses. Moreover, hierarchical regression analysis is used to verify whether IADL has a moderating effect on the relationship between living modes and life satisfaction. The influence of demographic variables of gender, age, marital status, number of children, education level and household monthly average income are taken into account at the same time. The regression equation to test Question1&2&3, Hypothesis 1&2 and the moderating effect (living modes × IADL) is presented in [Figure 5-1].

Question 1: Are there any differences in life satisfaction between the elderly living in the community and those living in institutions?

Hypothesis 1: The life satisfaction of the elderly who live in the community is different from that of those who live in institutions.

Question 2: Does physical health (IADL) affect the life satisfaction of the elderly?

Hypothesis 2: Physical health (IADL) affects the life satisfaction of the elderly people.

Question 3: Are the effects of living modes on life satisfaction moderated by physical health variables - i.e., IADL and ADL?

[Figure 5-1]The Moderating Effect of IADL.

[Model 1] $Y = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7 + b_8X_{8\text{-}1} + b_9X_{9\text{-}1}$

D_1: Gender (0:male, 1: female)
D_2: Age
D_3: Marital Status (0:all others, 1: married)
D_4: Number of Children (1: 0, 2: 1, 3: 2, 4: ≥3)
D_5: Education Level (1: no education, 2:less than elementary school graduate, 3: elementary school, 4:Junior school/technical second school graduate, 5:High school/ junior college graduate, 6:College graduate and above)
D_6: Household Monthly Average Income (1:<1000, 2:1000-1999, 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)
X_7: Living Modes (0: community living, 1: institutional living)
$X_{8\text{-}1}$: IADL
$X_{9\text{-}1}$: Living Modes × IADL

[Table 5-4-1A] presents results of the IADL moderating the relationship between living modes and life satisfaction. The following four test outcomes are provided: ① effect of control variables on life satisfaction, ② effect of living modes on life satisfaction, ③ effect of IADL on life satisfaction, ④ moderating effect of interaction item (living modes × IADL) on life satisfaction. Additionally, the variables in the study are mean-centered to avoid the multicollinearity problem affecting the regression results.

Firstly, the results show in [Model 1-1] that gender, age, marital status, number of children, education level and household monthly average income had no statistical significance on life satisfaction of the elderly.

The second step in [Model 1-2] is to perform the regression of living modes on life satisfaction controlling variables of gender, age, marital status, number of children, education level and household monthly average income, and the results show that living modes is negatively associated with life satisfaction (β = -.146, $p<.05$), which means that the elderly living in institutions have less life satisfaction than those living in the community. [Model 1-2] explains 1% of the total variance of life satisfaction and the F value is not statistically significant in it.

Based on the second step, regression of IADL on life satisfaction is conducted in [Model 1-3]. The results show that IADL has a positive influence (β = .538, $p< .001$) on life satisfaction, that is, the elderly people with better IADL have higher life satisfaction. And 18.2 percent of the variance of life satisfaction is explained by [Model 1-3] and the value of F, which at 9.177 shows statistical significance at the level of $p < .001$.

Finally, on the basis of the previous three steps, the regression of interaction item (living modes × IADL) to life satisfaction is carried out. If the interaction term is statistically significant, it indicates the existence of moderating effects and the results are shown in [Model 1-4]. The interaction term is negative and significant (β = -.280, $p< .05$) which indicates that the interaction effect does differ between living modes and life satisfaction. Moreover, the moderating variable IADL (β = .834, $p< .001$) in [Model 1-4] is statistically significant and stronger than the interaction variable. And 19.1 percent of the variance of life satisfaction is explained by [Model 1-4] and the value of F, which is 8.737, shows statistical significance at the level of $p < .001$.

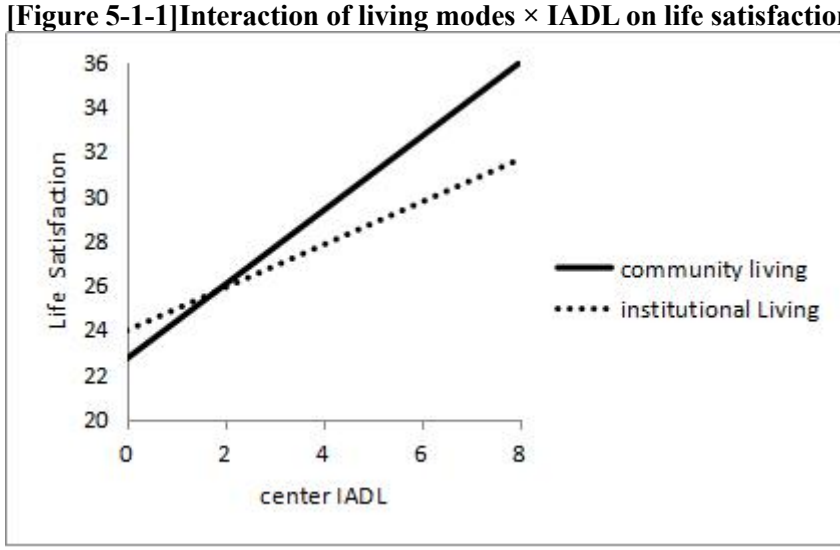
[Table 5-4-1]The Moderating Effect of IADL.

	Model 1-1			Model 1-2			Model 1-3			Model 1-4		
	B	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**
Gender (male=1)	.277	.546	.030	.244	.543	.027	.182	.494	.020	.233	.492	.026
Age	-.201	.405	-.036	.131	.433	.023	.608	.398	.108	.667	.397	.119
Marital Status (married=1)	.573	.601	.062	.186	.626	.020	-.137	.571	-.015	-.169	.567	-.018
Number of children	.505	.379	.092	.402	.380	.073	.454	.345	.082	.499	.344	.091
Education Level	.021	.242	.006	-.056	.243	-.016	-.215	.222	-.063	-.241	.221	-.070
Household Monthly Average Income	.250	.213	.085	.251	.212	.086	-.021	.196	-.007	-.051	.195	-.017
Living Modes (institutional living=1)				-1.323	.633	-.146*	.737	.633	.081	1.260	.678	.139
IADL							1.067	.136	.538***	1.656	.313	.834***
IADL*Living Modes										-.698	.334	-.280*
Constant	22.904	1.613		23.709	1.649		23.464	1.500		22.691	1.536	
R^2	.019			.034			.204			.216		
Adjust R^2	-.001			.010			.182			.191		
$\triangle R^2$	.019			.015			.170			.012		
F	.934			1.433			9.177***			8.737***		

*p < .05, **p < .01, ***p < .001 (two-tailed)

In order to better explain and present the interaction effect, the graph of the interaction of center IADL and living modes is presented in [Figure 5-1-1]. Overall, although elderly people with better IADL levels reported higher life satisfaction for both institutional living and community living, life satisfaction of the elderly with institutional living is lower than that of those with community living. Specifically, for people with a low IADL level, institutional living has higher life satisfaction than community living; for people with a high IADL level, community living has higher life satisfaction than institutional living. In addition, for older people with better IADL levels, choosing institutional living is more likely to reduce their life satisfaction. In addition, the degree of inclination of the slope in the figure shows that elderly people with community living have the larger increase in the level of life satisfaction while those living in institutions have the smaller increase in the level of life satisfaction.

[Figure 5-1-1]Interaction of living modes × IADL on life satisfaction.



2) ADL

In this part, multiple regression is conducted to understand the effect of moderating variable(ADL) on the relationship between living modes and life satisfaction, as well as test Questions 2&3 and Hypothesis 2&3. Moreover, hierarchical regression analysis is used to verify whether ADL have moderating effect in the relationship between living modes and life satisfaction. The influence of demographic variables such as gender, age, marital status, number of children, education level and household monthly average income are taken into account at the same time. The regression equation to test Question2&3, Hypothesis 2&3 and the moderating effect (ADL × living modes) is presented in [Figure 5-2].

Question 2: Does physical health (ADL) affect the life satisfaction of the elderly?

Hypothesis 2: Physical health (ADL) affects the life satisfaction of the elderly people.

[Figure 5-2]The Moderating Effect of ADL.

[Model 2] $Y = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7 + b_8X_{8-2} + b_9X_{9-2}$

D_1: Gender (0:male, 1: female)
D_2: Age
D_3: Marital Status(0:all others, 1: married)
D_4: Number of Children(1: 0, 2: 1, 3: 2, 4: ≥3)
D_5: Education Level(1: no education, 2:less than elementary school graduate,3: elementary school, 4:Junior school/technical second school graduate, 5:High school/ junior college graduate, 6:College graduate and above)
D_6: Household Monthly Average Income(1:<1000, 2:1000-1999, 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)
X_7: Living Modes (0: community living, 1: institutional living)
X_{8-2}: ADL
X_{9-2}: Living Modes × ADL

[Table 5-4-1B] presents results of the ADL moderating the relationship between living modes and life satisfaction. The order in which the variables are placed is the same as before in [Table 5-4-1A] and the first two steps produce the same results.

Then, regression of ADL on life satisfaction is carried out in [Model 2-3]. The results show that ADL has a positive statistical significance in predicting the life satisfaction of the elderly ($\beta = .350$, $p < .001$), which indicates that better the ADL level of the elderly, the higher the level of their life satisfaction. Furthermore, 12.5 percent of the variance of life satisfaction is explained by [Model 2-3] and the value of F which is 6.259 shows statistical significance at the level of $p < .001$.

Last, on the basis of the previous three steps, the regression of interaction item (living modes× ADL) to life satisfaction is presented in [Model 2-4]. In this part, the interaction term is not statistically significant, which indicates that ADL can not play a moderating role between living modes and life satisfaction. Thus, there is no interaction effect between ADL and living modes on life satisfaction. In addition, ADL presents statistical significance ($\beta = .441$, $p < .001$) in [Model 2-4]. That is, for the elderly with poor ADL levels, community living and institutional living are equally laborious for them due to the limitations of physical conditions. Moreover, 12.5 percent of the variance of life satisfaction is explained by [Model 2-4] and the value of F, which is 5.664, shows statistical significance at the level of $p < .001$.

[Table 5-4-2]The Moderating Effect of ADL.

	Model 2-1			Model 2-2			Model 2-3			Model2-4		
	B	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**
Gender (male=1)	.277	.546	.030	.244	.543	.027	.268	.511	.029	.272	.511	.030
Age	-.201	.405	-.036	.131	.433	.023	.140	.407	.025	.167	.408	.030
Marital Status (married=1)	.573	.601	.062	.186	.626	.020	.046	.589	.005	.011	.590	.001
Number of children	.505	.379	.092	.402	.380	.073	.555	.358	.101	.572	.358	.104
Education Level	.021	.242	.006	-.056	.243	-.016	-.109	.229	-.032	-.124	.229	-.036
Household Monthly Average Income	.250	.213	.085	.251	.212	.086	.187	.200	.064	.183	.220	.062
Living Modes (institutional living=1)				-1.323	.633	-.146*	-.884	.600	-.098	-.880	.600	-.097
ADL							1.329	.214	.350***	1.675	.420	.441***
ADL*Living Modes										-.466	.486	-.104
Constant	22.904	1.613		23.709	1.649		23.516	1.551		23.436	1.553	
R^2	.019			.034			.149			.152		
Adjust R^2	-.001			.010			.125			.125		
$\triangle R^2$	.019			.015			.115			.003		
F	.934			1.433			6.259***			5.664***		

*p < .05, **p < .01, ***p < .001 (two-tailed)

5.4.2 The Mediating Effect of Physical Health.

1) IADL

In order to confirm the mediating effect of IADL on the effect of living modes on life satisfaction, as well as to answer Question 4, the way by Baron & Kenny (1986) is used in this part. The stages are as follows: ① the independent variables should have a significant direct effect on the dependent variable, ② the independent variables should have a significant direct effect on mediating variables, ③ the mediating variables should have a significant effect on the dependent variable with independent variables under control, ④ the independent variables and the intermediate variables enter the regression at the same time, and at this time, the influence of the independent variable on the dependent variable should be smaller than it in the first stage. In addition, Stage ③ and stage ④ can be confirmed simultaneously. Therefore, the model here is presented in terms of the effect of independent variables on mediating variables, and the effect of independent and mediating variables on dependent variable.

The influence of demographic variables such as gender, age, marital status, number of children, education level and household monthly average income are taken into account at the same time. The regression equation is presented in [Figure 5-3].

[Figure 5-3]The Mediating Effect of IADL.

[Model]

② Living Modes → IADL

$Y_1 = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7$

Y_1: IADL

D_1: Gender (0:male, 1: female)

D_2: Age

D_3: Marital Status (0:all others, 1: married)

D_4: Number of Children (1: 0, 2: 1, 3: 2, 4: ≥3)

D_5: Education Level (1: no education, 2:less than elementary school graduate 3: elementary school, 4:Junior school/technical second school graduate 5:High school/ junior college graduate, 6:College graduate and above)

D_6: Household Monthly Average Income (1:<1000, 2:1000-1999 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)

X_7: Living Modes (0: community living, 1: institutional living)

③&④Living Modes, IADL → Life Satisfaction

$Y_2 = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7 + b_8X_8$

Y_2: Life Satisfaction

D_1: Gender (0:male, 1: female)

D_2: Age

D_3: Marital Status (0:all others, 1: married)

D_4: Number of Children (1: 0, 2: 1, 3: 2, 4: ≥3)

D_5: Education Level (1: no education, 2:less than elementary school graduate 3: elementary school, 4:Junior school/technical second school graduate 5:High school/ junior college graduate, 6:College graduate and above)

D_6: Household Monthly Average Income (1:<1000, 2:1000-1999 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)

X_7: Living Modes (0: community living, 1: institutional living)

X_8: IADL

The results of a total of four stages to determine the mediating effect of IADL is summarized in [Table 5-4-3A]. Firstly, the independent variables (living modes) have a significant effect on the mediating variable (IADL) at the p<.001 level (β= -.423). It can be seen that the stage ② of the mediating effect verification has been met. Furthermore, stage ② explains 39.6% of the total variance of IADL and the value of F, which is 28.519, shows statistically significance at the level of $p < .001$. In addition, control variables of age (β= -.158, p< .01) and household monthly income (β= .173, p< .01) both have significant impacts on IADL.

Looking at the results of stage ③ & ④, the mediating variable (IADL) has statistically significant effects (β=.538, $p < .001$) on the dependent variable (life satisfaction) under control of the independent variables (living modes), which indicates that the condition of stage ③ is established. Additionally, the influence of the independent variables (living modes) on the dependent variable (life satisfaction) is significant in stage ① (β= -.146, $p < .05$), while the influence of independent variables(living modes) on the dependent variable(life satisfaction) is smaller in stage ③&④ (β= .081, $p > .05$), which is not statistically significant. That is, the condition of the stage ④ is also established. Stage ③ & ④ explains 18.2% of the total variance of life satisfaction: the value of F, which is 9.177, shows statistical significance at the level of $p < .001$.

In conclusion, the four stages of Baron & Kenny's mediating effect test are satisfied in this regression model. Therefore, IADL can play a complete mediating role in the influence of living modes on life satisfaction. And in order to demonstrate the statistical significance of mediating effect, the Sobel Test has been

conducted and the results are presented in the [Table 5-4-3B]. The value of the Sobel test of IADL is -5.515, which is significant at the level of $p < .001$. It can be seen that IADL is a statistically significant mediating factor for the impact of living modes on life satisfaction.

[Table 5-4-3A]The Mediating Effect of IADL of Living modes on Life Satisfaction .

	① Living Modes →Life satisfaction			② Living Modes → IADL			③,④ Living Modes, IADL → Life Satisfaction		
	B	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**
Gender(male=1)	.244	.543	.027	.058	.214	.013	.182	.494	.020
Age	.131	.433	.023	-.448	.170	-.158**	.608	.398	.108
Marital Status(married=1)	.186	.626	.020	.303	.246	.065	-.137	.571	-.015
Number of Children	.402	.380	.073	-.049	.150	-.017	.454	.345	.082
Education Level	-.056	.243	-.016	.148	.096	.086	-.215	.222	-.063
Household Monthly Income	.251	.212	.086	.255	.083	.173**	-.021	.196	-.007
Living Modes(institutional living=1)	-1.323	.633	-.146*	-1.931	.249	-.423***	.737	.633	.081
IADL	-	-	-	-	-	-	1.067	.136	.538***
Constant	23.709	1.649		6.450	.649		16.828	1.738	
R^2	.034			.410			.204		
Adjusted R^2	.010			.396			.182		
$\triangle R^2$	-			-			.170		
F	1.433			28.519***			9.177***		

*p < .05, **p < .001, ***p < .000(two-tailed)

[Table 5-4-3B]Statistically Significant Verification of The Mediating Effect of IADL of Living modes on Life Satisfaction .

				Sobel Test	
a	S_a	b	S_b	Test Statistics	p-value
-1.931	.249	1.067	.136	-5.515***	.000

*p < .05, **p < .001, ***p < .000(two-tailed)

2) ADL

In order to confirm the mediating effect of ADL on the effect of living modes on life satisfaction, the method of Baron & Kenny (1986) is used here. The stages are as follows: ① the independent variables should have a significant direct effect on the dependent variable, ② the independent variables should have a significant direct effect on mediating variables, ③ the mediating variables should have a significant effect on the dependent variable with independent variables under control, ④ the independent variables and the intermediate variables enter the regression at the same time, and at this time, the influence of the independent variable on the dependent variable should be smaller than it in the first stage. In addition, Stage ③ and stage ④ can be confirmed simultaneously. Therefore, the model here is presented in terms of the effect of independent variables on mediating variables, and the effect of independent and mediating variables on the dependent variable.

The influence of demographic variables such as gender, age, marital status, number of children, education level and household monthly average income are taken into account at the same time. The regression equation is presented in [Figure 5-4] and the results of a total of four stages to determine the mediating effect of ADL is summarized in the [Table 5-4-4A].

[Figure 5-4]The Mediating Effect of ADL.

[Model 4]

② Living Modes → ADL

$Y_1 = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7$

Y_1: ADL
D_1: Gender (0:male, 1: female)
D_2: Age
D_3: Marital Status (0:all others, 1: married)
D_4: Number of Children (1: 0, 2: 1, 3: 2, 4: ≥3)
D_5: Education Level (1: no education, 2:less than elementary school graduate, 3: elementary school, 4:Junior school/technical second school graduate, 5:High school/ junior college graduate, 6:College graduate and above)
D_6: Household Monthly Average Income (1:<1000, 2:1000-1999, 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)
X_7: Living Modes (0: community living, 1: institutional living)

③&④Living Modes, ADL → Life Satisfaction

$Y_2 = a + b_1D_1 + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_5 + b_6D_6 + b_7X_7 + b_8X_8$

Y_2: Life Satisfaction
D_1: Gender (0:male, 1: female)
D_2: Age
D_3: Marital Status (0:all others, 1: married)
D_4: Number of Children (1: 0, 2: 1, 3: 2, 4: ≥3)
D_5: Education Level (1: no education, 2:less than elementary school graduate, 3: elementary school, 4:Junior school/technical second school graduate, 5:High school/ junior college graduate, 6:College graduate and above)
D_6: Household Monthly Average Income (1:<1000, 2:1000-1999, 3:2000-2999, 4:3000-3999, 5:4000-4999, 6:≥5000)
X_7: Living Modes (0: community living, 1: institutional living)
X_8: ADL

Concerning the results of stage ②, the effect of independent variables (living modes) on mediating variable (ADL) is statistically significant (β = -.138) at the level of p< .05, which satisfied the conditions for stage ② of the mediating effect. This stage explains 3.5% of the total variance of ADL; the value of F, which is 2.513, shows statistical significance at the level of p < .05.

Next, as can be seen from the results of stages ③ & ④, the mediating variable (ADL) has statistically significant effects (β=.350, p < .001) on the dependent variable (life satisfaction) under control of the independent variables (living modes), which indicates that the condition of stage ③ is established. Additionally, the influence of the independent variables (living modes) on the dependent variable (life satisfaction) is significant in stage ① (β= -.146, p < .05), while the influence of independent variables (living modes) on the dependent variable (life satisfaction) is smaller in stage ③ & ④ (β= -.098, p > .05), which is not statistically significant. That is, the condition of the stage ④ is also established. Stage ③ & ④ explains 12.5% of the total variance of life satisfaction, the value of F, which is 6.259, shows statistical significance at the level of p < .001.

If all four conditions satisfy Baron & Kenny's (1986) method to test the mediating effect, it can be considered that ADL has a complete mediating effect on the impact of living modes on life satisfaction. In order to verify whether the mediating effect is statistically significant, the Sobel Test was implemented at the end of the analysis and the results are shown in [Table 5-4-4B]. However, the value of the Sobel test of ADL is -1.904, which is not statistically significant at the level

of $p > .05$. It can be seen that ADL is not a statistically significant mediating factor for the impact of living modes on life satisfaction.

[Table 5-4-4A]The Mediating Effect of ADL of Living modes on Life Satisfaction .

	①			②			③		
	Living Modes →Life satisfaction			Living Modes → ADL			Living Modes, ADL → Life Satisfaction		
	B	**S.E.**	**β**	**B**	**S.E.**	**β**	**B**	**S.E.**	**β**
Gender(male=1)	.244	.543	.027	-.018	.141	-.007	.268	.511	.029
Age	.131	.433	.023	-.007	.112	-.005	.140	.407	.025
Marital Status(married=1)	.186	.626	.020	.106	.163	.043	.046	.589	.005
Number of Children	.402	.380	.073	-.115	.099	-.079	.555	.358	.101
Education Level	-.056	.243	-.016	.040	.063	.044	-.109	.229	-.032
Household Monthly Income	.251	.212	.086	.049	.055	.063	.187	.200	.064
Living Modes(institutional living=1)	-1.323	.633	-.146*	-.330	.165	-.138*	-.884	.600	-.098
ADL	-	-	-	-	-	-	1.329	.214	.350***
Constant	23.709	1.649		5.665	.429		16.183	1.966	
R^2	.034			.058			.149		
Adjusted R^2	.010			.035			.125		
$\triangle R^2$	-			-			.115		
F	1.433			2.513*			6.259***		

*p < .05, **p < .001, ***p < .000(two-tailed)

[Table 5-4-4B]Statistically Significant Verification of The Mediating Effect of ADL of Living modes on Life Satisfaction .

				Sobel Test	
a	S_a	b	S_b	Test Statistics	p-value
-.330	.165	1.329	.214	-1.904	.057

*p < .05, **p < .001, ***p < .000(two-tailed)

Chapter 6. Conclusion

6.1 Summary of Research Findings

Population aging is an important social problem in the whole world at present. The aging of developed countries happens naturally on the basis of social and economic development, while it is the result of strict population control for China. Therefore, the population aging of China is greater than the natural development process of the society. In addition, the cross-regional migration of population and the one-child policy are causing the traditional family structure to gradually shrink, and the old-age resources that families can provide are also decreasing. This means that in the current social situation, it will be very difficult for the elderly to rely entirely on family for their old age. The insufficient supply of family old-age resources and the increasing demand for the elderly are gradually making the aging problem in China a serious social problem. Due to the increasing needs of older adults and to alleviate the shortage, China has witnessed the coexistence of diversified old-age living modes, with the primary modes being community living and institutional living.

Exploring and establishing a living mode suitable for China's national conditions has always been a research hot spot. The emphasis of existing research is on the external factors, focusing on the content of service quality and supply under different living modes. But only the real feelings of the elderly are the best judgement of the effectiveness of the living mode (Liu, 2009), which is an important basis for solving the problem of population aging. However, the needs and willingness of the elderly themselves, the service object and executive subject

of the living modes, has not been sufficiently considered by academia. Only the real feelings of the elderly are the best judgement of the effectiveness of the living mode (Liu, 2009), which is an important basis for solving the problem of population aging.

Based on the current hot issues of aging in society, this study conducted a field survey in Panzhihua City, Sichuan province, a demonstration base of health-preservation and rehabilitation in China, using the method of questionnaire analysis, to deeply understand the aged of their characteristics, physical condition and life satisfaction under the community living mode and institutional living mode. After processing the collected data, the author analyzed the relationship among the physical condition, living modes and life satisfaction of the aged with relevant statistical methods. Specifically, this study takes physical health as the moderating variable and the mediating variable, and explores whether the influence of the living modes on life satisfaction will vary depending on physical health. This study involves the comparison of elderly people's life satisfaction between the community-living and institutional-living modes, which is an area not yet covered by previous studies. Therefore, it is still a preliminary study.

The results of the specific research questions and hypotheses of this study are as follows.

For Research Question 1, a difference in life satisfaction between the elderly people living in the community and those living in institutions was identified. The result shows that there are differences in life satisfaction between the elderly people in the community and those in institutions, and the life satisfaction of the

institutional-living was lower than the community-living among elderly people. Therefore, Hypothesis 1 is supported.

For Research Question 2, whether physical health affect the life satisfaction of the elderly people: Given the findings consistent with previous studies, the results show that physical health affects the life satisfaction of the elderly, and there is a positive relationship between physical health and life satisfaction, which means that elderly people with better health will be more satisfied with their lives. Therefore, Hypothesis 2 is supported.

Research Question 3 tested whether physical health moderates the relationship between living modes and life satisfaction. The results show that there is a significant interaction effect between IADL and living modes. Thus, Question 3 is partially answered, which means that the elderly with a good IADL level in communities have a higher level of life satisfaction, while those with a bad IADL have higher life satisfaction in institutions.

Research 4 tested whether physical health variables mediate the relationship between living modes and life satisfaction. The results show that there is a significant mediating effect of IADL on living modes and life satisfaction. Thus, Question 4 is partially answered, which means that the effect of living modes on life satisfaction is achieved through the mediating effect of IADL.

[Table 6-1]Results of Questions and Hypotheses

Question 1	Are there any differences in life satisfaction between the elderly living in the community and those living in institutions?	
Hypothesis 1	The life satisfaction of the elderly who live in the community is different from that of those who live in institutions.	Supported
Question 2	Does physical health affect the life satisfaction of the elderly?	
Hypothesis 2	Physical health affects the life satisfaction of the elderly people.	Supported
Question 3	Are the effects of living modes on life satisfaction moderated by physical health variables - i.e., IADL and ADL?	Partially supported
Question 4	Do physical health variables mediate the relationship between living modes and life satisfaction (i.e., are the variance in life satisfaction explained by living modes be attributed to physical health variables?)	Partially supported

6.2 Discussion of Major Findings

6.2.1 The Relationship Between Living Modes and Life Satisfaction

In this study, the results indicate that institutional-living elderly are less satisfied with their lives than community-living elderly, which is consistent with previous results (He, et al, 2011; Ji, et al, 2014). The research results of this paper can be explained as follows.

In terms of family function, community living means that the elderly do not have to go to live in the institution, they can live at home and receive old-age services in their communities. Compared with the elderly in institutions, the elderly

in community living have more opportunities to communicate with their children. The more frequent communication with children, the more parents will talk and express themselves, which is conducive to reducing loneliness (Zhou & Song, 2014; Zhou, 2017), and alleviating the negative impact of declining health on depression (Ning, 2001; Kim & Lee, 2015), and guiding their emotions to develop in a positive direction (Oh, 2008; Chen & Sun, 2010; Zhang, et al, 2018). In other words, positive intergenerational relationships can help the elderly to have higher life satisfaction (Yang, et al., 2010).

In terms of social function, the community-living elderly have more contact with the outside world, and more opportunities to interact with relatives, friends, neighbors and so on (Ellison, White & Chapman, 2011). Social support networks consisting of family, friends, and circles can alleviate the negative emotions of the elderly and improve their life satisfaction (Li, 2007; Sun, 0211; Cheng, 2016). The higher the frequency of social interaction, the better their life qualities will be (Xu, 2018). Chen (2014) and colleagues used the self-rating scale of symptoms of mental health (SCL-90) to measure mental health, and found that symptoms of the elderly with community support decreased in nine dimensions: somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, terror, paranoia and psychiatric disorders.

In addition, as a place where the elderly person has been living for a long time, the community is familiar with all aspects of their situation, so it is easier for the community to contact with the elderly and gain their trust. The dependence of the elderly on the neighborhood and outdoor environment was found to be significantly related to life satisfaction (Oswald, 2010). A good community

environment is conducive to reducing the depression level of the elderly and maintaining a good mental state (Jin, 2017).

6.2.2 The Relationship Between Physical Health and Life Satisfaction

The finding results from the previous chapter present a positive and statistically significant association between physical health and life satisfaction. That is to say, elderly people with a higher level of physical health (both IADL and ADL) may be more satisfied with their lives than those with a lower level of physical health. The result of the relationship between physical health and life satisfaction is consistent with the existing studies in China and elsewhere. That is, life satisfaction of the elderly is significantly positively affected by the level of physical health (Xu, 1994; Li & Liu, 2015). In this paper, the positive association between physical health and life satisfaction can be explained as follows.

Physical health plays an important role for the elderly (Mroczek & Kolarz, 1998) and is an important factor affecting the well-being and quality of life of the elderly (Kudo., et al, 2007; Jin, 2011). Poor physical health means that elders are more vulnerable to getting sick, and physical illness can lead to depression, irritability and other emotions (Mao, 2000; Zhong, 2005; Bravell, Berg & Malmberg, 2008; Yin, 2014). When suffering from illness, the elderly experience more pain and misfortune, more psychological pressure, so life satisfaction will be reduced (Zhang, 2001). That is to say, a healthy physical condition can let an individual experience the happiness of life, and therefore have higher life satisfaction.

Moreover, age-related weakness can limit the flexibility and social activities, and reduce the quality of life by increasing dependence (Lin et al, 2011). The more serious the weakness of the elderly, the less able they are to take care of themselves, so they are more likely to have a pessimistic mood and lower happiness (Hao, 2019).

In addition, this paper measures physical health through ADL and IADL, and the research results show that the main effect of IADL (β= .538) on life satisfaction is greater than that of ADL (β= .350) when controlling the same variables. ADL represents the most basic ability of self-caring (Zhang, et al., 2009), while IADL is the basic ability to maintain social activities (Yin,et al., 2014). A good IADL level indicates that the elderly have the ability to participate in various social activities and become more closely connected with society, while ADL can only prove whether the elderly are capable of self-caring. Loss of ADL functions mean loss of self-care abilities and loss of IADL functions mean that normal social life cannot be carried out and that the scope of activities will be limited to home or institutions (Xu & Zhou, 2013). There is a clear correlation between ADL and IADL, in which IADL is more complex (Millán-Calenti, 2010), emphasizing adaptability to the environment and less loss of functions (Spector, et al., 1987). For most elderly people, IADL dysfunction occurs earlier than ADL dysfunction (Barberger, 2000; Wu, 2018). It cannot be denied that both the loss of self-care abilities and the restriction of normal social life will have a passive influence on the life satisfaction for old adults in the final stage of life, but because the elderly with a good IADL level have more opportunities to contact with the outside world, there are more

opportunities to help them improve their self-worth and life satisfaction (Cheng, 2016). Therefore, IADL has a relatively greater influence on life satisfaction.

6.2.3 The Association among Living Modes, Physical Health and Life Satisfaction

The results for the third and the fourth question indicated that IADL has both a moderating effect and a mediating effect on the relationship between living modes and life satisfaction. The details are as follows.

1) The Moderating Effect of Physical Health

The results for the third question show that IADL can significantly moderate the relationship between living modes and life satisfaction, and the effect of IADL (β=.834, $p<.001$) is stronger than the interaction effect (β= -.280, $p<.05$). The moderating effect of IADL can be expressed as follows: the influence of living modes on life satisfaction varies according to the IADL level of the aged. That is to say, for the aged with a good IADL level, community living has a higher life satisfaction than institutional living; for the aged with a low IADL level, the satisfaction of institutional living is higher than those of community living. This is consistent with the research results of Wang, et al (2018) and He (2019). The results of Shen, Cheng & Wei (2013) also show that for older people with good IADL levels, community living is beneficial to alleviate depression and improve life satisfaction.

However, ADL cannot play a moderating role between the relationship of

living modes and life satisfaction. That is to say, the impact of living modes on life satisfaction does not vary according to the level of ADL. This is consistent with the research results of Zeng (2011), which show that the interaction term between living modes and ADL is not significant in the regression of life satisfaction, and after controlling the interaction effect, the influence of ADL on the life satisfaction is no longer significant.

2) The Mediating Effect of Physical Health

The findings for the fourth question show that IADL plays a mediating role while ADL has no significant mediating effect. The mediating effect of IADL can be divided into three parts. First of all, living modes has a significant impact on physical health. Wang, et al (2006) shows that the health condition of elderly people living with their families is significantly higher than those living in institutions. Ji (2014) shows that the overall health of community-living elderly is better than institutional-living elderly. Secondly, after controlling living modes, physical health has a positive impact on life satisfaction. That is, life satisfaction changes according to the degree of physical health, which is consistent with the findings of Xue (2014) and Chen (2014). Finally, IADL has a complete mediating effect on the impact of living modes on life satisfaction, which means that after inputting IADL in the relationship between living modes and life satisfaction, the influence of living modes on life satisfaction can be obtained through the mediating effect of IADL, and the direct influence of living modes on life satisfaction is reduced. In addition, after adding the mediating variable (IADL), the overall explanatory power of the model is improved. This is consistent with previous

research results (Xue, 2014). Furthermore, for the elderly in community living, the health level has a positive impact on life satisfaction, which is consistent with the literature(Xue & Zhang, 1998; Li, 2003; Jin, 2011).

In summary, IADL has a moderating effect and mediating effect on the effect of living modes on life satisfaction, while ADL has neither a moderating nor a mediating effect. This study believes that the reasons may be as follows.

First of all, elderly with impaired IADL but intact ADL can live independently through various appointment services while those with impaired ADL cannot live independently and meet their own needs (Zhang & Wei, 2015). The loss of ADL capability means the loss of the most basic self-care ability (Zhong, 2014). In this case, whether they choose community-living mode or institutional-living mode, it is difficult for the elderly to be satisfied with life.

Secondly, IADL represents the elderly's ability to participate in social life. Community is the main activity area for community-living elderly, providing them with more opportunities to participate in social life. The elderly with good health status have higher social participation willingness (Yan, Gao & Yuan, 2015; Wang, 2017) and degree (Wang, 2011), which is conducive to mainaining good mental health in the elderly (Ren, et al., 2010). Research shows that various kinds of care services provided by the community have a direct positive impact on older people’s life satisfaction, of which community old-age service plays a relatively small role in improving the welfare of the elderly with a poor health condition, but a greater positive role for the elderly with a better condition of health (Ma, Zheng & Fang, 2019).

In addition to the positive moderating effect of the community, the service provided by institutions is also an important factor affecting the life satisfaction of the aged. Previous studies have shown that the content of services provided by institutions cannot meet their needs (Ding & Xu, 2007; Zhang & Han, 2018). For the elderly with better health, they often hope to get more attention, but the insufficient number of service personnel leads to insufficient attention and care for the elderly (Zhao, 2017). Moreover, after entering the institution, most of the elderly need to participate in less labor or other activities than the elderly in community-living, so the ability of daily living will gradually decline over time (Xiao, 2017), thus reducing the satisfaction with life. At the same time, living in a closed environment can make the elderly feel burdened by their family and society, losing self-esteem, and having a low sense of happiness (Shi, et al., 2007; Garatachea, et al, 2009). Research shows that most elderly people choose to go to institutions for their old age when their children are not supportive and their social support is weak (Su, 2018). In this case, their psychological endurance is even worse (Ni, 2013). In communicating with the elderly during this research the author found that many elderly people with better health have to choose the institutional-living mode for some other reasons, which is consistent with the previous research results.

Considering the factors of the community environment, the service qualities of institutions and the mentality of the elderly, the author of this study believes that the reasons for the moderating effect and mediating effect in this study can be summarized as follows: elderly people with good IADL are less dependent on their families, and they can live the life they want according to their own wishes. In this

case, community living can provide them with more opportunities to participate in social life and achieve higher life satisfaction. However, if they are in good health and have to live in institutions for some other reason, the sudden change of lifestyle and environment will make them feel confused and depressed; and after the elderly enter the institution, the frequency of communication with family members and social participation will drop sharply, which will also likely lead to loneliness, depression and other negative emotions, so as to increase negative effects on life satisfaction. In addition to the limitations of the overall service quality of institutions, for the elderly with a good IADL level, the choice of institutional-living will indeed reduce their life satisfaction. However, as this paper is a preliminary study, there are still many limitations and it is necessary to go deeper into this aspect to draw more accurate conclusions.

6.2.4 The Effect of Control Variables on Life Satisfaction

In this study, six control variables (gender, age, marital status, number of children, education level and household monthly income) are added when analyzing the influencing factors of life satisfaction of the elderly. The results of the analysis showed results consistent with previous studies for some variables and inconsistent results for others.

This study shows that males' life satisfaction is slightly higher than females', but there is no statistically significant difference between them ($P > 0.05$). Like in the study by Haring, Stock & Okun (1984), women had more negative emotional experiences than men, but the difference is very small and the main difference between men and women has not been found at the overall level of subjective

well-being. Kim & Kim (2018) in their analysis of elderly living alone found no gender difference in life satisfaction. Liu (2015) drew similar conclusions in the study of Jiangsu, Zhejiang and Shanghai; although the life satisfaction of women in these three areas is slightly higher than men, it is not significant.

This study shows that age has no significant effect on life satisfaction, which is consistent with previous studies. Wang (2011) showed that the age had no obvious influence on life satisfaction. Ren, et al. (2010) used meta-analysis to analyze 21 related studies to certify that age had little or no effect on subjective happiness. Age does not have a significant impact on the elders' life satisfaction, indicating that they adapt to their age appropriately and do not mind aging too much.

This study shows that there is no significant relationship between life satisfaction and marital status of the aged. This is consistent with the research conclusions of Xu (2009) and Huang & Duan (2018). This may be related to the quality of marriage. A happy marriage can effectively improve subjective well-being (Carr, et al, 2014). Major changes such as widowhood, divorce and illness may reduce the effect of marital status on life satisfaction.

This study shows that the number of children does not significantly effect the life satisfaction of the elderly, which is inconsistent with previous research results. Children are beneficial for the life satisfaction of the aged (Gao & Zuo, et al, 2009); the elderly without children have lower life satisfaction than that of those with children (Wang., Xu & Yao, 2016). Children not only provide financial support for the elderly, but also, more importantly, the emotional communication between generations is irreplaceable for the elderly. In this study, the number of children are

not significant for the life satisfaction of the aged, which may be related to the frequency of intergenerational communication. The frequency of intergenerational communication reflects the degree of emotional harmony between the elderly and their children (Han, 2017). The developed and convenient communication mode in modern society has overcome the restrictions of distance, enabled the elderly to maintain close ties with their children, and to some extent offset the impact of the number of children on the life satisfaction of the elderly.

This study shows that education level does not have a significant impact on life satisfaction, which is inconsistent with the results of the previous studies. According to previous research results, a higher educational level may make people more satisfied with life (Luo, 2006). Compared with the older people with a lower education level, older people with a higher education level know more about self-regulation, and they are more likely to seek external help or change through self-adaptation (Bures, et al., 2009; Lim et al., 2009). In addition, the higher the education level of the elderly, the fewer bad habits they have that will adversely affect their health, which is beneficial to improving their life satisfaction (Meeks & Murrell, 2001).

This study shows that there is no significant relationship between household monthly income and life satisfaction of the elderly, which is inconsistent with previous research results. Li & Zhang (2012), Jeong & Jeong (2011), Jin (2011) and Zhang (2014) have all shown in their own studies that income level is an important factor determining the life satisfaction of the elderly. The economic status is closely related to the quality of medical services they receive; poor economic status means that it is difficult to guarantee the quality of medical

services they receive, thus affecting their mental health, reducing their quality of life and increasing their risk of death (Yeung & Xu, 2011). In the author's opinion, under the current social reality of lagging development in the pension field in China, it is undeniable that economic conditions have an important influence on the overall quality of life of the elderly. There is no significant difference between income and life satisfaction in this paper, which may be related to the small sample size. A smaller sample size will lead to a larger standard error, thus reducing the possibility of rejecting the zero hypothesis.

6.3 Implications

6.3.1 Theoretical Implications

Firstly, this paper focuses on the main subjects of the living mode — the elderly themselves — and studies the similarities and differences of old adults' life satisfaction under different living modes. Most of the previous studies on the living mode focus on the service quality, contradictions between supply and demand, existing problems and countermeasures provided by different living modes. However, as the main subject of the living mode, the elderly people have received little attention from scholars. Starting from the elderly people themselves, this paper achieves an understanding of their true views on different living modes, improves academic awareness of old people's life satisfaction and different living modes, and makes up for the deficiencies in related fields.

Secondly, in general, this paper adopts a comparative approach, and for the first time, compares the physical health and life satisfaction of the elderly under the two different living modes of community living and institutional living. Moreover,

through the analysis of the full understanding of the relationship between physical health, living modes and life satisfaction, it helps to deepen our understanding of living modes from a more comprehensive perspective, and contributes a little to fill the theoretical gap.

In addition, in the setting of variables, physical health is used as a moderating/mediating variable for the first time to study whether the influence of living modes on life satisfaction was different due to physical health. In previous studies related to the living mode and life satisfaction of the aged, research methods were relatively simple, and research designs were not rigorous enough. By enriching the research methods, this paper adds credibility to the research conclusions and provides meaningful reference points for further research.

Finally, this study conducted a field survey in Panzhihua City, Sichuan Province, using the method of questionnaire analysis. As the experimental development zone of national health-preservation and rehabilitation in China, Panzhihua City has received strong support from the government for the development of the socialized pension industry. The survey results based on the actual situation of this demonstration city can provide a more real and timely understanding of the health status and life satisfaction of the elderly under different living modes, and expand the research perspective on China's pension security systems

6.3.2 Practical Implications

Given the relatively insufficient socioeconomic conditions and accumulation of material wealth resources, the rapid expansion of the aging population has put

great pressure on China, which is still in the ranks of developing countries. Some scholars predict that, as the only country in the world with over 100 million elderly people, China's elderly population will reach one third of the total population in 2050 (Li & Li, 2014), and the growth rate and proportion of the elderly population will exceed the world level in the same period (Wan, 2015). This study has significant reference value for scholars in the field of elderly psychology and professionals such as providers of old-age services.

First of all, the findings on Research Question 1 show that there is a significant correlation between different living modes and life satisfaction. Specifically, the life satisfaction of the community-living elderly is higher than those of the institutional-living elderly. Since China's old-age care industry is still in its infancy, there are problems such as insufficient staff, poor professionalism and older age of staff providing services in old-age care institutions. Most of the staff have not received formal and professional training, and their service quality cannot meet the increasing demand of old-age care services, nor can a good trust relationship be formed between the elderly and old-age care institutions. Therefore, it is necessary to further improve the service capacity of the old-age care institutions. Specifically, institutions should develop various forms of employee training courses and improve the treatment of employees to encourage and urge them to improve their professional abilities. Professional social workers and psychological counselors should also be brought in to improve the quality of services in existing institutions.

Secondly, the findings on Research Question 2 show that there is a significant association between physical health and life satisfaction of the elderly, that good

physical health can make the elderly more satisfied with lives. However, the reality is that with the increase of age, the physical condition of the elders will undoubtedly show a downward trend. In order to alleviate the negative impact of declining physical health on the life satisfaction of the elderly, both communities and institutions should focus on improving their physical health. The community can hold public talks of health topics to encourage the elderly to develop good living habits. In addition, on-site consultation and accompanying medical treatment should be carried out in the community to meet the medical needs of the elderly. From the perspective of institutions, the elderly are relatively poor in self-care abilities, and they have a high demand for professional nursing services and medical services. So service content should be provided according to the different needs of the aged. For example, for the elderly who can take care of themselves, some outdoor sports can be arranged to promote their physical conditions, while the disabled elderly should receive more professional nursing services. Additionally, the diet should be light which is suitable for the taste of the elderly, and the nutrition should meet the prevention and treatment requirements of some common elderly diseases such as hypertension and diabetes mellitus. Moreover, those who are eligible can also be equipped with a general practitioner within the institution to provide appropriate basic treatment when the elderly experience physical discomfort.

Furthermore, at present, most of the services provided by China's old-age institutions are still at the level of meeting the basic needs of the elderly, such as food and clothing, and lack spiritual consolation related services. Not only that, many old people with outdated ideas are also hindered by saving face, adhering to

the principle of “domestic shame should not be made public” and unwilling to talk to others and vent negative emotions. In view of this situation, communities needs to improve their publicity efforts, educating people morally about respect for the elderly and raising awareness of the problem of population aging; strengthening the construction of community activity centers for the elderly; and ensuring that the established activity center for the elderly perform their functions well, with fixed opening times and management by professionals to facilitate the elderly taking part in recreational activities such as mahjong. For institutions, they should keep in touch with the families, play a good role of “bridge” and promote intergenerational communication between elderly people and their children, so that the elderly living in institutions can feel the warmth from their families as well. In the process of providing services, they should fully respect the wishes of the elderly themselves and learn to listen. They should always counsel the elderly with serious emotional problems. If necessary, they should arrange professionals for positive psychological guidance to relieve negative emotions.

6.3.3 Policy Implications

The significance of this paper for policymakers is that on the basis of fully understanding the association among living modes, physical health and life satisfaction, through the findings about Research Questions 3 and 4, it can be seen that physical health plays an important role in the influence of living modes on the life satisfaction, reminding government workers not to ignore the mental health when constructing a living mode suitable for Chinese elderly people.

Secondly, most old-age care institutions in the society are run by the civil affairs system and social capital, which lack the function of disease prevention and control (Mu, 2012). According to the “National Study on the Status of Urban and Rural Disability Old People” released by China’s Aging Research Center on March 1, 2011, less than 60% of the institutions are equipped with medical rooms and more than 50% of institutions are empty of doctors. Therefore, the government should promote the establishment of long-term cooperative relationships between institutions and local hospitals, promoting the combination of medical resources and old-age resources and achieving optimal allocation of resources. In their financial investment, old-age care institutions should expand the proportion of medical-related resources and set up professional medical rooms to meet the basic medical needs of the elderly and effectively maintain their health.

Finally, the relevant departments should pay attention to protecting the legitimate rights and interests of the elderly, further improving the construction of the pension-related system, so that the elderly can afford to see a doctor and take medicine, and provide a strong guarantee for the health of the elderly from an economic perspective.

6.4 Limitations and Future Research Directions

1）Theoretical Basis

China's research on the life satisfaction of the elderly under different living modes is essentially a blank slate in theory, and many concepts do not have a unified standard definition. In the process of writing, the author of the study often

uses first-hand materials to analyze practical problems, so there are some shortcomings in the theoretical citation, and some conclusions in this paper may lack sufficient theoretical support.

2）Research Method

When investigating in institutions, the researcher of the study could only use the form of questionnaires to understand the existing problems due to personal time and energy, but could not understand the situation of the elderly in greater detail on the basis of questionnaires. Future research can try to combine quantitative research with qualitative research, and improve the research methods by in-depth conversation with the elderly on the basis of statistical analysis.

In addition, the study was conducted in March 2019, but with the changes in the environment and life events of the respondents, such as death of a spouse, major diseases and so on, living modes of choice and their life satisfaction may also change. Therefore, future longitudinal research may also be needed to study the effect of changes in the living mode on the mental health of the elderly.

3）Variables and Scale Selection

When measuring the physical health and life satisfaction, the author of the study chooses the common international measurement scales, which have mostly been developed by scholars in Western developed countries on the basis of their times and cultural backgrounds. The long-term research by scholars has fully proved that they are scientific and reasonable. However, there are no measurement scales developed according to the actual situation in China, so there may still be

some limitations in the study of the elderly in China. Future research can develop a measurement scale suitable for the elderly in China on the basis of measure scales from other countries. At the same time, although the main variables selected in this paper have slightly improved the research deficiencies in the field of life satisfaction for the aged, they still cannot fully reflect the psychological characteristics of the elderly in China; hence further study is needed for a deeper analysis and explanation of related issues. It is hoped that future research will compile related measurement scales suitable for the elderly in China, so as to more accurately grasp the old-age problem and help steer the future development of the pension sector.

4）Research Objects

The change of Chinese traditional living modes is most obvious in the one-child family. With the one-child generation gradually becoming the backbone of Chinese society, the situation of one couple supporting four elderly people has become the norm in Chinese society. The one-child parents are facing greater difficulties and risks in old age. With migration and urbanization it is expected that empty-nest families will become the main mode of elderly families in China in the future. Some scholars predict that by 2030, the proportion of empty - nest families will reach 90% (Li., Chen & Li, 2003). For these elderly people, institutional living has become another option for them in their later years. However, the average age of the respondents was over 70 (community living mode: 71.4 years old; institutional living mode: 78.45), and the proportion of one-child families was relatively small in the current study.

In order to better reflect China's unique one-child policy on the old-age living modes and life satisfaction of the elders, future study can try to study the parents of the one-child group separately. Additionally, a comparative study of the elderly with one-child and non-one-child families can be done to analyze the life satisfaction of the elderly under two different family structures and the similarities and differences in choosing the living model. Research will further improve the old-age living modes and the deficiencies in the field of mental health of the elderly.

5）Sample Size

Due to the limitations of time and economic conditions, there are certain geographical constraints in the sample selection in this study, which puts some limitations on the nationwide promotion of research conclusions. Future research can further improve the sample size and representativeness. In addition, many elderly people think that answering for themselves is a waste of time in the process of investigation, and they request the researcher to fill in their oral answers; the research into elderly in institutions in particular is almost always completed with the help of the researcher. Therefore, participants may have reservations about their real thoughts because they are concerned about other people's opinions or social expectation effects. Future research can be improved by enhancing the trust between researchers and research objects.

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APPENDIX

IRB No. 1902/003-010 유효기간: 2020년 2월 24일

Survey Notes

Dear grandparents:

Hello! I am a graduate student of social welfare at Seoul National University in South Korea. In order to better understand life satisfaction of the elderly between different community living and institutional living, this survey has been carried out, and hoping to get your help and support. This questionnaire will not record your name, all the results will only be used for academic research and will not affect your life. There is no right or wrong answer in the questionnaire. Please fill it out according to your own situation. Sincerely thank you for your cooperation and participation.

Best wishes for you.

Principal Investigator: He Yuhan

Advising Professor:Kahng Sang Kyoung

Date:_____

Personal information

1. Gender:
   ①male ②female

2. When were you born? _____

3. Marital status:
   ①unmarried ②married ③divorced ④widowed
   ⑤others (Please specify:_____)

4. Number of children:
   ①0 ②1 ③2 ④≥3

5. Your current living type:
   ☐ Community living ☐ Institutional Living

6. If you live in the community, who do you live with?
   ①living alone ②living with spouse only ③living with children only ④living with both spouse and children ⑤others (Please specify:)

7. Your children' s living situation:
   ①No child ②live with children ③live in the same city
   ④live in a different city ⑤live in a different country
   ⑥Others (Please specify:_____)

Version 1.1(2019.2.25.)

8. Education:
①no education ② less than elementary school graduate ③elementary school graduate
④junior school/technical secondary school graduate
⑤high school/ junior college graduate
⑥college graduate ⑦graduate school graduate and above

9. Household monthly average income: (unit:Yuan)
①<1000 ②1000-1999 ③2000-2999
④3000-3999 ⑤4000-4999 ⑥≥5000

10. What level do you think your economic conditions are in the local area?
①very good ②good ③general ④difficult ⑤ very difficult

Physical health

Part A.ADL

For each are a of functioning list below, check description that applies.(The word "assistance" means supervision, direction of personal assistance.)

A1. Bathing—either sponge bath, tub bath, or shower.
☐ Receives no assistance(gets in and out of tub by self if tub is usual means of bathing)
☐ Receives assistance in bathing only one part of the body(such as back or a leg)
☐ Receives assistance in bathing more than one part of the body(or not bathed)

A2. Dressing—gets clothes from closets and drawers-including underclothes,outer garments and using fasteners(including braces if worn)
☐ Gets clothes and gets completely dressed without assistance
☐ Gets clothes and gets dressed without assistance except for assistance in tying shoes
☐ Receives assistance in getting clothes or in getting dressed, or stays partly or completely undressed

A3. Toileting—going to the "toilet room" for bowel and urine elimination; cleaning self after elimination, and arranging clothes
☐ Goes to "toilet room," cleans self, and arranges clothes without assistance(may use object for support such as cane, walker, or wheelchair and may manage might bedpan or commode, emptying same in morning)
☐ Receives assistance in going to "toilet room" or in cleansing self or in arranging clothes after elimination or in use of night bedpan or commode
☐ Doesn't go to room termed "toilet" for the elimination process

A4. Transfer—
☐ Moves in and out of bed as well as in and out of chair without assistance(may be using object for support such as cane or walker)
☐ Moves in or out of bed or chair with assistance
☐ Doesn't get out of bed

A5. Continence—

☐ Controls urination and bowel movement completely by self

☐ Has occasional "accidents"

☐ Supervision helps keep urine or bowel control; catheter is used, or is incontinent

A6. Feeding—

☐ Feeds self without assistance

☐ Feeds self except for getting assistance in cutting meat or buttering bread

☐ Receives assistance in feeding or is fed partly or completely by using tubes or intravenous fluids

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Part B.IADL

For each are a of functioning list below, check description that applies.

B1. Ability to use telephone

☐Operates telephone on own initiative—looks up and dials numbers, etc.

☐Dials a few well-known numbers.

☐Answers telephone but does not dial.

☐Does not use telephone at all.

B2. Shopping

☐Takes care of all shopping needs independently.

☐Shops independently for small purchases.

☐Needs to be accompanied on any shopping trip.

☐Completely unable to shop.

B3. Food Preparation

☐Plans,prepares and serves adequate meals independently.

☐Prepares adequate meals if supplied with ingredients.

☐Heats and serves prepared meals, or prepare meals but does not maintain adequate diet.

☐Needs to have meals prepared and served.

B4. Housekeeping

☐Maintains house alone or with occasional assistance(e.g., "heavy work-domestic help").

☐Performs light daily tasks such as dish-washing,bed making.

☐Performs light daily tasks but cannot maintain acceptable level of cleanliness.

☐Needs help with all home maintenance tasks.

☐Does not participate in any housekeeping tasks.

B5. Laundry

☐Does personal laundry completely.

☐Launders small items; rinses socks, stockings,etc.

☐All laundry must be done by others.

B6. Mode of Transportation

☐Travels independently on public transportation or drives own car.
☐Arranges own travel via taxi, but does not otherwise use public transportation.
☐Travels on public transportation when assisted or accompanied by another.
☐Travels limited to taxi or automobile with assistance of another.
☐Does not travel at all.

B7. Responsibility for Own Medications

☐Is responsible for taking medication in correct dosages at correct time.
☐Takes responsibility if medication is prepared in advance in separate dosages.
☐Is not capable of dispensing own medication.

B8. Ability to Handle Finances

☐Manages financial matters independently(budgets, writes checks, bills, goes to bank), collects and keeps track of income.
☐Manages day-to-day purchases,but needs help with banking,major purchases, etc.
☐Incapable of handing money.

Mental health

Part C. Depression

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

Rarely or None of the Time (Less than 1 day)
Some or a Little of the Time (1-2 days)
Occasionally or a Moderate Amount of Time (3-4 days)
Most or All of the Time (5-7 days)

Codes	Item	Less than 1 Day	1-2 Days	3-4 Days	5-7 Days
C1	I was bothered by things that usually don't bother me.	①	②	③	④
C2	I did not feel like eating; my appetite was poor.	①	②	③	④
C3	I felt that I could not shake off the blues even with help from my family or friends.	①	②	③	④
C4	I felt that I was just as good as other people.	①	②	③	④
C5	I had trouble keeping my mind on what I was doing.	①	②	③	④
C6	I felt depressed.	①	②	③	④
C7	I felt that everything I did was an effort.	①	②	③	④

C8	I felt hopeful about the future.	①	②	③	④
C9	I though my life had been a failure.	①	②	③	④
C10	I felt fearful.	①	②	③	④
C11	My sleep was restless.	①	②	③	④
C12	I was happy.	①	②	③	④
C13	I talked less than usual.	①	②	③	④
C14	I felt lonely.	①	②	③	④
C15	People were unfriendly.	①	②	③	④
C16	I enjoyed life.	①	②	③	④
C17	I had crying spells.	①	②	③	④
C18	I felt sad.	①	②	③	④
C19	I felt that people dislike me.	①	②	③	④
C20	I could not get "going."	①	②	③	④

Life Satisfaction

Part D. SWLS

Below are five statements with which you may agree or disagree. Using the 1 -7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neither agree nor disagree
5 = slightly agree
6 = agree
7 = strongly agree

__ D1. In most ways my life is close to my ideal.
__ D2. The conditions of my life are excellent.
__ D3. I am satisfied with my life.
__ D4. So far I have gotten the important things I want in life.
__ D5. If I could live my life over, I would change almost nothing.

IRB No. 1902/003-010 유효기간: 2020년 2월 24일

CONSENT

Research Name: A Study on the Life Satisfaction of Urban Elderly: Exploratory Comparison Between Community Living and Institutional Living. — Taking Panzhihua, China as an example

Researcher (Principal Investigator): HeYuhan (Student of Master Course, Department of Social Welfare, Seoul National University)

1. I have read the constructions and some questions have asked the researcher in charge of the study.
2. I understand the benefits and risks of this study, and my questions have been satisfactorily answered.
3. I agree voluntarily to participate in this study.
4. I agree to collect information about myself obtained from this study that the researcher are collected and processed under the current legals and the ethical review committee.
5. I hereby agree the researcher or the designated representative for result research or manage ment and the legal national organization and the Institutional Review Board of Seoul National University for situation investigation to read my personal information on the principle of con fidentiality.
6. I know that I can withdraw my participation in the study at any time, and if so, this decision will do me no harm.
7. I got a copy of this consent form that I signed. And I will save it until the end of the study.

Name of participant	Signature	Date(year/month/day)
Legal guardian	Signature	Date(year/month/day)
Researcher	Signature	Date(year/month/day)
Observer	Signature	Date(year/month/day)

Version 1.1(2019.2.25.)

问卷调查说明

亲爱的爷爷奶奶：

您好！ 我是韩国首尔大学社会福祉专业的硕士研究生何雨菡。目前正在进行《老年人社区养老与机构养老生活满意度的探索性比较研究》。为了更好地了解老年人的实际养老情况以及对生活的满意度，特开展了此次调查，希望得到您的帮助与支持。本问卷不会记录您的姓名，所调查内容仅用于学术研究，不会对您的生活造成任何影响。答案没有对错之分，请您根据自己的情况真实填写。衷心感谢您的配合与参与。

祝您身体健康，生活愉快！

研究负责人：何雨菡

指导教授：Kahng Sang Kyoung

_____年_____月_____日

▶下面是关于您的个人信息，请在符合您情况的选项上打 √。

1. 性别：

①男 ②女

2. 您是哪年出生的？ _____

3. 婚姻状态：

①未婚 ②已婚 ③离婚 ④丧偶

⑤其他（具体为：_____）

4. 子女数量：

①0 个 ②1 个 ③2 个 ④≥3 个

5. 您目前的养老模式：

☐ 居家养老 ☐ 机构养老

6. 如果您是居家养老，现在和谁住在一起?

①独居 ②仅与老伴同住 ③仅与子女同住 ④与老伴子女同住

⑤其他（具体为：_____）

7. 您子女的居住方式：

①没有子女 ②与子女同住 ③住在同一个城市

④住在不同的城市 ⑤住在不同的国家 ⑥其他（具体为：_____）

8. 您的受教育水平：

①没有接受过教育 ②小学未毕业 ③小学毕业 ④初中/中专毕业

⑤高中/大专毕业 ⑥大学毕业 ⑦研究生毕业及以上

9. 您每个月的家庭收入（单位：元）：

①<1000 ②1000-1999 ③2000-2999

④3000-3999 ⑤4000-4999 ⑥≥5000

10. 您认为您的经济条件在当地属于怎样的水平?

①很好 ②较好 ③一般 ④较困难 ⑤很困难

▶以下内容是关于您日常生活能力的选项，请选择与自己情况最相符合的一项并打 √。

Part A.ADL

编号	内容	活动能力		
		独立完成	需要帮助	需要服侍
A1	洗澡	□自己能进出浴室（淋浴、盆浴），独立洗澡	□只需帮助洗一部分(背部或腿)	□不能洗澡、或大部分需帮助洗
A2	穿衣	□能独立拿取衣服，穿上并扣好	□能独立拿取衣服及穿上，需帮助系鞋带	□完全不能穿，要靠他人拿衣穿衣或自己穿上部分
A3	用厕	□能独立用厕、便后拭净及整理衣裤（可用手杖、助步器或轮椅，能处理尿壶、便盆）	□需要助用厕、坐便后处理（清洁、整理衣裤）及处理尿壶、便盆	□不能用厕
A4	床椅转移	□自己能下床，坐上及离开椅、凳（可用手杖或助步器）	□需帮助上、下床椅	□卧床不起
A5	大小便控制	□自己能够完全控制	□偶尔失控	□失控，需帮助处理大小便（如导尿、灌肠等）
A6	进食	□独立，无须帮助	□自己能吃，但需辅助	□部分或全部靠喂食或鼻饲

Part B.IADL

内容	Score
B1. 使用电话的能力	
①能主动打电话，能查号，拨号。	□
②能拨打几个熟悉的号码。	□
③能接电话，但不能拨号码。	□

④根本不能用电话。	□
B2. 购物	
①能独立进行所有需要的购物活动。	□
②仅能进行小规模的购物。	□
③任何购物活动均需要陪同。	□
④完全不能进行购物。	□
B3. 备餐	
①独立计划，烹制和取食足量食物。	□
②如果提供原料，能烹制适当的食物。	□
③能加热和取食预加工的食物，或能准备食物。	□
④需要别人帮助做饭或用餐。	□
B4.整理家务	
①能单独持家，或偶尔需要帮助（如重体力家务需家政服务）。	□
②能做一些轻的家务，如洗碗、整理床铺。	□
③能做一些轻的家务，但不能做到保持干净。	□
④所有家务活动均需要在帮忙的情况下完成。	□
⑤不能做任何家务。	□
B5. 洗衣	
①能洗自己所有的衣服。	□
②洗小的衣物：漂洗短袜以及长筒袜等。	□
③所有衣物必须由别人洗。	□
B6.使用交通工具	

①能独立乘坐公共交通工具或独自驾车。	□
②能独立乘坐出租车并安排自己的行车路线，但不能坐公交车。	□
③在他人帮助或陪伴下能乘坐公共交通工具。	□
④仅能在他人陪伴下乘坐出租车或汽车。	□
⑤不能自己乘坐。	□
B7. 个人服药能力	
①能在正确的时间服用正确剂量的药物。	□
②如果别人提前把药物安好单次剂量分好后，自己可以正确服用。	□
③不能自己服药。	□
B8. 理财能力	
①能独立处理财务问题（做预算，写支票，付租金和账单，去银行），收集和适时管理收入情况。	□
②能完成日常购物，但到银行办理业务和大家购物等需要帮助	□
③无管钱能力	□

Part C. Depression

下面是一些你可能有过的感受或行为，请根据你的实际情况，指出在**上周内**各种感受或行为的发生情况。

很少或没有时间（少于 1 天）

一些或一点时间（1-2 天）

偶尔或适量时间（3-4 天）

大部分或全部时间（5-7 天）

编号	题目内容	少于 1 天	1-2 天	3-4 天	5-7 天

C1	我最近烦一些原来不烦心的事情。	①	②	③	④
C2	我不想吃东西，我的胃口不好。	①	②	③	④
C3	我觉得沮丧，就算有家人和朋友的帮助也不管用。	①	②	③	④
C4	我觉得自己不比别人差。	①	②	③	④
C5	我不能集中精力做事。	①	②	③	④
C6	我感到消沉。	①	②	③	④
C7	我觉得我做每件事都费力。	①	②	③	④
C8	我对未来充满希望。	①	②	③	④
C9	我觉得一直以来都很失败。	①	②	③	④
C10	我感到害怕。	①	②	③	④
C11	我睡不安稳。	①	②	③	④
C12	我感到快乐。	①	②	③	④
C13	我讲话比平时少。	①	②	③	④
C14	我感到孤独。	①	②	③	④
C15	我觉得人们对我不友好。	①	②	③	④
C16	我生活愉快。	①	②	③	④
C17	我哭过或想哭。	①	②	③	④
C18	我感到悲伤难过。	①	②	③	④
C19	我觉得别不喜欢我。	①	②	③	④
C20	我提不起劲儿来做事	①	②	③	④

▶以下内容是关于您对自己生活的满意度情况。该部分共有 5 道题，请仔细阅读并根据右边的指标，在符合自己情况的数字上打 √。

1 =非常不同意

2 = 不同意

3 = 少许不同意

4 = 中立

5 = 少许同意

6 = 同意

7 = 非常同意

__ D1. 我的生活大致符合我的理想。

__ D2. 我的生活状况非常圆满。

__ D3. 我满意自己的生活。

__ D4. 直到现在为止，我都能够得到我在生活上希望拥有的重要东西。

__ D5. 如果我能重新活过，差不多没有东西我想改变。

IRB No. 1902/003-010　　유효기간: 2020년 2월 24일

同意书（研究参与者保管用）

研究课题名称：居家养老模式和机构养老模式下城市老年人生活满意度的探索性比较研究 —以中国攀枝花为例

研究责任人：何雨菡（首尔大学 社会科学大学院 社会福祉专业）

1. 我已阅读该说明书，并针对疑问部分向研究负责人询问。

2. 我了解该研究的好处和风险，并且我的疑问都得到了满意的答复。

3. 我同意自愿参加该项研究。

4. 本人同意在现行法律和生命伦理委员会规章允许的范围内，收集和处理从本研究中获得的关于本人的信息。

5. 本人同意在研究人员或委派代表进行研究或管理结果时，以及在法律规定的国家机构和首尔国立大学生命伦理委员会进行时态调查时，在保密的原则下阅览我的个人信息。

6. 我知道我可以随时退出参与本研究，这个决定对我没有任何伤害。

7. 我收到了一份有我本人签名的本同意书的复印件，我将保留该复印件直到到研究任务结束。

研究参与者姓名	签名	日期（年/月/日）
法定代理人（与参与者的关系）	签名	日期（年/月/日）
研究员姓名	签名	日期（年/月/日）
现场监督员姓名	签名	日期（年/月/日）

Version 1.1(2019.2.25.)

국문초록

도시 노인의 삶의 만족도에 관한 연구: 지역거주와 시설거주의 탐색적 비교
-중국 판즈화시를 중심으로-

서울대학교 대학원
사회복지학과
何雨菡

가족내의 노후 자원에 대한 공급 부족과 노인 수요의 증가가 중국의 노령화 문제를 점차 심각한 사회 문제로 만들고 있다. 이를 완화하기 위해 중국 정부는 관련 정책을 내놓았고 이를 바탕으로 다양한 거주 형태가 병존하는 양상이 나타났다. 그 중 주류형태는 지역거주와 시설거주이다. 노인들의 건강상태와 삶의 만족도는 각기 다른 거주형태에서 다르다. 하지만 현재의 선행연구들은 다른 신체건강 상태의 차이와 거주형태 간의 연관에 대한 결론이 일치되게 나타나지 않는다. 즉, 전반적으로 다른 수준의 신체건강과 거주형태를 선택하는 사이의 관계에 대한 일치된 결

론은 아직은 없으니 추가적인 연구가 필요하다. 따라서 이 연구의 목적은 거주형태, 신체건강 및 삶의 만족도 사이의 연관성을 분석하고 이를 바탕으로 신체건강이 조절변수와 매개변수로 간주되어 거주형태가 삶의 만족도에 미치는 영향이 신체건강에 따라 변화하는지 여부를 탐색하고자 한다.

이 연구는 2019 년 2 월부터 3 월까지 중국 판즈화시의 노인 300 명을 대상으로 설문조사를 분석자료로 사용한다. 이 중 150 명은 지역거주였고 150 명은 시설거주이다. 연구 질문 및 가설검증은 다중 회귀 분석을 사용하였다.

본 연구의 주요 연구 결과는 다음과 같다.

첫째, 지역거주 노인과 시설거주 노인들은 삶의 만족도에 차이가 있으며, 시설거주 노인의 삶의 만족도는 지역거주 노인보다 낮았다.

돌째, 신체건강과 삶의 만족도 사이에는 정적인 관계가 있으며, 이는 신체건강이 좋은 노인들의 삶의 만족도가 더 높다는 것을 의미한다.

셋째, IADL 이 거주형태가 삶의 만족도에 미치는 영향에 조절효과가 있어, IADL 이 높은 사람의 경우 지역거주 노인이 삶의 만족도가 높았고, IADL 이 낮은 노인의 경우 시설거주가 삶의 만족도가 높았다.

넷째, IADL 이 거주형태와 삶의 만족도에 유의미한 매개효과가 있다는 것을 보여주는데, 이는 거주형태가 삶의 만족도에 미치는 영향이 IADL 의 매개효과를 통해 달성된다.

본 연구는 노인의 시각에서 출발하여 각기 다른 거주형태에 대한 그

들의 진정한 욕구를 더 잘 이해하며, 거주형태가 삶의 만족도에 미치는 영향이 다른지를 연구하기 위해 신체건강을 조절변수/매개변수로 처음으로 사용된다. 또한, 본 연구는 중국 쓰촨성 판즈화시에서 진행된 설문조사 자료를 분석에 사용한다.

이 연구는 노인 심리학 분야의 학자들과 노후 서비스 제공자 같은 전문가들에게 참고가치를 가진다. 지역사회와 시설 모두 노인의 신체건강에 이로운 서비스와 활동을 개발하고 정신 건강에 더 많은 관심을 기울여야 한다. 또한 정부는 시설과 지방 병원 간의 장기적인 협력 관계를 촉진하고, 연금 관련 제도를 더욱 개선하여 경제적 관점에서 노인의 건강을 든든히 보장해 주어야 한다.

그러나 이 연구에는 몇 가지 한계가 있다.

이 연구는 중국 국내 이론 연구와 관련 척도의 부족으로 인해 중국 노인들의 특성을 소홀할 가능성이 있다. 시간과 경제적 조건의 한계로 인해 이 연구에 있는 표본은 일정 기간 노인들의 상황을 반영할 뿐이며, 대표성과 폭넓은 해석에는 여전히 한계가 있다. 후속 연구는 보다 정교한 연구 방법을 사용하고, 이론적 근거를 강화하며, 표본 크기를 확대하여 연구 결론에 더 의미 있는 점을 제시할 필요가 있다.

주요어: 삶의 만족도, 신체건강, 지역거주, 시설거주, 거주형태, 조절효과, 매개효과

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