Quality of Life of Middle Aged and Older Persons and Policy Initiatives

Kyunghee Chung

Quality of Life of Middle Aged and Older Persons and Policy Initiatives

Kyunghee Chung, Senior Research Fellow

Contents

List of Tables

List of Picture

Chapter 1

Introduction

1 Introduction «

Growing social interest in baby boomers has recently triggered policy attention to the middle aged, considered as Koreans nearing old age. This is encouraging in that past practices where policy countermeasures that were previously discussed and executed for older persons have broken, leading to an interest in how aging would affect our society in general. However, it is also true that a sense of balance is required in that such change should not diminish attention to older persons of the current generation whose quality of life should be improved through immediate policy interventions. This is because in order to secure the sustainability of our society and enhance the quality of life for the older adults of today and the future, the scope of targets that require aging-related policy attention needs to be expanded and changes in policy paradigm are required, and these should build on examination into the current policies and the understanding of the older adults of today as a starting point.

On the other hand, such interest in the middle aged as the preelderly has become an opportunity to take an interest in their diversity. The fact that the older adults are not just a group but have their diversity has been repeatedly pointed out

but failed to be brought to the fore of policy attention (Seok, Jaeeun, et al., 2005; Oh, Younghee, at al, 2005). However, as baby boomers, which represent a large demographic segment, have entered into their 50s, an interest in their diversity has materialized. This has led to recognition of the needs for tailored policy actions by focusing on the diversity of middle and old age when it came to policy interventions in their behalf (Kim, Mihae, et al., 2005; Baek, Hakyoung, 2010; Lee, Sojung, et al., 2011; Chung, Kyunghee, et al., 2011; Chung, Jinkyoug· Kim, Koeun, 2012; Cho, Okkum, 2011). Such a series of changes clearly illustrates the need for establishing tailored policy actions by carefully identifying and understanding the diversity of middle and old age by and within age groups in order to enhance policy effectiveness[1].

Against this backdrop, this study is aimed at laying the empirical foundation for seeking policy actions to enhance the quality of life for middle and old age. For the sake of this, I have identified and classified types of middle and old age from quality-of-life perspectives and examined their diversity within age groups as well as intend to compare the diversity of lives of the middle aged and older persons in their former and latter part of old age by comparing composition of types by age

---

[1] Existing classification efforts for middle and old age have proceeded separately. Both classification efforts based on several criteria that researchers deem important and statistical analytic approaches such as cluster analysis have been employed.

group. I intend to identify targets that require an improvement in their quality of life through public interventions based on such analysis results, and specifically identify targets to which priority should be given when executing public interventions to raise the quality of life of people of middle and old age with limited resources.

This study consists of the following chapters. Chapter II will touch upon preceding research on the classification of quality of life, and Chapter III will describe analysis data, research targets, analysis methods and key variables. Chapter IV will review analysis results and Chapter V will illustrate summary and conclusion.

Chapter 2

Literature Review

2

Literature Review »

1. Discussion about Quality of Life

First used by Pigou (1929), the notion of quality of life failed to attract social attention. In the 1960s, when the US and Sweden had made attempts to measure quality of life, it began to receive international attention. Quality of life is in contrast with quantity of life (Han, Jun, et al., 2012). It is based on the understanding that material living conditions, as measured by GDP, etc. cannot alone explain factors that make people happy. Accordingly, it is based on the premise that the concept of quality of life is multidimensional. However, such complexity of quality of life has made it impossible to define the concept of quality of life that can be commonly accepted (Yoon, Byeongsik, et al., 1996).

Characteristics that are derived from discussions about quality of life that have been carried out so far are as follows. First, the concept of quality of life is extensive in that it is based on the needs for identifying various life dimensions unlike existing economic indices including GDP, etc. Second, it is conceptually ambiguous. The operational definition of quality of life varies among scholars and countries. In particular, there are two

camps where one stresses objective aspects while the other puts an emphasis on subjective aspects. Third, it has a normative nature in that it reflects values or norms that a society deems desirable. This means that an operational definition of quality of life has no choice but to be relative. Fourth, it is related not only to quality of life of an individual in a society but also to quality of life of an entire society.

Key points under social science discussion relating to such quality of life[2] are summarized as follows. First point at issue is whether or not life under the discussion about quality of life means life of an individual or the collective life of a society. If one takes the former position that differences in quality of life are deemed as a comparison issue among individuals, it is called the individualistic position. If one takes the latter position that differences in quality of life are understood as differences between societies, it is called the transcendental position

Second point at issue is whether quality of life is how an individual feels subjectively or how a researcher as an observer evaluates external conditions in accordance with objective criteria.

Third point at issue is whether quality of life means the ful-

---

2) In philosophical discussion about quality of life, there are three camps: the Prudential Happiness approach to quality of life depends on the fulfillment of normative ideals based on religious, philosophical or other values; the Hedonistic Happiness approach to quality of life is based on the fulfillment of preferences; and the Psychological Happiness approach to quality of life puts an importance on the feeling of joy, pleasure, satisfaction and fulfillment.

fillment of an individual's needs, or the sufficiency of individuals' capabilities and opportunities of choice.

With regard to the second and third points at issue, there are two camps where one stresses the objective conditions for quality of life while the other puts an importance on the subjective wellbeing. The former is mainly driven by economic tradition where there are resource-centric living standards and capabilities approached from utilitarian perspectives. The latter is driven by psychological tradition that values subjective judgment or feelings for quality of life. In addition, the former is mainly represented by the Scandinavian approach, while the latter is represented by the American approach that emphasizes individual wellbeing. Given the fact that it is necessary to inform social policies and provide policy makers with information on the current status of social problems and results of endeavors made to address such problems, objective indicators should be emphasized.

Fourth point at issue is whether criteria for determining quality of life vary among individuals, societies and cultures or there are common criteria for determining qualify of life for human beings. Growing interest in quality of life started from the understanding that material standards alone cannot appropriately explain living standards. It has led to the awareness that the weight of various components that constitute quality of life cannot be the same. In conjunction with it, in order to un-

derstand quality of life of middle and old age, it is pointed out that aspects of lives of older adults, which are differentiated from those of other age groups, should be highlighted (Kim, Ikgi, et al., 1997; Lee, Gaok, et al., 2000).

2. Diversity of Life of Middle and Old Age

A study on classifying the diverse aspects of lives into certain types has become an area of interest in academia. As Korea, in particular, has experienced a rapidly aging population, it has made attempts to classify lives of older persons by focusing policy attention on them.

Characteristics of such classification efforts that target the middle aged and older persons can be summarized as follows. First, such classification efforts for middle and old age had proceeded separately. Classification efforts for older persons who have reached the old age and those for the baby boomers in whom social interest was raised had been performed independently. As social interest in the preparation for later life has been growing recently, classification efforts that encompass both the middle aged and older persons in the context of the preparation for senescence have begun (Lee, Sojung, et al., 2011).

Second, classification methods consist of 1) classification based on several criteria that researchers deem important and

2) a statistical analysis-driven approach. Studies by Seok, Jaeeun, et al., (2005) used the 2004 fact-finding investigation on older persons and employed health and money income to classify them into 6 groups. In addition, studies by Chung, Kyunghee, et al., (2011) targeted baby boomers and used cross frequency to classify their lives based on gender, status in occupation and income.

On the other hand, studies by Chung, Jinkyoung · Kim, Koeun (2012) used cluster analysis to classify mutual support types between old parents and adult children and examined differences in their resultant quality of life. They used the 2008 fact-finding investigation for older persons as empirical data. They used the 2008 fact-finding investigation on older persons as empirical data. Studies by Kim, Mihae, et al., (2005) classified into 4 types-1) approaching an ideal, 2) deficiency of spouse, 3) maintaining the appropriateness, and 4) deficiency of determinants-- that constitute a successful later life in the successful aging context and employed cluster analysis as classification method. Studies by Baek, Hakyoung (2010) and those by Choi, Okkum (2011) extended classification efforts in the context of consumption and spending. They used the Korea welfare panel investigation and the public later life assurance panel investigation.

As such, preceding studies mostly focused on older persons of the current generation to classify their lives. Though baby

boomers have emerged as the social center of attention recently, such attention has failed to integrate the middle aged as people nearing old age into a broader lens of welfare for senior citizens. Therefore, the middle aged should be compared and analyzed as people nearing old age under the same analysis framework as that of the aged.

3. Social Indicators and Index Development

1) Trend in Studies in Domestic and Foreign Countries

Under the understanding that GDP alone could not explain the quality of life of the public, there were movements driven by international organizations to get a firm grasp of quality of life of the public based on multilateral social indicators during the 1960s and 1970s (Land, Yun, Byeongsik et al.,1996). The need for measuring quality of life of the public was raised and such endeavors have begun. Accordingly, the objective to measure quality of life is to monitor the level of quality of life.

Such efforts have been executed with target-specific approaches at the international organization and individual country levels, and such approaches are made at different levels. OECD Happiness Index and UNDP's Human Development Index are the representative approaches employed by international organizations. The OECD, which had

worked on social indicators since the 1970s, celebrated its 50th anniversary in 2011 to start building comparative statistics on quality of life through the How's Life Index as a part of Better Life Initiative.

On the other hand, the UNDP has investigated various indices relating to human life including the real national income of each country, educational level, illiteracy rate, average life expectancy, etc. to evaluate the degree of human development and advancement of each country. Human Development Index has a set of maximum value and minimum value and is calculated by averaging the three indices of average life expectancy, education and GDP, with distribution ranging from 1 to 0 scores.

Japan, Canada, the Netherlands and Australia have made proactive efforts at the country level. Japan has calculated the Life Reform Index since 2002 and Canada has calculated Canadian Index of Wellbeing as a yardstick to indicate human happiness, while the Netherlands has developed Life Situation Index to measure the wellbeing index. As such, Japan, Canada and the Netherlands have worked on composite index development while Australia has chosen the Suite-of-indicators Approach. That is, each statistical data is determined and used by individuals in a comprehensive manner instead of making a comprehensive evaluation through index development.

2) Preceding Studies in the Country relating to Index Development

Representative are Korea's Social Indicators by the National Statistical Office and the happiness index by Hwang, Myeongjin et al., (2007) and Han, Jun et al., (2011), targeting the entire population in the country. With regard to middle and old age, statistics of the aged by the National Statistical Office, and quality of life index system for older persons by Lee, Gaok et al., (2000), Choi, Sujung (2002), and Chung, Kyunghee et al., (2012) are the representative approaches[3]. They have in common a focus on developing a comprehensive individual index and have made rare approaches to calculate a composite index.

A look at several index development endeavors that have been made in Korea reveals the following. Under the 'study on childbirth environment and behavior index development,' Kim, Jungseok, et al., (2012) calculated a composite index by selecting representative indices out of entire individual indices. The proposed childbirth index system consists of five dimensions. Out of a total of 37 indices, three are selected for each dimension, scores of dimension index are calculated, and then a composite index is calculated by incorporating them.

---

3) Specific details of each index system are prepared in Chung, Kyunghee, et al., (2012).

The study made three attempts to calculate dimension index. First, weights were calculated based on a correlation co-efficient for the total birth rate that the index system aimed for, and each index and then dimension specific index was calculated. Second, weights were calculated based on the survey for professionals. Third, weights based on the correlation coefficient and weights based on the survey for professionals were incorporated on a 50:50 basis.

On the other hand, studies by Kim, Hweongju (2011) executed index development to evaluate youth centers. It applied and compared the proportional average method and weights analysis method of the AHP(Analytic Hierachy Process) method for weights analysis. Four dimensions consisted of 33 evaluation indices for youth center evaluation. The proportional average method calculated proportion to ensure that a total value should add up to 100% in accordance with priority and importance, while the AHP analysis method used a paired comparison interval scale. Results of a group of 20 professionals' responses to the survey in the proportional average method and those of their responses to the survey in paired comparison of the AHP method were used as empirical data.

Shim, Junseop (2006) constructed an index system to evaluate 'energy savings policy' and attempted to develop an index based on it. Five dimension-specific weights were assigned using the regression coefficient.

The following are implications of such preceding studies in laying the empirical foundation for policy interventions for the improved quality of life of middle and old age, an objective of this study. First, there is no unified operational definition of quality of life that can describe the degree of wellbeing or happiness of people because of multidimensionality and relativity of quality of life. Accordingly, the operational definition of quality of life that can reflect the characteristics of the Korean middle aged and older persons is required. Second, there is a surging social interest in the middle aged as people nearing old age in that their differences in traits from those of the current older persons and their preparedness for later life will have an impact on their quality of later life. In addition, this will affect the scope and content of welfare policies for older persons. Thus, studies need to proceed based on the conceptual framework that can encompass both the middle aged and older persons. Third, classification efforts that are based on the empirical foundation can be useful for the appropriate policy interventions for the improved quality of life of middle and old age. Thus, classification endeavors are needed to reflect key areas of policies and identify the size and characteristics of policy intervention targets. In such context, studies need to be carried out in the order of an index system that can help to understand quality of life of middle and old age, index development, and classification endeavors.

Chapter 3
Method

3

Method 《

1. Data and Research Target

To achieve the objective of this study, 3rd Korean Longitudinal Study of Aging (KLosa) data was used. The KLosa targeted about 10,000 middle aged and older persons aged 45 years and older in American age in 2006 to understand multi-lateral aspects of their lives. The follow-up survey has been carried out every other year to track down the same targets. As the KLosa provides information on participation of older persons in the labor market, status of income and asset, social participation and health in a longitudinal manner, such information is deemed appropriate to study quality of life of middle and old age that this study has interest in. The KLosa data that this study used is from the 3rd wave survey that was conducted in 2010 where 7,628 people aged 50 years and older were subject to analysis[4]. That is, this study defines people aged 50 years and older as of middle and old age.

---

4) 3rd KLosa used in this study has a success rate of 82% with a total of 7,920 persons completely investigated. Their ages range from a minimum of 46 years old (born in 1961) to the maximum 101 years old (born in 1909) as of 2010.

2. Analysis Method

The following are procedures to understand the dimension-specific quality of life of middle and old age in a quantitative manner.

[Picture 1] Quality of Life Index System for Middle and Old Age and Classification Efforts Progress
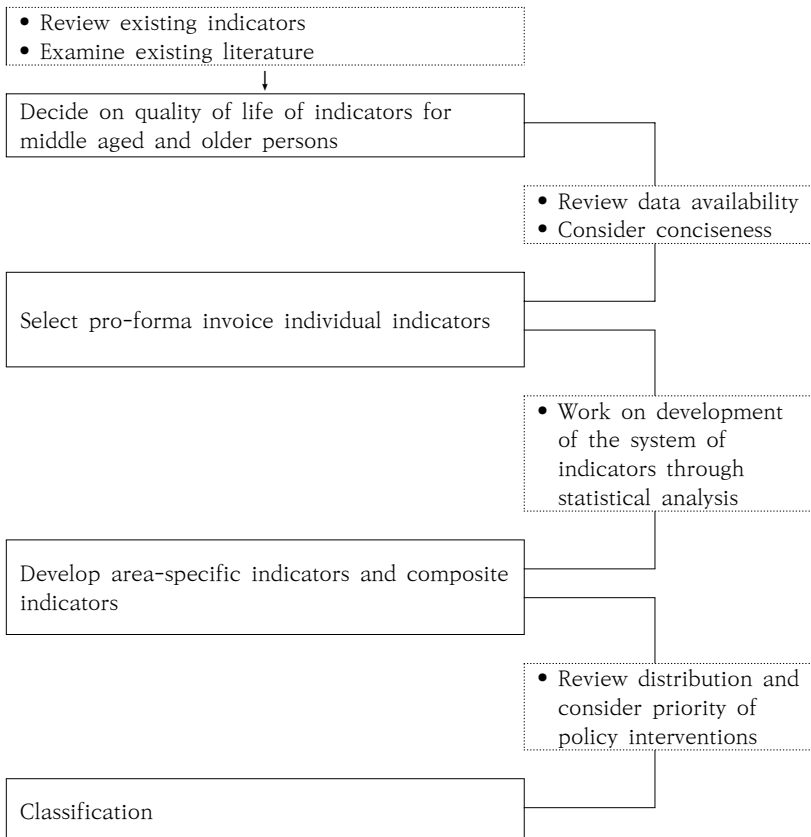
1) Operationalization of Quality of Life Concept for Middle and Old Age

Quality of life is a starting point of analysis and is operationally defined from the perspectives that initiatives that require the most policy interventions are to protect older persons from poverty, illness, loneliness and idleness. In addition, older persons is undergoing their later life today and this study has interest in the fact that the middle aged are positioned as the preelderly.

Such selected individual indices serve as 16 individual ones that reflect four sufferings, which are fundamental values (concept) for classification of middle and old age, the final objective of this study (Cho, Jaejung·Jang, Inhyup, 2010)[5].

---

5) As there is no general concept of quality of life, empirical studies have no choice but to make an operational definition based on the consensus of researchers. This study is based on 'Quality of life index system for the Korean elderly' (Chung, Kyunghee, et al., 2012), the final outcome of recent studies based on the survey of professionals and examination of previous researches. However, this study employed it by complementing its limitation that such a system targeted 'the old'. Expressions that are only applicable for older persons(or after retirement) were modified to ensure that they can be applicable for both the middle aged and older persons. As analysis should be performed not at a 'social level', but at an individual level, index should be at 'individual level'. So, only individual indices that can be quantifiable for each individual were included. Only objective indices were included to achieve clarity. In addition, indices whose level can be changeable depending on the situation of targets in a similar context were excluded (ex: exchange of resources with children of older persons). Besides, indices whose direction of the impact (positive/negative) on quality of life is not clear were excluded.

〈Table 1〉 Establishment of Various Levels of Quality of Life and Selection of Index

Large Dimension	Individual indicators[1]	This study			
		Decide on index system		Individual indicatorsfor which there is available data source	Individual indicators that is included in final indicator develop ment efforts
		1) Select quality of life indicators at individual level	2) Select individual indicators based on fundamenta l principles		
0. Population and social background	25	0	0	0	0
1. Social psychological stability of older persons	8	6	0	0	0
2. Individual resources of older persons their family and social relationship	20	20	10	6	4
3. Physical safety of older persons	19	13	3	2	0
4. Economic status of older persons	21	15	12	8	4
5. Health of older persons	32	32	18	6	4
6. Social participation of older persons	21	19	13	9	4
Composite	146	106	56	31	16

Note: 1) Chung, Kyunghee, et al., (2012). Development and application of quality of life indicator system for Korean older persons. Ministry of Health and Welfare·Korea Institute for Health and Social Affairs

   Such selected individual indices serve as 16 individual ones that reflect four sufferings, which are fundamental values (concept) for classification of middle and old age, the final ob-jective of this study. An examination of them from the per-spectives of four sufferings reveals the following. 『Individual

resources of older persons and their family and social relation-ship』 shows how many resources the middle aged and older persons.

have to minimize loneliness. Cantor and Little (1985) said that it is important to have close interpersonal contact and re-lationship with spouse, children, siblings, friends and neighbors. 『Economic status of older persons』 serves as a meaningful dimension in terms of minimization of poverty of later life, reflecting income, asset and later life income prepar-edness status. 『Health of older persons』 shows how important health is as it is a starting point of quality of life and identifies both physical and psychological health and health behaviors. 『Social participation of older persons』 should best reflect dis-tinct characteristics of later life in that minimization of idleness is possible through participation in various social activities.

〈Table 2〉 Quality of Life Individual Indicators at Various Levels

4 sufferings of old age	Dimension	Individual Index	Remark
Loneliness	1. Family and social relationship	1-1.Spouse (Y/N) 1-2.Physical accessibility with children 1-3.Number of siblings alive 1-4.Contact frequency with friends and neighbors	Select index by key tie that constitutes social network
Poverty	2. Economic status	2-1.Equivalised household income 2-2.Equivalised household asset 2-3.Liquidity of asset (proportion of financial asset against asset) 2-4.Status of pension coverage (public pension and private pension (including whole life insurance))	Current economic status: Income, asset Economic stability and preparedness of the old age: liquidity, multilayered later life income preparedness
Illness	3. Health status	3-1.Number of chronic diseases 3-2.Depression (Y/N) 3-3.Degree of restriction on activities 3-4.Degree of health behavior practice (exercise and medical checkup (Y/N))	Health status (physical, psychological aspect) Health behavior practice
Idleness	4. Social participation	4-1.Participation in proper economic activities 4-2.Number of group activities participated 4-3.Enjoyment of cultural activities (Y/N) 4-4.Travel experience (Y/N)	Reflect various social participation activities

2) Index Development Efforts

A. Calculation of Dimension-specific Index

Scores of quality of life have been calculated by dimension. Correlation coefficients of 'Satisfaction of quality of life in general' and individual index was used for the sake of this (Table 3).

Such efforts were executed in two steps. First, as units of individual indices and mean points of distribution are different, standardization was performed (equal distribution between 10 and 100 scores). That is, total scores of all the dimensions are set to add up to a maximum of 100 scores. The correlation coefficient of 'satisfaction of quality of life in general' and individual index was used to calculate the weight of each index based on such standardization of individual indices[6].

> Formula:
>   Score of dimension 1 (family and social relationship) = (individual value of 1-1 index × weight of 1-1 index in dimension 1)+(individual value of 1-2 index × weight of 1-2 index in dimension 1)+(individual value of 1-3 index × weight of 1-3 index in dimension 1)+(individual value of 1-4 index × weight of 1-4 index in dimension 1)

─────────

6) An observation of preceding studies relating to index development shows that there are three representative methods; 1) regression analysis conducted with 'satisfaction of quality of life in general' used as dependant variable and each coefficient used (Shim, Junseop, 2006); 2) correlation coefficient used (Kim, Jungseok, et al., 2012); results of professionals' responses to the survey employed (Kim, Jungseok, et al., 2012; Hong, Baekyeoi et al., 2012). This study employed the method where the correlation coefficient was used.

B. Calculation of Quality of Life Composite Index

Dimension-specific index can be used to estimate the dimension-specific level. However, if they can be aggregated to arrive at a composite index, it can be used to judge the level of quality of life of individuals in middle and old age. In this context, weights were developed based on the correlation coefficient of dimension-specific index and satisfaction of quality of life in general, and composite index was then developed.

Formula:
Quality of life composite index = (scores of dimension 1 × relative weight of dimension 1) + (scores of dimension 2 × relative weight of dimension 2) + (scores of dimension 3 × relative weight of dimension 3) + (scores of dimension 4 × relative weight of dimension 4)
Calculation of relative weight of each dimension (dimension 1, dimension 2, dimension 3, dimension 4) in quality of life index system (weight of dimension 1 + weight of dimension 2 + weight of dimension 3 + weight of dimension 4=1)

3) Classification Efforts

I intended to set the priority of policy interventions by classifying middle and old age based on such a quantified area-specific quality of life level. Distribution of area-specific scores was primarily reviewed to classify them into three groups of high/mid/low. As a result, a total of 81 types were identified. However, out of 81 types, some of them had little distribution.

Also, 81 types were too many to be used for the purpose of comparison so that simplification was performed. During the course of this process, given the fact that there are no policy initiatives relating to 『Family and social relationship』 considering the scope of policies targeting the current older persons, and that in case of three out of four indices including spouse (Y/N), physical accessibility with children and number of siblings alive, it is difficult to improve such levels through policy interventions. So, high/mid/low classification of such dimension was decided not to be included in the classification. As a result, 81 types were reduced to 27 types.

〈Table 3〉 Distribution of Individual Index and Relative Weight

Dimension	Individual Index	Average (Frequency)	Standard Deviation (%)	Correlation Coefficient			
				Dimension		Composite	
				Value	Weight within Dimension	Value	Weight
1. Family and social relationship	1-1.Spouse (Y/N)	0.76[78.7]	0.43[38.3]	0.2034	0.3285	0.2970	0.1991
	0.No: 10	(1,805)	(23.7)				
	1.Yes: 100	(5,823)	(76.3)				
	1-2.Physical accessibility with children	0.95[52.9]	0.91[40.8]	0.0914	0.1476		
	0.No: 10	(3,318)	(43.5)				
	1.No. However, live within close distance of 30 min: 55	(1,347)	(17.7)				
	2.Yes: 100	(2,963)	(38.8)				
	1-3.Number of siblings alive	3.99[74.9]	2.87[32.7]	0.1296	0.2093		
	0.None: 10	(1,075)	(14.1)				
	1.1~3 persons: 55	(2,102)	(27.6)				
	2.more than 4 persons: 100	(4,451)	(58.3)				
	1-4.Contact frequency with friends and neighbors	2.72[71.1]	1.15[25.8]	0.1947	0.3145		
	0.no persons with whom older persons have close interpersonal relationship: 10	(453)	(5.9)				
	1.less than 6 times per year: 32.5	(716)	(9.4)				
	2.1~2 times per month: 55	(1,536)	(20.1)				
	3.1~3 times per week: 77.5	(2,761)	(36.2)				
	4.Almost every day (more than 4 times per week): 100	(2,162)	(28.3)				
2. Economic status	2-1. Equivalised household income[2]	1,375.4[55.6]	1,418.2[31.1]	0.3193	0.3100	0.4060	0.2722
	0.1st quintile(~459.6(KRW10,000)): 10	(1,394)	(18.3)				
	1.2nd quintile(~858.6(KRW10,000)): 32.5	(1,529)	(20.0)				
	2.3rd quintile (~1,414.2(KRW10,000)): 55	(1,671)	(21.9)				
	3.4th quintile(~2,121.3(KRW10,000)): 77.5	(1,558)	(20.4)				
	4.5th quintile(2,136.2 and over): 100	(1,476)	(19.4)				
	2-2.Equivalised household income[2]	14,083.1[56.4]	22,601.3[31.4]	0.3062	0.2973		
	0.1st quintile(~2,683.3(KRW10,000)): 10	(1,354)	(17.8)				
	1.2nd quintile(~5,773.5(KRW10,000)):32.5	(1,557)	(20.4)				
	2.3rd quintile(~10,000(KRW10,000)): 55	(1,549)	(20.3)				
	3.4th quintile(~18,384.8(KRW10,000)): 77.5	(1,596)	(20.9)				
	4.5th quintil(18,475.2 and over): 100	(1,572)	(20.6)				
	2-3.Liquidity of asset (proportion of financial asset against asset)[3]	3.6[37.3]	8.8[30.5]	0.2181	0.2117		
	0.None: 10	(3,840)	(50.3)				
	1.less than 10%: 55	(2,949)	(38.7)				
	2.10% and higher: 100	(839)	(11.0)				
	2-4.Status of pension coverage (public pension, private pension (including whole life insurance))	0.24[20.9]	0.47[21.0]	0.1865	0.1811		
	0.No: 10	(5,906)	(77.4)				
	1.Either of them : 55	(1,594)	(20.9)				
	2.Both: 100	(128)	(1.7)				

〈Table 3〉 Continued

Dimension	Individual Index	Average (Frequency)	Standard Deviation (%)	Correlation Coefficient			
				Dimension		Composite	
				Value	Weight with Dimension	Value	Weight
3. Health status	3-1.Number of chronic diseases	1.01[70.7]	1.08[29.9]				
	0.more than 3: 10	(3,096)	(40.6)				
	1.2: 40	(2,395)	(31.4)	0.2169	0.2119		
	2.1: 70	(1,357)	(17.8)				
	3.None: 100	(781)	(10.2)				
	3-2.Depression (Y/N)	0.93[94.1]	0.25[22.3]				
	0.Yes: 10	(502)	(6.6)	0.2097	0.2048		
	1.No: 100	(7,126)	(93.4)			0.4130	0.2768
	3-3.Degree of restriction on activities	1.74[62.2]	0.80[24.0]				
	0.Very restricted: 10	(635)	(8.3)				
	1.Restricted: 40	(1,775)	(23.3)	0.3556	0.3473		
	2.Not such restricted: 70	(4,144)	(54.3)				
	3.Hardly restricted: 100	(1,074)	(14.1)				
	3-4.Degree of health behavior practice (exercise and medical checkup (Y/N))	1.10[59.3]	0.68[30.4]				
	0.No: 10	(1,415)	(18.5)	0.2416	0.2360		
	1.Either of them: 55	(4,070)	(53.4)				
	2.Yes: 100	(2,143)	(28.1)				
4. Social participation	4-1.Participation in proper economic activities	0.99[32.4]	1.38[31.0]				
	0.No participation: 10	(4,474)	(58.7)				
	1.Participation, 1st income quintile (0~50 (KRW10,000): 32.5	(864)	(11.3)				
	2.Participation, 2nd income quintile(~100 (KRW10,000): 55	(811)	(10.6)	0.2139	0.2309		
	3.Participation,3rd income quintile (~200 (KRW10,000): 77.5	(819)	(10.7)				
	4.Participation, 4th income quintile (~5,000 (KRW 10,000): 100	(660)	(8.7)				
	4-2.Number of group activities participated	0.96[38.8]	0.77[22.5]				
	0.None: 10	(2,053)	(26.9)			0.3758	0.2519
	1.1: 40	(4,084)	(53.5)	0.2812	0.3035		
	2.2: 70	(1,243)	(16.3)				
	3. more than 3: 100	(248)	(3.3)				
	4-3.Enjoyment of cultural activities (Y/N)	0.19[15.0]	0.75[18.8]				
	0.No:10	(7,080)	(92.8)	0.1547	0.1670		
	1.1,2 times: 55	(256)	(3.4)				
	2. more than 3 times: 100	(292)	(3.8)				
	4-4.Travel experience (Y/N)	1.04[33.1]	2.38[32.3]				
	0. No: 10	(4,721)	(61.9)	0.2767	0.2987		
	1. less than 2 times: 55	(1,897)	(24.9)				
	2. more than 3 times: 100	(1,010)	(13.2)				

Note: 1) 7,628 persons subject to analysis excluding missing values, the number expressed in subordinate items of individual index means 100 point conversion figure. Number in [ ] calculated by 100 point conversion figure.
2) Analysis unit used in this study is individual. However, in case of income and asset, due to their characteristics, the value of quinti is calculated at household unit and then allocated to an individual. Amount statistics of income and asset represent figures for 4,639 households. For the rest of them, they represent average, standard deviation, frequency and weight at individual unit.
3) 95 persons who do not have any assets and financial asset is given 0%, 13 persons whose financial asset ratio against asset exceed 100% (117~1,100%) excluded.
Data: 3rd KLosa.

Distribution of the 27 types and age group-specific distribution were reviewed and the following types were finalized considering the aspect of policy interventions[7].

Type1: Economic status, health and social participation are all in 'mid · high' level and priority of policy interventions is the lowest group.

Type2: Health or social participation is 'mid · high' level, but economic status is 'low' level, requiring policy interventions relating to poverty issues.

Type3: Economic status or social participation is in 'mid · high' level, but they have health issues, requiring policy interventions relating to illness and resultant daily life restriction.

Type4: Economic or health status are in 'mid · high' level, but social participation is in 'low' level, requiring policy interventions to alleviate social isolation and idleness.

Type5: More than two out of economic status, health, social participation are in 'low' level, having complex issues with high priority of public policy interventions.

    Type5-1: Economic and health status are in 'low' level, requiring simultaneous policy interventions for poverty and illness

---

7) The following principles were used in finalizing types. First, those who show 'high' or 'mid' level for each dimension are considered the ones that do not require the public intervention. Second, a focus is given to a balance and an imbalance between dimensions. So, types that have 'low' level in only one dimension and types that have 'low' level in more than two dimensions should be distinguished. That is, types that have only a single problem and types that have complex problems were distinguished. As a result, a total of fives types were identified.

problems.

Type5-2: Economic status and social participation are in 'low' level, requiring simultaneous policy interventions to ease poverty and idleness.

Type5-3: Health status and social participation are in 'low' level, requiring simultaneous policy interventions to mitigate illness and idleness problems.

Type5-4: Economic status, health, and social participation are all in 'low' level, having complex problems with highest priority of public policy interventions.

Chapter 4

Results

4

Results ≪

1. Dimension-specific Quality of Life of Middle and Old Age

『Family and social relationship』 obtains 71.7 points out of 100, the highest of four dimensions. A comparison by age group shows that people in their 50s receive 79.9 points, those in their 60s 74.8 points, those in their 70s 66.5 points, and those in their 80s and older 51.5 points. Those in their 80s and older show a very low level. In case of standard deviation, those in their 80s and older have the highest standard deviation, indicating that they have more diversity than other age groups (Table 4).

The total score of 『Economic status』 is 45.7 points on average, less than 50 points. A comparison by age group displays that people in their 50s receive 55.6 points, those in their 60s 45.8 points, those in their 70s 37.0 points, and those in their 80s and older 36.9 points. Those in their 60s and 70s can be estimated to be in a transition period that distinguishes them from the former and latter generations in terms of economic status.

『Health status』 attains 69.9 on average, which is a bit lower than 71.7 points of 『Family and social relationship』, but significantly higher than those of 『Economic status』 or 『Social

participation』. A comparison by age group exhibits that people in their 50s earn 78.0 points, those in their 60s 70.9 points, those in their 70s 63.7 points, and those in their 80s and older 57.7 points. In case of people in their 80s and older, the fact that they obtain higher points than the average 51.5 points of 『Family and social relationship』 is worth noting.

〈Table 4〉 Age-specific Scores by Item

Dimension	Individual Index	50s	60s	70s	80s and older	Total
1. Family and social relationship (Loneliness)	1-1.Spouse (Y/N)	90.4 (27.7)	85.6 (33.0)	70.7 (42.2)	43.5 (43.5)	78.7 (38.3)
	1-2.Physical accessibility with children	63.0 (43.0)	51.8 (39.7)	45.0 (37.3)	45.7 (38.9)	52.9 (40.8)
	1-3.Number of siblings alive	88.1 (23.4)	79.2 (30.1)	66.6 (33.8)	43.7 (34.8)	74.9 (32.7)
	1-4.Contact frequency with friends and neighbors	71.3 (23.4)	71.2 (24.7)	72.1 (27.2)	67.9 (31.5)	71.1 (25.8)
	Average of total scores (standard deviation)	79.9 (15.3)	74.8 (15.9)	66.5 (17.9)	51.5 (19.3)	71.7 (18.8)
2. Economic status (Poverty)	2-1.Equivalised household income	73.7 (25.7)	54.5 (28.7)	39.9 (28.0)	43.2 (31.5)	55.6 (31.1)
	2-2.Equivalised household asset	58.1 (31.0)	59.4 (30.9)	52.5 (31.5)	52.3 (32.2)	56.4 (31.4)
	2-3.Liquidity of asset (proportion of financial asset against asset)	42.7 (30.7)	38.4 (31.3)	33.0 (29.4)	28.6 (26.5)	37.3 (30.5)
	2-4.Status of pension coverage (public pension and private pension(including whole life insurance))	35.8 (26.3)	17.4 (17.0)	11.2 (7.3)	10.4 (4.1)	20.9 (21.0)
	Total scores (standard deviation)	55.6 (19.0)	45.8 (18.0)	37.0 (17.3)	36.9 (18.9)	45.7 (19.8)

〈Table 4〉 to be continued

Dimension	Individual Index	50s	60s	70s	80s and older	Total
3. Health status (Illness)	3-1.Number of chronic diseases	85.0 (22.4)	69.2 (29.6)	59.3 (30.9)	60.5 (30.6)	70.7 (29.9)
	3-2.Depression (Y/N)	96.8 (16.8)	94.0 (22.4)	92.0 (25.7)	91.4 (26.5)	94.1 (22.3)
	3-3.Degree of restriction on activities	72.5 (20.7)	63.6 (22.2)	54.5 (23.3)	46.7 (25.1)	62.2 (24.0)
	3-4.Degree of health behavior practice (exercise and medical checkup (Y/N)))	63.4 (29.8)	63.2 (28.9)	56.7 (30.3)	42.3 (30.3)	59.3 (30.4)
	Total scores (standard deviation)	78.0 (13.5)	70.9 (15.9)	63.7 (16.8)	57.7 (17.3)	69.9 (17.0)
4. Social participation (Idleness)	4-1.Participation in proper economic activities	52.0 (35.4)	30.7 (28.3)	18.7 (18.2)	12.2 (9.3)	32.4 (31.0)
	4-2.Number of group activities participated	44.6 (22.2)	40.4 (22.1)	34.4 (21.6)	27.5 (19.9)	38.8 (22.5)
	4-3.Enjoyment of cultural activities (Y/N)	21.2 (27.2)	13.3 (15.4)	11.2 (9.0)	10.3 (4.4)	15.0 (18.8)
	4-4.Travel experience (Y/N)	40.3 (34.8)	34.6 (32.3)	28.4 (29.8)	18.9 (22.4)	33.1 (32.3)
	Total scores (standard deviation)	41.1 (18.4)	31.9 (16.0)	25.1 (13.9)	18.5 (10.7)	31.6 (17.6)
Total scores (standard deviation)		63.0 (11.7)	55.0 (11.3)	47.3 (10.8)	41.0 (10.7)	54.0 (13.5)

Note: Weights reflected only in dimension total. Individual index does not have weights reflected.
Data: 3rd KLosa.

A comparison by age group discloses that with regard to average scores of proper economic activities, people in their 50s obtain 52.0 points, those in their 60s 30.7 points, and those in their 70s and those in their 80s and older 18.7 points and 12.2 points, respectively. It is estimated that such reduced economic activity level in their 60s may be maintained at a similar level after their 70s. In case of group activities, age groups after

the 70s attain especially low points, with age groups of 80s and older averaging just 27.5 points. With regard to enjoyment of cultural activities (Y/N), only people in their 50s gain an average of 20's points and all the other age groups receive 10's points. In case of travel, older age groups tend to show low average points. Those in their 50s obtain 40.3 points, while those in their 80s take just 18.9 points.

2. Composite Scores of Quality of Life of Middle and Old Age

Composite scores that are calculated by reflecting the dimension-specific index have distribution ranging from 13.6 points to 96 points, with average points of 54.0, lower than 60 points (Table 5). Distribution of composite scores of quality of life is similar to normal distribution. However, more cases are located in the zone between the 60 and 70 points.

An observation into quintile-specific distribution of composite scores of quality of life for middle and old age reveals that the 1st quintile has distribution between 13.6 points and 42.1 points, the 2nd quintile between 42.1 points and 50.8 points, the 3rd quintile between 50.8 points and 57.0 points, the 4th quintile between 57.9 points and 66.0 points, and 5th quintile between 66.0 points and 96.0 points. That is, the 1st quintile has about a 28.5 point range, the 2nd quintile an 8.7 point range, 3rd quintile a

6.2 point range, the 4th quintile an 8.1 point range, and the 5th quintile a 30 point range, which can confirm the fact that most cases are concentrated in the mid level.

⟨Table 5⟩ Distribution of Age Group-specific Quality of Life Composite Scores

(Unit: %, Person)

Classification	50s	60s	70s	80s and older	Total
5th quintile (65.998 points~95.964 points)	42.6	16.9	4.0	0.6	20.0
4th quintile (57.938 points~65.995 points)	26.8	24.3	12.3	6.3	20.0
3rd quintile (50.78139 points~57.024 points)	16.7	24.6	22.1	11.5	20.0
2nd quintile (42.106 points~50.78108 points)	8.6	21.1	29.6	27.1	20.0
1st quintile (13.635 points~42.104 points)	5.3	13.0	32.0	54.4	20.0
Total	100.0	100.0	100.0	100.0	100.0
(Person)	(2,446)	(2,351)	(2,008)	(823)	(7,628)

3. Comparison of Age Group-specific Quality of Life of the Middle- and Old-aged

I intend to compare age group-specific quality of life in terms of absolute level and dimension-specific balance. Composite scores of quality of life have a big difference by age group, where people in their 50s obtain 63.0 points, those in their 60s 55.0 points, those in their 70s 47.3 points, and those

in their 80s and older 41.0 points. That is, in general, the older people are, the lower their quality of life is (Table 4).

A comparison by age group of quintile-specific composition of composite scores of quality of life shows that in the case of people in their 50s, the 5th quintile takes up 42.6%, while in the case of those in their 60s, it accounts for 16.9%, a big difference. In the case of those in their 70s, it amounts to 4.0%, while in the case of 80s and older, it is just 0.6%. On the other hand, a look at the composition of the 1st quintile shows that people in their 50s take up just 5.3%, and those in their 60s account for 13.0%, those in their 70s 32.0%, and those in their 80s and older 54.4%. In age groups of 70s and older, the 1st quintile has the most cases.

Quality of life of people in their 50s is by far high in all the dimensions. Quality of life of people in their 60s is lower than that of people in their 50s, and is also true for those in their 70s and 80s. That is, quality of life of people in their 70s is lower than those in their 60s and quality of life of those in their 80s is lower than those in their 70s. In other words, biological aging is closely related to deterioration in the quality of life.

A closer look discloses that in the case of people in their 50s and 60s, both family and social relationships and health status obtain almost 80 points. In the case of those in their 70's, the highest points go to family and social relationships. However, it hovers at just 66.5 points. Also, in case of those in their 80s and

older, the highest scores go to health status, but only at 57.7 points. All the dimensions receive 60 points and below.

On the other hand, all the age groups show an imbalance in dimension-specific quality of life. In all age groups, quality of life of 『Economic status』 and 『Social participation』 has lower points than that of 『Family and social relationships』 and 『Health status』. In particular, people in their 60s represent the composition of quality of life between dimensions for middle and old age.

A closer observation by age group reveals that people in their 50s have quality of life in all the dimensions, compared with other age groups, but still show a dimension-specific imbalance. Those in their 60s show the similar composition of dimension-specific quality of life level for middle and old age. On the other hand, those in their 70s show very low level in all the dimensions, compared with quality of life level of middle and old age. In case of those in their 80s, they are similar to those in their 70s. However, their differences are greater than those of people in their 70s. In particular, in the case of 『Family and social relationships』 and 『Social participation』, their differences are even greater, indicating that they experience absolutely low quality of life and imbalance between dimensions.

A comparison between dimension-specific quality of life order shows that dimension-specific level is in the order of

『Family and social relationships』 〉 『Health status』 〉 『Economic status』 〉 『Social participation』 in all age groups, except for those in their 80s and older. In case of those in their 80s and older, as 『Family and social relationships』 rapidly falls, 『Health status』 earns the highest quality of life points.

4. Diversity of Quality of Life of the Middle- and Old-aged

With regard to type distribution, Type5 has more than two complex problems and requires policy interventions in priority, accounting for 34.2%. In particular, Type5-4 requires the most urgent policy interventions, taking up 14.0%. On the other hand, Type1 accounts for 39.8%, showing more than 'mid·high' level in all dimensions, and indicating that it has the lowest priority in policy interventions. In addition, those that have a single problem and require focused policy interventions by dimension stand at 26.1%. Specifically speaking, Type2 that needs policy interventions including income guarantee system/cash pay, etc. takes up 8.6%, Type3 that requires health related policy interventions amounts to 9.4%, and Type4 that needs various social participation invigoration programs to alleviate idleness amounts to 8.1%.

〈Table 6〉 Age Group-specific Type Distribution

Classification	50s	60s	70s	80s	Total
Type1 (Dimension2,3,4=mid high in all dimensions)	67.3	40.9	17.8	8.8	39.8
Type2 (subject to only poverty problem)	7.5	10.6	9.9	3.0	8.6
Type3 (subject to only illness problem)	8.1	11.7	10.1	4.9	9.4
Type4 (subject to only idleness problem)	6.0	8.6	8.9	11.1	8.1
Type5 (subject to complex problems)	11.1	28.3	53.4	72.3	34.2
· 5-1 (subject to poverty+illness problems)	2.5	5.2	9.0	4.7	5.3
· 5-2 (subject to poverty+idleness problems)	2.9	6.4	10.4	11.3	6.9
· 5-3 (subject to illness+idleness problems)	2.4	6.7	10.3	23.3	8.1
· 5-4 (subject to poverty+illness+idleness problems)	3.4	10.0	23.8	32.9	14.0
Total	100.0	100.0	100.0	100.0	100.0
(Person)	(2,446)	(2,351)	(2,008)	(823)	(7,628)

Data: 3rd KLosa.

A comparison by age group shows that in the case of people in their 50s, Type1 takes up 67.3%, with the lowest number of people requiring policy interventions at this moment. Type5 with complex problems takes up 11.1%. It looks as if it requires urgent policy interventions. Those that have a single problem are Type2, which accounts for 7.5%, Type3 8.1%, Type4 6.0% (Table 5).

An observation of such problems in such type distribution reveals that 16.2% have economic problems, out of which 7.5% (about half of them) (46.2%) have only economic problems while the other half has health and social participation prob-

lems, too. Such occurrence of complex problems is very low, compared with other age groups. On the other hand, 17.2% have health problems, out of which 8.1%, about half of them, have a single problem. In addition, in the case of social participation, 14.7% have inactive social participation, indicating that there is a possibility of idleness, out of which 41.0% have a single problem.

In the case of those in their 60s, Type1 takes up 40.9%, similar in size to the average. Type5 accounts for 28.3%, indicating that about 1/4 of those in their 60s are identified as those that require policy interventions in priority. Type2 amounts to 10.6%, Type3 11.7%, and Type4 8.6%. A look at characteristics of problems shows that about 1/3 of those in their 60s has economic problems, out of which about 1/3 of them has only the poverty problem while the rest of them the poverty, idleness or other problems. On the other hand, in case of health problems, 38.4% of those in their 60s have health issues, out of which about 3/10 of them have only health issues, while the rest of them have other problems, too. In the case of social participation, they show a similar pattern.

In the case of those in their 70s, Type1 stands at just 17.8%, very low compared with those in their 50s and 60s. On the other hand, Type5 reaches 53.4%, indicating that about half of those in their 70s require policy attention. Out of them, those whose economic status, health, social participation level is low reach 23.8%,

while Type2 with a single problem stands at 9.9%, Type3 10.1%, and Type4 8.9%. That is, in the case of those in their 70s, as there are many people that suffer from complex problems, comprehensive policy approaches are required rather than fragmentary approaches. In the case of those in their 80s and older, as they have complex problems similar to those in their 70s, and those that have such complex problems reach 72.3%, much stronger policy attention is required.

That is, such analysis results show that there are no differences between dimensions in terms of the composition ratio of single and complex problems. However, the older people are, the more they tend to have complex problems. In particular, in the case of those in their 80s and older, if they have income or health issues, they tend to have idleness problems, too.

⟨Table 7⟩ Type Distribution by Age Group

(Unit: %)

Classification		50s	60s	70s	80s	Total
Poverty	–	7.5	10.6	9.9	3.0	8.6
		(46.2)	(32.9)	(18.7)	(5.8)	(24.8)
	+Illness	2.5	5.2	9.0	4.7	5.3
	+Idleness	2.9	6.4	10.4	11.3	6.9
	+Illness, idleness	3.4	10.0	23.8	32.9	14.0
Those who have poverty problems		16.2	32.2	53.0	52.0	34.7
Illness	–	8.1	11.7	10.1	4.9	9.4
		(47.0)	(30.4)	(14.8)	(5.2)	(20.6)
	+Poverty	3.4	10.0	23.8	32.9	14.0
	+Idleness	2.4	6.7	10.3	23.3	8.1
	+Poverty, Idleness	3.4	10.0	23.8	32.9	14.0
Those who have illness problems		17.2	38.4	67.8	94.1	45.3
Idleness	–	6.0	8.6	8.9	11.1	8.1
		(41.0)	(27.0)	(16.6)	(14.1)	(21.9)
	+Poverty	2.9	6.4	10.4	11.3	6.9
	+Illness	2.4	6.7	10.3	23.3	8.1
	+Poverty, Illness	3.4	10.0	23.8	32.9	14.0
Those who experience idleness		14.7	31.7	53.3	78.6	37.0

Data: 3rd KLosa.

Chapter 5
Policy Implication

5

Policy Implication 《

1. Establishment of Policy Direction

　The following are implications of this study as to what direction and emphasis should be given to perform policy interventions in order to bring about immediate improvements in the quality of life for the middle aged and older persons. First of all, the quality of life of older persons is very low, compared with that of the current middle aged. Accordingly, focused policy interventions are required for the current older persons . In addition, policy interventions that can help prevent the current middle aged from falling to the same level of quality of life of the current older persons should be executed.

　Second, as it turns out that health status has a material impact on the rest of the components that constitute quality of life, focused policy attention to health policy is required out of various dimension-specific policies targeting middle and old age. In particular, policy support measures need to be developed at a preventive or therapeutic intervention level.

　In addition, though it takes time for such measures to work, policy interventions are needed to reinvigorate social participation. A comparison of dimension-specific scores exhibits that family

and social relationships obtains the highest points of 71.7, followed by health status at 69.9 points, economic status at 45.7 points, and social participation at 31.6 points, which is the lowest. In the case of social participation, opportunities for economic activities, various group activities and leisure·cultural activities for middle and old age need to be urgently expanded. Both private and public attention and participation are required in that government's policies alone cannot make it happen.

Third, given the mutual dynamics of components that constitute quality of life, alignment of cash and service in kind should be actively pursued for effective policy interventions. That is because only attention to economic resources cannot lead to promoting physical and psychological health and various social activities. In particular, the effectiveness of income policy for a low income group can be enhanced when such income policy aligns income guarantee provision through the selection of targets with comprehensive service provision, including health and social relationships.

Lastly, campaigns and education for the public need to be provided to raise awareness of the importance of social relationships or leisure life on top of the financial area to raise the quality of later life. In particular, such efforts are very important in that it is difficult to perform standard policy interventions in the case of social relationships. In addition, it is because given the difference between quality of life of the middle

aged and that of older persons today, both system improvements and thorough preparation at an individual level are required to prevent a possible deterioration in quality of life of the middle aged as they enter into the later life stage. Currently, their preparedness for later life is very low and deviation between dimensions is very significant (Ministry of Health and Welfare, 2013).

2. Priority of Policy Interventions

Execution of public interventions for all the targets has limitations, given the limited financial resources. Therefore, it is necessary to select a group that requires priority policy interventions for effective policy interventions, and such selection may be possible from various perspectives. First of all, those whose composite quality of life level is low can be selected as those subject to policy interventions. In this case, the bottom 20% should receive priority policy interventions based on composite scores of quality of life.

Next, it can be a way to pay attention to the complexity of problems that they suffer from. That is, as examined in this study, in the case of those who have complex problems, policy interventions are very urgent. Specifically speaking, policy attention needs to be paid to Type5, whose size is 34.2%. Out of Type5, in particular, Type5-4, which requires the most urgent

policy interventions, meaning that they have low level of quality of life in terms of income, health, and social participation, takes up 14.0%. On the other hand, 39.8% are in mid and high level in all the dimensions, indicating that they are the lowest in priority in policy interventions.

Third, it is possible to select those that require focused policy interventions by problem dimension. Of the middle aged and older persons, 34.7% require policy interventions such as income guarantee system/cash benefit, etc., 45.3% need health-related policy interventions, and 37.0% of Type4 need invigoration of various social participation activities in order to address idleness.

What needs to be taken into account in selecting dimension-specific candidates for policy intervention and searching for policy plans is that the point where quality of life starts to deteriorate appears to vary by dimension. This study shows that in the case of 『Family and social relationships』, there is a high possibility that quality of life after the 80s may rapidly deteriorate. So, policy priority should be given to endeavors to search for plans to alleviate loneliness for older persons after their 80s in this dimension. On the other hand, in the case of 『Economic status』, there is a huge difference between people in their 50s and the rest of the age groups. Therefore, financial preparedness for later life targeting people in their 50's appears to be an urgent policy initiative. In the case of

『Health status』, continuous management is determined to be a requirement in that there would be a constant deterioration in quality of life of middle and old age. In the case of 『Social participation』, there is a significant difference between people in their 50s and the rest of the age groups, similar to what is detected in 『Economic status』. In the case of 『Social participation』, the absolute level is also low. Thus, laying the systemic and cultural foundation needs to become a matter of a priority policy concern in order for those in their 50s to create leisure career plans in the present.

3. Dimension-specific Policy Plans

1) Family and Social Relationships

An observation of a trend in changes in quality of life reveals that people in their 80s and older are in a very low level of family and social relationships and have great internal diversity. Focused social attention and policy interventions are required for the groups that are vulnerable in family and social relationships starting from those in their 70s. A closer look reveals that although primary informal relationships including those with spouse and children tend to get weaker as people age, contact frequency with friends and neighbors is not related to age. So, given such a tendency, efforts are required to

search for ways to strengthen the roles of friends and neighbors for the purpose of social integration of the increasing number of older persons in latter part of old age.

In addition, the importance of family relationships needs to be raised and opportunities for education need to be provided. Discussions and information sharing may be required with regard to communication among family members, improvements in the relationship with spouse, establishment of a role within the family after retirement, and the establishment of roles of grandparents. In particular, in the case of people in their 60s, as they are retired from their work, they can spend time with family members and spouses. However, in reality, they tend to maintain the current situation as it is, rather than making significant changes in activities such as visiting their children, spending time together with spouses, etc., even though they are not satisfied with the current situation. It is not desirable to endure this on their own or give up rather than having a dialogue with adult children or spouses to alleviate the situation. Therefore, public attention is required to provide an opportunity to revisit family relationships and address such problems.

2) Economic Status

In the case of economic status, it appears that household income significantly decreases for people starting from their 60s.

Thus, it appears urgent to lay the systemic foundation relating to later life income and establish plans for and initiate discussion on changes in spending behavior or setting priority on spending at a personal level in response to a reduction in income. Various types of education for later life design are required to provide support for such personal efforts.

On the other hand, in the case of recipients of national basic livelihood security, they can manage monthly living expenses, but have difficulties in securing incidental expenses for residence stability and health maintenance. This results in low quality of life in general. Therefore, it appears that support measures are required to maintain the minimum quality of life including transportation expenses or expenses for balanced diet in the public domain. In addition, the need for support for residence expenses for older persons were also confirmed. In the case of recipients for national basic livelihood security, as a significant portion of pay is spent for residence expense (rent, management fee), residence stability will make it possible for them to spend money in other areas including leisure activities, etc.

3) Health Status

With regard to health, its level is high compared with other dimensions. However, a closer look reveals that the degree of health behavior practice is low, compared with health status.

Therefore, an emphasis on constant health behavior and prac-
tice need to be placed. That is, the needs for constant educa-
tion, promotion, medical checkup and management for health
management and maintenance are greater. In particular, health
status of older persons in their 80s is standardized downward
in general, requiring constant management. Preparation for ac-
cidental falls (ex: installation of hand rail at home) is needed as
a preventive measure especially.

On the other hand, the needs for appropriate medication ad-
ministration have been identified. Some research targets have
suffered from depression and insomnia, having medication.
They have also undergone side effects stemming from admin-
istration of inappropriate medication. The amount of medi-
cation that older persons take increases in old age, and they
may also suffer from problems relating to psychological health
including low spirits due to a diminished social network and
activities. Efforts are required to search for specific plans for
appropriate medication administration.

4) Social Participation

With regard to social participation, trends in changes differ
by details of social participation activities. Therefore, policy
interventions that would incorporate such trends in changes by
details of social participation activities are required. People in

their 60s start to experience a rapid drop in their economic activities. As they remain relatively healthy, they have much interest in jobs as a source of income generation. Therefore, the job creation business needs to search for ways to reflect the needs of those in their 60s in particular. In addition, in the case of those in their 60s who are healthy and can contribute to society, it is desirable to search for ways to contribute their talent to the society by aligning with social contribution types of jobs for older persons or support centers for double cropping in their lives.

On the other hand, out of leisure activities, travel is very low especially for people in their 80s. That is because of their functional restriction. Travel programs need to be developed by reflecting changes in their health status. As the proportion of travel will become lower in social and cultural leisure activities of those in their 80s, group activities or performance culture needs to be reinvigorated as activities to replace travel.

On the contrary, a drop in participation rate of group activities due to physical aging appear to be relatively slow compared with other social participation activities. Therefore, it is necessary to search for plans for maintaining such levels of group activities in the latter part of the old age.

On top of such activity types, approaches will be required considering income brackets. This study confirmed that public infrastructure where people in the low income bracket can en-

joy its use at a lower price would play an important role. In particular, it is very important to expand public infrastructure for older persons. Also, as time may play a more important role for the middle aged on top of expenses for leisure activities, time-tailored leisure programs need to be provided along with lower-priced leisure programs that are provided by the community center or welfare center.

References

Kim, Mihae·Shin, Kyoungrim·Choi, Haekyoung·Kang, Misun (2005). Factors that affect the types of successful later lives of the Korean elderly, Korean Gerontological Society, 26(1), pp.91~104.

Kim, Jungsuk·Kim, Haeyoung·Song, Yoojin·Eun, Kisoo·Kyun, Ahnna·Hwang, Sunjae (2012). Childbirth environment and type index system development, Dongkuk University Population and Society Institute.

Kim, Hweongju (2011). Comparison of youth center evaluation data weights analysis methods, Youth Research, 18(12), pp.181~202.

Shim, Junseop (2006). Assignment of evaluation index weights using Judgment Analysis, Korea Association for Policy Science 2006 Winter Academic Conference, pp.59~80.

Baek, Hakyoung (2010). Analysis of differences in spending characteristics of elderly households in accordance with poverty status and household types, 30(3), pp.911~931.

Ministry of Health and Welfare (2013). Low Childbirth · Aging Society Committee 1st Meeting Press Release (2013.1.25.).

Seok, Jaeeun·Oh, Younghee·Park, Soocheon·Kim, Soobong·Kim, Mihae·Yoon, Dongsung·Kim, Eunhae·Lee, Yunkyoung·Song, Minkyoung (2005). Comprehensive measures for living support for older persons, Korea Institute for Health and Social Affairs.

Oh, Younghee·Seok, Jaeeun·Kwan, Joongdon·Kim, Jungseok·Park, Youngran·Im, Jungki (2005). Study on policy plans for improved quality of life of older persons: centered on fact-finding on women's livelihood, farming and fishing communities, senior

citizens who live alone, Korea Institute for Health and Social Affairs.

Lee, Sojung·Chung, Kyunghee·Oh, Younghee·Jung, Hongwon·Park, Jisoong·Park, Bomi·Lee, Kumryong (2011). Research and development of comprehensive diagnosis program for later life preparedness, Ministry of Health and Welfare·Korea Institute for Health and Social Affairs.

Chung, Kyunghee et al., (2011). Study on the diversity of lives of baby boomers, Korea Institute for Health and Social Affairs.

Chung, Kyunghee et al., (2012). Development and application of quality of life index for the Korean elderly, Ministry of Health and Welfare·Korea Institute for Health and Social Affairs.

Chung, Jinkyoung·Kim, Koeun (2012). Study on support type between older parents and adult children, 32(3), pp.895~912.

Choi, Sungjae·Jang, Inhyup (2010). Senile Welfare, Seoul University Publishing Department.

Choi, Okkum (2009). Classification of consumption and spending of elderly household and analysis of impact factors, Study on welfare for the aged, 51, pp.277~296.

Han, Jun·Kang, Seokhun·Kim, Seokho·Suh, Eunkook·Hong, Jongho·Lee, Heegil·Park, Jooeon (2011). Analysis framework for measurement of quality of life of the public, Korean Sociological Association.

Bunge, M.(1975). What is a quality of life indicator? *SocialIndicatorsResearch2*.65~79.

Diener, E. and Suh, E. (1997). Measuring quality of life: economic, social, and subjective indicators. *SocialIndicatorsResearch40*.189~216.

France, I.(2010). *Objectiveindicatorsofqualityoflife*.1~17.