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The Influence of Successful Ageing Indicators on Life Satisfaction among Elders in Korea

This study investigated differences in related factors affecting life satisfaction with the elderly in or above middle class experiencing successful ageing. In the study, the respondents were 206 elderly people whose occupation (professional career) placed them in the middle and upper class range residing in metropolitan Seoul. Major results are summarized as follows: (1) In order to test gender differences, results of t-test show that there are 13 variables with seven of those being statistically significant and the rest being insignificant. (2) Needs fulfillment and physical functioning are significant factors for Korean male elders to be satisfied with their later lives. Needs fulfillment, physical functioning, group activity, and learning activity are significant factors for Korean female elders to be satisfied with their later lives.

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“Successful ageing” is prominent theme in contemporary applied gerontology. With an ageing population, Korean society has come to realize how diverse the elderly population has become and to accept the fact that the elderly are not always dependent on other family members for their care. Rather, elders are now regarded as active opinion leaders in the society. This phenomenon has given rise to the term “Neo-Elders (NEs)” or “WINE (Well Integrated New Elders) generation” in Korea.

As elders with high level of economic and educational background have increased currently, gerontologists have recognized that elders can live their independent and productive lives and have tried to determine how to become older well in an aged society or to identify factors of successful ageing. Based on their efforts, physical, functional, psychological and social health and active social participation have been suggested as factors of successful ageing (Baltes & Baltes, 1990; Crosnoe & Elder, 2002; Phelan *et al.*, 2004; Rowe & Kahn, 1998; Ryff, 1989).

In particular, being active is considered to be a key factor for successful ageing (Baltes & Baltes, 1990; Rowe & Kahn, 1997; Strawbridge *et al.*, 1996). The World Health Organization (WHO) describes

'active ageing' as 'the process of optimizing opportunities for health, participation and security in order to enhance the quality of life as people age'. In this formulation, 'active' refers to the ability not only to be physically active, but also to 'continue participating in social, economic, cultural, spiritual, and civic affairs' (WHO 2002:12). The WHO's concepts of 'healthy ageing' or 'active ageing', while incorporating physical, mental and social well-being, extend into the social and epidemiological contexts to include the policies and community actions that promote the health of older people. These concepts are collective and action-oriented and stress the level of participation in defining 'active'.

However, some in Korea insist that applying 'active aging' defined in the Western society to the Korean society, is not appropriate to explain indicators of successful ageing of Korean elders. In other words, using models and concepts of successful ageing of the Western society to compose indicators of successful ageing of Korean elders can overlook many things produced by cultural differences between the two societies. Kim and Shin(2005) claim that family factors focusing family relationship such as 'satisfied life through success of children' and 'accompanying life with spouses' as well as personal factors like 'life feeling self-efficacy' and 'life with a good self-control' should be included in critical indicators of successful ageing of Korean elders. That is similar with the finding of other researches that while 'a positive relation with others (Fisher & Specht, 1999; Ryff, 1989) is important for successful ageing in the Western society, Asian elders consider that family factors, especially adult children factors are important and the children's success leads to their successful ageing (Beyene *et al.*, 2002; Ingersoll-Dayton *et al.*, 2001; Torres, 2003). Therefore, this study used family support reflecting characteristics of Korea and four indicators (Physical well-being, Emotional well-being, Productive well-being, Social well-being) among six ones of successful ageing and classified by SIRGQL (2000)¹.

In previous researches on successful ageing, the concept of 'life satisfaction' has been widely utilized. Some researchers included life satisfaction, which is overall personal score on quality of life based on

standards set by oneself, as a factor of successful ageing (Baltes & Baltes, 1990; Crawford, 1999; Crosnoe & Elder, 2002; Vailant & Mukamal, 2001) and others used it as a key scale to explain or decide successful ageing (Guse & Masesar, 1999). This study also utilized it as a variable for explaining successful ageing like the later.

In most studies on life satisfaction in elders, only one dimension of ageing--most often physical functioning or disease--has been used as the outcome measure, while mental and social health have rarely been examined (Albert *et al.*, 1995; Chang, 1997; Glass *et al.*, 1995; Hu, 1997; Schaie, 1990; Seeman *et al.*, 1994, 1995; Strawbridge *et al.*, 1996; Wu, Leu & Li, 1999). Only a few researchers have used a multi-dimensional construct for studying successful ageing (Chou & Chi, 2002; Garfein & Herzog, 1995; von Faber *et al.*, 2001). Against this background, this study defined successful ageing as multi-dimensional concept of maintenance of physical and cognitive function and participation in social and productive activities rather than simple avoidance from incompetence and diseases (Rowe & Kahn, 1997) and investigated how it affected life satisfaction of male and female elders in or above middle class to determine difference in effects of the successful ageing on life satisfaction according to gender.

Generally, male elders showed higher life satisfaction than female ones and while educational background and religion affected life satisfaction positively, age did negatively. For marital status, elders with spouses had higher life satisfaction than those without spouses (Mannell & Dupuis, 1996).

1. SIRGQL (2000) has described six life satisfaction domains and associated indicators (SIRGQL, 2000): 1) Physical well-being: indicated by health, nutrition, mobility and daily activities; 2) Emotional well-being: indicated by happiness, contentment, freedom from stress, healthy self-concept and religious beliefs, 3) Social well-being: indicated by intimacy, friendships, community activities and social status and roles, 4) Productive well-being: indicated by personal and professional development, leisure activities, autonomy, and personal competency, 5) Material well-being: indicated by asset ownership, financial security, food and shelter, and socio-economic status, 6) Civic well-being: indicated by privacy, voting access, civic responsibilities and protections under the law. These indicators are not an exhaustive index, but rather they provide an ongoing list that may be added to and refined continuously (Cummins & Baxter, 1997; Felce, 1997; Gardner *et al.*, 1997; Hughes & Hwan, 1996; Schallock, 1996).

However, some others revealed that the gender of the elderly did not provoke any significant difference (Liang, 1984; Kim *et al.*, 1998; Kwon & Cho, 2000). In the meantime, others found that female elders showed higher life satisfaction than male ones (Park, 2000). However, the meaning of these fragmental conclusions about the issue is not clear strictly. That is because female and male elders experience different lives and their expectancy to life satisfaction in their later lives also can vary. Therefore, factors affecting life satisfaction of the later lives cannot but be different according to gender.

In detail, although informal support (from spouses, children and friends) was a very critical variable for the elderly in Korea, the support from spouses friends could be a measure to prohibit decrease of life satisfaction for males and females, respectively, and the support from adult children was observed to be important in improving life satisfaction for both of male and female elders (Lee, 2007). Despite of that, a current study insisted that economic independence of the elderly could control these informal supports (from spouses, children, etc.) (Sonh, 2006) and this finding meant that a fragmental conclusion about how family support is related with life satisfaction could not be made. In addition, productive activities were found to generally have a significant impact on life satisfaction of the elderly (Chung & Lee, 2005; Kim & Jung, 2003), but the results were reported to be different according to characteristics of the elderly groups (Kim & Park, 2007). Life satisfaction of elders with middle or higher income level were affected significantly by social participation compared to elderly with low income level, particularly among female elderly, and caring family was found to be a factors reducing life satisfaction of the elders in all economic levels.

Like these, although female and males elders have different characteristics, previous studies on successful ageing have not taken attention to the differences according to gender. Therefore, this study examined the degree of successful ageing and differences in factors affecting their life satisfaction with male and female elders in or above middle class.

The study purposes are as follows.

First, it investigates the degree of successful ageing indicators and life satisfaction of the elderly in or above middle class.

Second, it examines differences according to gender in successful ageing indicators and life satisfaction.

Third, it tests how successful ageing indicators affect life satisfaction of male and female elders and determines differences according to gender.

METHOD

Sampling and Procedure

Based on a study of Kim *et al.* (2005) it is conducted on the premises that successful ageing is a process in which a person is adapted well to various physical, psychological and social changes experienced in his or her later lives, the last life cycle and that a persons experiencing successful ageing satisfies his or her life.

Subjects in this study are male and female elderly people of over 55years of age² living in Seoul and the Metropolitan area, elderly who are in or above middle class. The most controversial item in middle-class studies is the problem of how to establish the range of the middle-class. In this study, we take into account objective variables as well as subjective variables (social status consciousness) for the classification standards, based on previous studies that used the middle-class as subject (Ha, 2003; Han, 2004; Jang, 2002). Accordingly, the range of elderly in the middle-class was chosen by taking into account the variables below³. First, the form of residence must be one's own house or they must at least be living in a separate rented house. Second, the occupational characteristics of the occupation before retirement were teacher, pharmacist, small entrepreneur, professor, lawyer and CEO of a large

2. The age basis of an elderly person in actual geriatric security laws is over 65 years of age, and an aged person is identified as someone over 55 years of age in the Aged Employment Promotion Act

3. Since current Korean elderly people grew up by going through social changes such as the Korean War, there are many cases in which they grew up without receiving the benefit of education. Thus, academic backgrounds were excluded from standards classifying middle-class elderly people

enterprise and some were full-time housewives. Third, they must have a middle-class consciousness (membership) in which they think of themselves as belong in the middle-class.

In this study, a pilot test was conducted from July to August 2006 by four colleagues and ten elders from the general population whose occupation (professional career) placed them in the middle and upper classes range in order to exam face validity. Participants were asked to review all the materials to be used in the survey, including survey questionnaire, cover letter and instructional sheet. Feedback forms included questions about the readability and length of the survey, adequacy of the instructions and a place to offer suggestions for improvement.

The final survey was carried out from December 2006 to January 2007. Totally 250 questionnaires were delivered and 211 questionnaires returned. 5 poorly answered ones of them in which the elders recognized themselves as low class were excluded. Finally 206 questionnaires were used for data analysis.

Indicators of Successful Ageing in This Study

Successful ageing indicators for this study were developed in accordance with the successful ageing literature (Baltes, 1997; Baltes & Baltes, 1990; Baltes & Carstensen, 1996; Faber *et al.*, 2001; Garfein & Herzog, 1995; Kahng, 2008; Schulz & Heckhausen, 1996; Strawbridge *et al.*, 2002). First, "family support" includes spousal and adult children support (Yoon & Yoo, 2006; Hui, 2006). Second, "functional ability" consists of physical and cognitive functioning (Kim, 2008; Kim & Jong, 2006; Kahng, 2008). Third, "need fulfillment" involves existential, social, self-identity, and actualization needs (Paik & Choi, 2007). Fourth, "productive activity" includes group, learning, and volunteer activities (Hong, 2005; Kim, 2008; Paik & Choi, 2007).

Measurement Scale

Family Support To measure family support we used questions adapted by Sung (2005) into Korean, which were originally used in the study by Seeman *et al.* (1995). The family support scale has 12 items and

consists of questions about emotional support from the spouse and children. The scale used for this study is the 5-Likert scale, with a higher score indicating that the elders received a high level of emotional support from the spouse and children. The Cronbach's α coefficients for spousal support and children support were .83 and .84, respectively.

Functional Ability This scale measures the elders' physical and cognitive functioning for daily life. To measure functional ability, we used questions adapted by Sung (2005) into Korean, which were originally used in the study by Seeman *et al.* (1995), Strawbridge *et al.* (2002), and Row and Kahn (1998). The functional ability scale used for this study has 14 items, with a higher score indicating that the elders demonstrated a high level of functional ability. The Cronbach's α coefficients for physical functioning and cognitive functioning were .90 and .84, respectively.

Needs Fulfillment This scale measures the elders' level of needs (i.e. existential, social, self-identity, and self-actualization) fulfillment. The existential needs are needs for a sense of security. The social needs are needs for what makes one valuable. The self-identity needs are needs for one's self definition of who one is. The self-actualization needs are needs for someone to accomplish goals of improving their potential ability. The scale used has 29 items, with a higher score indicating that the elders' needs are being successfully fulfilled. The Cronbach's α coefficients were .81, .78, .80 and .80, respectively.

Productive Activity This scale measures the elders' paid and unpaid labor, including volunteer activity, housework activity, learning activity or group activity. Learning activity is the activity for participating adult educational program. Group activity is the activity for participating religious or gathering activity. This scale has 6 items, with a higher score indicating that the elders are participated in highly productive activities.

Life Satisfaction This scale measures subjective satisfaction with one's current life. We used the

SWLS (satisfaction with life scale) that Sung (2005) adapted into Korean, which was originally developed by Diener (1984). This scale has 5 items, with a higher score indicating a higher level of life satisfaction for the elders. The reliability coefficients for measurement scales in this study ranged from .72 to .90 mainly over .85.

Analysis

The reliability was measured using Cronbach's α coefficient to verify the internal consistency of the evaluation tools used in this study. Descriptive statistics analysis was carried out to understand the general characteristics of the survey data. In order to test gender differences, t-test analysis was carried out. In order to test the effects of variables on life satisfaction for male and female elders, hierarchical regression was carried out.

RESULTS

Demographic Characteristics of Subjects

Table 1 shows the demographic characteristics of the subjects. Most of the male subjects (N = 90, 81.8%) were 60 to 69 years old and their academic background was relatively high as 52 (48.1%) and 36 (33.3%) of the subjects graduated colleges and graduate schools or higher institutions, respectively. The marital status of most of subjects (N = 101, 91.8%) was married and the number of children of the elderly was 2 and 3 for 51 (47.7%) and 31 (29.0%), respectively. For living arrangement, more than half of the subjects lived only with the couples (N = 59, 54.1%). The age of the female subjects was similar with that of male ones as 85.1% of them were 60 to 69 years old. Their educational background was graduation of colleges and graduation of high school for 44 (46.3%) and 29 (30.5%), respectively and their marital status was married and widowed for 81 (84.4%) and 13 (13.5%), respectively. The number of the subjects living alone was higher in females than in males. The number of children of more than half of the female subjects was 2 (N = 49, 53.8%) and living arrangement of the female elders was also similar with that of males elders as 60.0% of

Table 1. *Demographic Characteristics of Subjects (n = 206)*

Variable	Male (n = 110)	Female (n = 96)
<i>Age</i>		
Less than 60	6 (5.5)	9 (9.6)
60s	90 (81.8)	80 (85.1)
70s	11 (10.0)	4 (4.3)
Above 80	3 (2.7)	1 (1.1)
<i>Marital Status</i>		
Married	101 (91.8)	81 (84.4)
Remarried	6 (5.5)	13 (13.5)
Widowed	1 (.9)	1 (1.0)
Divorced	1 (.9)	0 (0.0)
Separated	1 (.9)	1 (1.0)
<i>Number of Children</i>		
None	1 (.9)	1 (1.3)
1 Child	12 (11.2)	9 (9.9)
2 Children	51 (47.7)	49 (53.8)
3 Children	31 (29.0)	21 (23.1)
More than 4 Children	12 (11.2)	11 (12.1)
<i>Living Arrangement</i>		
Alone	4 (3.7)	5 (5.3)
Only the Couple	59 (54.1)	57 (60.0)
With Son and Daughter-in-law	11 (10.1)	7 (7.4)
With Daughter and Son-in-law	3 (2.8)	3 (3.2)
With Non-married Children	28 (25.7)	22 (23.2)
Grandchildren Only	2 (1.8)	0 (0.0)
Others	2 (1.8)	1 (1.1)
<i>Highest Level of Education</i>		
Equal to or Lower than Elementary School	0 (0.0)	2 (2.1)
Middle School	1 (.9)	7 (7.4)
High School	19 (17.6)	29 (30.5)
College	52 (48.1)	44 (46.3)
Graduate School	36 (33.3)	13 (13.7)

the females lived only with the couples.

Table 2 presents the descriptive statistics (i.e. mean and standard deviation). The mean and standard deviation of each variable were 4.01 (.60) for family support, 3.24 (.74) for functional ability, 3.80 (.59) for needs fulfillment, 3.19 (1.32) for productive activity, and 3.2 (.56) for life satisfaction.

Table 2. Descriptive Statistics

Construct	M (SD)
Family Support	4.01 (.60)
Spousal Support	4.02 (.62)
Children Support	3.97 (.64)
Functional Ability	3.24 (.74)
Physical Functioning	3.03 (.85)
Cognitive Functioning	3.45 (.63)
Needs Fulfillment	3.80 (.59)
Existential Need	3.83 (.58)
Social Need	3.92 (.50)
Self-identity Need	3.66 (.60)
Actualization Need	3.64 (.68)
Productive Activity *	3.19 (1.32)
Housework Activity	4.37 (1.24)
Group Social Activity	3.57 (1.07)
Learning Activity	3.38 (1.51)
Volunteer Activity	2.63 (1.39)
Economic Activity	3.41 (2.07)
Life Satisfaction	3.52 (.63)

Note. 1 = Strongly Disagree; 5 = Strongly Agree

Note. * 1 = I never do it; 6 = I do it Daily

Gender Differences by Variables

Table 3 shows results of investigation on differences according to gender. Life satisfaction used to determine successful ageing was found not to be different between males and females. For each independent variable, functional ability and productive activity showed a significant difference according to gender and the degree of functional ability was higher in male elders than in female ones ($M = 3.38$ vs 3.15 , $t = 2.61$, $p < .01$). For productive activity, participation of females was higher than that of males ($M = 3.31$ vs 3.67 , $t = -3.40$, $p < .001$)

In detail, males showed better perceived higher physical ($M = 3.19$ vs. 2.86 , $t = 2.77$, $p < .01$) and cognitive functioning ($M = 3.53$ vs 3.36 , $t = 2.09$, $p < .05$) and economic activity ($M = 4.16$ vs 2.54 , $t = 5.64$, $p < .001$) than females. Females perceived higher levels of children support than males ($M = 4.14$ vs 3.91 , $t = -2.72$, $p < .01$). Also a higher number of females, compared with males, participated

in housework activity ($M = 5.32$ vs 3.55 , $p = -10.36$, $p < .001$), learning activity ($M = 3.83$ vs 3.00 , $p = -4.23$, $p < .001$), and volunteer activity ($M = 2.97$ vs 2.38 , $p < .01$).

Gender Differences for the Effects of Variables on Life Satisfaction

The first set of variables entered into the hierarchical regression analysis was family support (i.e. spousal support, children's support). The higher-order variables of functional ability (i.e., physical functioning, cognitive functioning), needs fulfillment (i.e., existential need, social need, self-identity need, self-actualization need) and productive activity (i.e., group social activity, volunteer activity, learning activity, housework activity, economic activity) were then entered. The gender difference results of the hierarchical regression analysis performed with four variables and the criterion variable of life satisfaction score are presented in Table 4 and 5.

The Effects of Variables on Life Satisfaction for Male Elders

The full model for male elders' life satisfaction accounted for 61% of the variance ($R^2 = .613$, $F = 13.56$, $p < .001$). The first step of the regression analysis, in which the family support variable was entered, contributed significantly to the variance in life-satisfaction scores ($R^2 = .110$, $F = 7.31$, $p < .001$). Examining the standardized partial regression coefficients, children's support significantly contributed to the change in variance in life satisfaction ($\beta = .274$, $p < .05$). The higher-order variable of functional ability was entered in step two and contributed significantly to increasing the variance in life satisfaction ($R^2 = .206$, $F = 7.696$, $p < .001$), suggesting that these higher-order variables are significantly related to life-satisfaction even after controlling for the contribution of family support. Examining the standardized partial regression coefficients within this step, physical functioning significantly contributed to the change in variance ($\beta = .338$, $p < .01$), indicating that higher levels of physical functioning predicted higher levels of life-satisfaction. The higher-order variable of needs fulfillment was entered in step three and contributed

Table 3. Gender Differences by Variables

Variables	Male	Female	t
	M (SD)	M (SD)	
Family Support	3.94 (.54)	4.03 (.56)	-1.19
Spousal Support	3.98 (.60)	3.95 (.74)	.364
Children Support	3.91 (.64)	4.14 (.56)	-2.723**
Functional Ability	3.38 (.66)	3.15 (.63)	2.61**
Physical Functioning	3.19 (.83)	2.86 (.86)	2.767**
Cognitive Functioning	3.53 (.61)	3.36 (.64)	2.089*
Needs Fulfillment	3.63 (.43)	3.15 (.63)	-.19
Existential Need	3.80 (.52)	3.76 (.60)	.52
Social Need	3.86 (.55)	3.97 (.46)	-1.45
Self-identity Need	3.36 (.48)	3.46 (.43)	-1.61
Self-actualization Need	3.42 (.53)	3.30 (.48)	1.73
Productive Activity	3.31 (.78)	3.67 (.73)	-3.40***
Housework Activity	3.55 (1.49)	5.32 (.95)	-10.36***
Group Social Activity	3.49 (1.05)	3.67 (1.06)	-1.279
Learning Activity	3.00 (1.56)	3.83 (1.28)	-4.233***
Volunteer Activity	2.38 (1.32)	2.97 (1.40)	-3.149**
Economic Activity	4.16 (2.12)	2.54 (2.01)	5.643***
Life Satisfaction	3.50 (.72)	3.36 (.79)	1.41

** p < .01 *** p < .001

Table 4. Summary of Hierarchical Regression Analysis for Life Satisfaction of Male Elders

Variables	Life Satisfaction							
	Model 1		Model 2		Model 3		Model 4	
	B	β	B	β	B	β	B	β
Family Support								
Spousal Support	.138	.118	.106	.091	-.032	-.027	.021	.018
Children Support	.305	.274*	.229	.269*	.123	.111	.108	.097
Functional Ability								
Physical Functioning			.273	.338**	.248	.279**	.232	.262*
Cognitive Functioning			.006	.007	.146	.181	.111	.138
Need Fulfillment								
Existential Need					.271	.190*	.282	.198*
Social Need					.215	.168	.135	.106
Self-identity Need					.373	.252***	.409	.276**
Self-actualization Need					.548	.395***	.531	.382***
Productive Activity								
Housework Activity							.071	.133
Group Social Activity							.008	.013
Learning Activity							-.052	-.115
Volunteer Activity							-.038	-.077
Economic Activity							-.017	.052
Constant	1.757		2.649		-2.112		-2.090	
F	7.35***		7.696***		20.860***		13.566***	
R ²	.110		.206		.607		.613	
Variation for R ²			.096		.401		.006	

*p < 0.05 ** p < 0.01 ***p < 0.01

Table 5. Summary of Hierarchical Regression Analysis For Life Satisfaction of Female Elders

Variables	Life Satisfaction							
	Model 1		Model 2		Model 3		Model 4	
	B	β	B	β	B	β	B	β
Family Support								
Spousal Support	.459	.431^{***}	.411	.387^{***}	.171	.161	.168	.158
Children Support	.107	.075	-.027	-.019	.036	.025	.028	.019
Functional Ability								
Physical Functioning			.333	.373^{***}	.224	.251^{**}	.197	.221[*]
Cognitive Functioning			.084	.082	.054	.053	.051	.050
Need Fulfillment								
Existential Need					.440	.350^{***}	.481	.383^{***}
Social Need					-.017	-.010	-.129	-.075
Self-identity Need					.448	.250^{**}	.541	.302^{**}
Self-actualization Need					.238	.148	.245	.153
Productive Activity								
Housework Activity							.120	.214[*]
Group Social Activity							-.071	-.096
Learning Activity							.132	.213[*]
Volunteer Activity							.041	.049
Economic Activity								
Constant	1.099		3.125		-.855		-.815	
F	12.04^{***}		13.671^{***}		16.530^{***}		12.403^{***}	
R ²	.206		.374		.594		.636	
Variation for R ²			.168		.220		.042	

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

significantly to increasing the variance explained in life-satisfaction ($R^2 = .607$, $F = 20.86$, $p < .001$). Examining the standardized partial regression coefficients within this step, self-actualization need, ($\beta = .395$, $p < .001$), physical functioning ($\beta = .279$, $p < .01$), self-identity need s ($\beta = .252$, $p < .01$) and existential needs ($\beta = .190$, $p < .05$) significantly contributed to the change in variance But children's support did not significantly contribute to the change in variance. Lastly, the higher-order variable of productive activity was entered in step four and contributed significantly to increasing the variance explained in life satisfaction ($R^2 = .613$, $F = 13.56$, $p < .001$). But productive activity (i.e., volunteer activity, learning activity, *et al.*) did not significantly contribute to the change in variance. Consequently,

needs fulfillment (especially, self-actualization needs fulfillment) and physical function (especially, good health) are significant indicators for Korean male elders to be satisfied with their later lives.

The Effects of Variables on Life Satisfaction for Female Elders

The full model for female elder's life-satisfaction accounted for 64% of the variance ($R^2 = .636$, $F = 12.40$, $p < .001$). The first step of the regression analysis, in which the family support was entered, contributed significantly to the variance in life-satisfaction scores ($R^2 = .206$, $F = 12.04$, $p < .001$). Examining the standardized partial regression coefficients, spousal support significantly contributed to the change in variance in life satisfaction ($\beta =$

.431, $p < .001$). The higher-order variable, functional ability was entered in step two and contributed significantly to increasing the variance in life-satisfaction ($R^2 = .374$, $F = 13.67$, $p < .001$). Examining the standardized partial regression coefficients within this step, spousal support ($B = .387$, $p < .001$), physical functioning ($\beta = .338$, $p < .01$) significantly contributed to the change in variance, indicating that higher levels of spousal support and physical functioning predicted higher levels of life-satisfaction. The higher-order variable of needs fulfillment was entered in step three also contributed significantly to increasing the variance explained in life-satisfaction ($R^2 = .594$, $F = 16.53$, $p < .001$). Examining the standardized partial regression coefficients within this step, existential needs ($\beta = .350$, $p < .001$), physical function ($\beta = .251$, $p < .01$) and self-identity needs ($\beta = .250$, $p < .01$) significantly contributed to the change in variance. But spousal's support was not significantly contributed to the change in variance. Lastly, The higher-order variable of productive activity was entered in step four and contributed significantly to increasing the variance explained in SA ($R^2 = .636$, $F = 12.40$, $p < .001$). But in contrast to male elders, group activity ($\beta = .214$, $p < .05$), learning activity ($\beta = .213$, $p < .05$) did significantly contributed to the change in variance. Consequently, needs fulfillment (especially, existential needs fulfillment), physical function (especially, good health), and group activity or learning activity are significant factors for Korean female elders to be satisfied with their later lives.

DISCUSSION

This study investigated differences in related factors affecting life satisfaction with the elderly in or above middle class experiencing successful ageing. From these results, the influence of successful ageing indicators was different according to gender.

There are significant differences between male and female elders regarding factors contributing to life satisfaction. For male elders, needs fulfillment, especially self-actualization, is a significant factor for satisfaction in later life. In other words, male elders

have a tendency to feel more satisfied in their later lives if they feel that they are respected, goal-oriented, and useful. This result indicates that the Korean government should provide social services to help male elders transfer their life experiences and skills to society, rather than offering care-oriented services. For instance, the Korean Association of Retired Persons (KARP), like its U.S. counterpart the American Association of Retired Persons (AARP), should help develop programs for the elderly, such as providing a clearinghouse for job opportunities, job assistance program, volunteering, foundational activities, and educational activities. Interestingly, male elders do not derive increased life satisfaction through economic activities. The reason might be that male elders in this study were still engaged in job-related activities, so that economic status is not as much of a concern for life satisfaction.

For female elders in Korea, needs fulfillment, especially existential needs, is the most important factor to increase life satisfaction. This means that a sense of security is a significant factor for female elders to be satisfied with their later lives, even if they are in the middle or high income class. This result indicates the Korean government should provide social services to help female elders manage their properties and/or pensions, such as providing financial assistance about social security, mortgages, retirement income, and personal budgets. Group activity and learning activity are significant factors for Korean female elders to be satisfied with their later lives. This result suggests that the government should develop life-long educational program, leisure activity program, community activity program for female elders to ensure they successfully aged.

What is interesting in this study is that family support does not show any significant impact in the elderly who think that they are experiencing successful ageing. In other words, support and aids from children, which are thought to be very important for Korean elders, do not affect life satisfaction of the elderly with some degree of economic independence. This result could be because this study recruited the elderly with relatively higher economic and social levels rather than general ones and because this study

investigated related variables in complex rather than only family support. As a result, for successful ageing of Korean elders in middle class, personal factors (realization of self esteem such as fulfillment of self-efficacy) can be expected to be important in the future than family factors. Moreover, health-related functional ability and productive activity affect life satisfaction of male and female subjects, respectively, so to secure successful ageing of Korean elders different institutional and political approaches are necessary according to gender.

Limitations and Future Research

This study has several limitations. The majority of the quantitative data was collected through a self-reported check list. Considering that each elderly person has unique needs, a more diverse data collection method may be needed that is sensitive to each respondent's needs. Another limitation is that the survey included 100 items, and thus may have been a burden that discouraged respondents. Also the sample set of this study restricted participants based on their educational levels, income, and former occupations. Another limitation for this study is sample size. Usually, ratio of 1 to 10 (variable to sample size) is regarded as proper in regression analysis. Even though sample size for female elderly and male elderly in this study are 96 and 110 respectively, this study included 13 independent variables in hierarchical regression.

Future research efforts should incorporate the WHO's definition of active ageing as 'the process of optimizing opportunities for health, participation, and security in order to enhance the life satisfaction as people age' (Hsu, 2006). In this formulation, 'active' refers to the ability not only to be physically active, but also to 'continue participating in social, economic, cultural, spiritual, and civic affairs' (WHO, 2002:12). Future research should be conducted with elders who view themselves as successfully ageing in the context of the WHO's definition.

The authors of this study recommend that as part of a future research effort, in-depth interviews should be conducted to understand more thoroughly needs fulfillment for the elderly because results

showed that needs fulfillment was the most important factor for both male and female elders to be satisfied with their later lives. This future research should take into account the growing consensus in many countries that public policy for the elderly should be developed in consultation with gerontologists and experts from related fields, as well as with the elderly themselves.

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