Two step hierarchical regression analyses health and social care essay

SThis study examined social participation status of Korean young elderly, and its association with self-esteem. Data was obtained through face-to-face interviews, and consists of 1713 participants. Two-step hierarchical regression analyses were conducted. The result were as follows. Firstly, Korean young elderly's participation was well distributed across the seven social participation activities considered in this study, and there were significant differences in which gender participated more in certain activities. Secondly, participation in some of the activities was significantly associated with self-esteem, and there were gender differences as to what activities proved to be significant in association with self-esteem. These results indicate that the association between self-esteem and social participation may differ according to gender and activity.▐ Key words : social participation, self-esteem, young elderly

I. Introduction

According to statistics, more than 7. 2% of Koreans were over 65 years of age in year 2000, firmly establishing Korea as an aging society (Statistics Korea, 2008). It is predicted that Koreans over 65 will make up more than 14. 9% of population by 2018, marking the beginning of an aged society. As these figures indicate, Korea is now facing a rapidly aging population, and it is becoming even more important to understand how Koreans age and how they could age well. Unfortunately, to date, research has yet to provide a definite answer as to what constitutes aging well. This is especially true for South Korea, which underwent industrialization at an unprecedented rate in 1960s and 1970s, and experienced a rapid increase in average life span. Korea as a country has no learned example to offer its elderly and soon-to-be

elderly as to how to live the prolonged old age that is intensifying diversity (Kim, Kim & Jung, 2007). Combined with the fact that later life itself engenders an accumulation of losses, this lack of guideline could be considered extremely detrimental to one's aging well. There have been, of course, attempts to fill this void, by proposing images of the ideal later life and the ideal course of aging. The concept of successful aging emerged in the process, with no single universally accepted definition, but all the same, convenient. Rowe and Kahn's (1998) version of its conceptualization was especially influential, and nowadays, the term " successful aging" is used primarily in reference to theirs: avoidance of disease and disablity, maintenance of high physical and cognitive function, and sustained engagement in social and productive activities. The emphasis on being involved is noteworthy; it is the only social component of the three. This is where the term " social participation" enters the picture. Social participation, again, is a tricky term, without a precise agreement on the definition. Terms such as social activity, social engagement, productive activity, civic engagement and community involvement are considered interchangeable with it. It is generally left to the researcher's discretion as to which term to employ and how to define it. As social participation could be understood to include most activities that act to relieve social exclusion (Ju, 2010), and thus allows to measure involvement in the widest sense, this study has chosen this concept in order to examine the young elderly's involvement with life and how it is associated with their self-esteem, self-esteem being the instrument to measure how they are dealing with later life. As gender is an important factor for both self-esteem and elderly's social participation, the analyses were conducted by gender. The research questions are as follows:

Research Question 1. How is the social participation status of Korean young elderly men and women? Research Question 2. How are social participation and self-esteem of Korean young elderly men and women associated?

II. Literature Review

1. Elderly's Self-esteemRosenberg(1979) defines in his discussion self-esteem as " a positive or negative orientation toward an object", and self-concept, which is a term sometimes equated with self-esteem, as " the totality of the individual's thoughts and feelings having reference to himself as an object". By Maslow's (1943) definition, " satisfaction of the self esteem need leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world". Self-esteem " moderates the impact of daily events on mental and physical well-being", and subjects with " high self-esteem made more internal, stable, global attributions for positive events than for negative events" (Campbell, Chew & Scratchley, 1991). Self-esteem has been found to be the most powerful direct determinant of happiness (Furnham & Cheng, 2000), and the strongest predictor of spouse-less female elderly's life-satisfaction (Yun & Lee, 1997). Self-esteem has been known to decline in old age (Robins & Trzesniewski, 2005). Some of the known reasons are changes in roles, relationships, physical functioning and socioeconomic status. However, as self-concept is a " both a structure and a process, i. e. a dynamic structure that responds to situational stimuli", it could be modified even as adults, as one develops " new cognitive and intellectual capabilities and confront new social demands and processes" (Demo, 1992). Previous studies elucidated relationships between elderly's self esteem and sociodemographic factors as

follows. When analyzed by gender, men tended to have higher self-esteem than women (Seo & Kim, 2003; Jung, 2004), Younger age, higher education level, and better health meant higher self-esteem (Lee, 1999; Jeon, 2004; Park, 1995; Ahn, 2002; Byun, 2005; Ahn, 2002; Jung, 2004). Economic variables such as perceived financial status or income, too, were positively related with self-esteem (Kim & Han, 2001; Oh, 2003). Being religious, and having a spouse was also associated with self-esteem (Choi, 2003; Yu & Choi, 2003; Hong, 1999). 2. Social ParticipationActivity theory, one of three major psychosocial theories on the human development in old age, asserts that aging adults will replace lost roles with compensatory activities in order to preserve their identity (Cavan, Burgess, Havinghurst, & Goldhammer, 1949, cited in Utz, MGS, Carr, Nesse, Wortman, & C, 2002). Social participation of the elderly, or the young elderly, is deemed as an ideal example of said compensatory activities. It is an important modifiable health determinant (Levasseur, M., Richard, L., Gauvin, L., & Raymond, E., 2010), and mortality (Berkman, 1995) as well as quality of life (Levasseur, Desrosiers & Tribble, 2008) is said to be associated with it. Social participation as a term, is without a clear consensus on its definition. Many similar terms, such as social activity, social integration, civic participation, and productive activity, are considered interchangeable, while specific meanings do differ, and reasons exist in which term is employed for each study instead of the others. It is of the each researcher's discretion how precisely to define social participation in a study. In one instance, it was defined as " paid or unpaid work for a family business or farm, volunteer work and other social group participation" (Hsu, 2007), and in another, it was " social interaction with persons other than a spouse" and included both

formal and informal social roles such as meeting attendance and telephone contact (Utz et al., 2002). Along with the definition, the exact activities that are considered as social participation and how they are categorized differs depending on the research context. There is Rose's (1967) classic categorization of expressive groups with goals external to the organization, and instrumental groups which serve socioemotional purposes for the members, that became a footing for Kim and Lee's (2008) categorization of religious ritual, leisure activities, public association activities and ascriptive association activities. Kim and Lee's categorization is noteworthy as it recognized the importance of ascriptive associations in Korea, which has no equivalent in the western world, and therefore, had been going largely unnoticed in the academia. For Bukov, Mass and Thomas (2002), it was categorized into collective participation, productive participation and political participation, and for Kim (2007), it was paid work, caregiving, and self-development. In this study, social participation is defined in its broadest sense: activities that act to relieve social exclusion. Kim and Lee's (2008) categorzation of social participation was adopted, and work, volunteering, and care-giving will be additionally examined. The additional three activities are to supplement the facets of young elderly's life the chosen categorization does not cover, and have been tested in previous studies as forms of social participation with a leaning to productive activities. 3. Social Participation and the Elderly's Well-beingThe results are varying where the association work has with the elderly's well-being is concerned. While there exists a study in which getting employed had a positive effect on self esteem (Lee, Kang, Jung, Chae & Ji, 2008), there are works that proved work to be unrelated to the elderly's well-being (Yun & Han, 2004). Furthermore, some

studies assert that work itself is neither detrimental or beneficial to one's well-being, and what matters is whether one is active at the level and in the form they would like to be (Herzog & House, 1991). Positive results are prominent for volunteering. Kim and Han (2001) proved that even after controlling for sociodemographic characteristics, the self-esteem of those who participated in volunteering was still higher than that of those who did not. This maybe because volunteering makes one feel useful to the society, and helps maintaining positive self-image (Lee, 2005). Leisure activities are especially important for the elderly who have lost, or are in the course of losing their previous roles in work or as parents. Min, Jung and Seo (2001) have proven in their study that participation in active leisure activities enhanced self-esteem and reduced loneliness and depression. Religion activities are still up for debate as many studies differ in their results. In Kim's 2006 work, religious elderly were proven to have higher self-esteem than the irreligious, and Kim and Park (2000) asserted that the elderly who participated in religious activities were leading healthier lives both physically and psychologically than those who did not. Jung (2004) has flat-out proven that religion and self-esteem had no association between. Public association activities and ascriptive association activities have been proven to have positive effects on the elderly's subject well-being in Kim and Lee's work (2008).

III. Research Design

1. Variables: Definitions and Measurements1) Sociodemographic characteristicsConsidered sociodemographic characteris-tics were economical status, health, education level, and marital status. Gender and

age were excluded as the analyses were conducted separately by gender, and age was not a factor of interest in this study. The economic status was to evaluate the young elderly's perceived economic well-being. It was measured with a 7-point Likert scale composed of " Low-low", " Low", " Medium-low", " Medium", " Medium-high", " High", and " High-high". Health is a factor that could directly influence the elderly's participation in social activities, as most activities require at least some level of physical and cognitive capacities. For this reason, health was measured with a 4-point Likert scale. Participants were categorized into 3 education levels for analysis: " Less than highschool", " High school graduate", " College graduate or higher". Those who were without a spouse at the moment, regardless of the reason, were coded " 0", and the rest were coded " 1". 2) Social participationSocial participation considered in this study was the participation in public association groups, leisure activities, religious ritual, ascriptive association groups, work, volunteering and care-giving. The terms for the former four activities were adopted from Kim & Lee's work (2008) in which social participation of the elderly was classified into aforementioned four activities. Resident gathering, informal town council, trade association, senior citizens association, women's association, PTA, labor union, cooperation association, consumer organization, and civic organization were categorized as public association groups. Participation in any of the above was coded " 1" in public association participation. Participation in study group, cultural program, hobby group, friend gathering, internet community was counted as participation in leisure activities. Participating in small group activities in religious institutions was coded " 1" for religious ritual. Small groups at workplace, alumni association, hometown association were

categorized and coded " 1" as ascriptive association groups. Participation in work was measured by current work status, and those who were currently working were coded " 1". Those who were participating in volunteering groups, or had done volunteering work within the past 1 year, were coded " 1" in volunteering. Care-giving was coded " 1" only when the respondent had nursing experience. Financial or emotional support, or running errands for the sick person was excluded. 3) Self-esteemSelf-esteem is a term associated with self-worth and self-evaluation (Maslow, 1943), and refers to the affective or emotional component of self-concept (Huitt, 2009). A shortened five-item version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to assess the participants' self-esteem in this study. The items are as follows: " I feel that I have a number of good qualities", " I feel that I am a person of worth, at least on an equal plane with others", " I feel I do not have much to be proud of", " On the whole, I am satisfied with myself" and " At times I think I am no good at all". Items were scored on a 5-point Likert scale, and negative items were reverse-coded so that higher score indicated higher self-esteem. The calculated Cronbach's alpha coefficient of reliability was . 78, indicating satisfactory internal consistency. 2. SubjectsThe data used for this study was obtained from " Comparison study on retired urban male elderly's social participation between Korea and Japan" (Research directed by: Han, Gyoung-Hae), conducted in 2009. The data was collected from 1713 participants, age ranging from 50 to 69, of which 836 were male and 877 were female. Participants were quota-sampled for gender and age, in all of 34 districts in four Korean cities (Seoul, Gwangju, Cheongju and Jeonju). 3. Methodology1) Data collectionThe data for this study was obtained through face-to-face interviews using a structured questionnaire.

The interviewer read out the list of questions and recorded the respondent's answers. A professional research firm conducted the data-collection from March 3rd to April 17th in 2009. 2) Data analysisSAS 9. 1 program was used for data analyses. A reliability test was conducted in order to test the internal consistency of self-esteem scale. Descriptive statistics were generated to describe the respondents' sociodemographic features. The relationships between dependent variables and independent variables were tested through correlation analysis. Chi-square tests and T-test were employed to determine gender differences. To analyze the relationship between social participation and self-esteem, hierarchical regression analysis were performed. Sociodemographic variables were entered in the first model, and social participation variables were added in the second model.

IV. Results

1. Sample DescriptionThe subjects of this study are 1713 Korean young elderly, and their characteristics are shown in . As this study analyzes young elderly's self-esteem by gender, it was essential to examine the subjects' characteristics by gender. 513 (29. 95%) men and 534 (31. 17%) female were in their 50s, and 323 (18. 86%) men and 343 (20. 02%) female were in their 60s. The average age of the participants was 58. 27 for men, and 57. 93 for women. Economic status was self-rated, and the average score was 3. 52 for men and 3. 57 for women, signifying that women rated their economic status a bit higher than men. Health variable was measured by perceived health. The average score was 3. 12 for men and 2. 99 for women, indicating that on average, men perceived their health to be more satisfactory than women. The education level of the subjects was reflective of their age and

gender, showing only 184 (10. 74%) men and 78 (4. 55%) women were college graduates or higher. 262 (15. 29%) men and 447 (26. 09%) women did not graduate from high school, and 390 (22. 77%) men and 352 (20. 55%) women graduated from high school. As for marital status, while 760 (44. 37%) men and 719 (41. 97%) women replied that they were together with spouse, 76 (4. 44%) men and 158 (9. 22%) women were without their spouse. Sample Description (N= 1713)Male (%)Female (%)Age50s513 (29. 95)534 (31. 17)60s323 (18. 86)343 (20. 02)M (SD)58. 27 (5. 82)57. 93 (5. 67)Eco- nomic statusLow-low33 (1. 93)25 (1. 46)Low130 (7. 59)115 (6. 71)Medium-low197 (11. 50)215 (12. 55)Medium355 (20. 72)397 (23. 18)Medium-high93 (5. 43)106 (6. 19)High26 (1. 52)19 (1. 11)High-high2 (0. 12)0 (0. 0)M (SD)3. 52 (1. 11)3. 57 (1. 03)HealthDissatisfied52 (3. 04)50 (2. 92)A littledissatisfied118 (6. 95)186 (10. 86)A littlesatisfied340 (19. 85)362 (21. 13)Satisfied325 (18. 97)279 (16. 29)M (SD)3. 12 (. 88)2. 99 (. 87)Edu- cationLess than high school262 (15. 29)447 (26. 09)High school graduate390 (22. 77)352 (20. 55)Collegegraduate orhigher184 (10. 74)78 (4. 55)M (SD)1. 91 (. 72)1. 58 (. 65)Mar- riedY760 (44. 37)719 (41. 97)N76 (4. 44)158 (9. 22)836 (48. 8)877 (51. 2)2. Self-esteem of the subjects shows average scores of the subjects' self-esteem by gender. Male participants' average self-esteem was 17. 75, and female participants' average self-esteem was 17. 68. T-Value was not significant. Self-esteem of sample by gender (N= 1713)GroupM (SD)Score ranget-ValueMale(n= 836)17. 75 (3. 49)5-25-0. 43Female(n= 877)17. 68 (3. 31)6-25* p <. 05 , ** p <. 01 , *** p <. 0013. Social participation status of the subjectsThe social participation status of the subjects by gender is shown in . Chi-square tests were used to determine significant gender differences in social participation activities. 161 (9. 4%)

male subjects participated in public association groups, whereas 137 (8. 0%) female subjects did, making the gender difference significant at p <. 05 level. As for leisure activities, 424 (24. 8%) men and 449 (26. 2%) women participated in the activities, the gender difference being not significant. 166 (9. 7%) of men participated in religious ritual, which was significantly smaller at p <. 001 level, compared to 240 (14. 0%) women. 536 (31. 3%) male subjects and 338 (19. 7%) female subjects participated in ascriptive association groups, and the gender difference was significant at p <. 001 level. The gender difference in currently working population was also significant at p <. 001 level, only 501 (29. 3%) women being currently employed, while 672 (39. 2%) men replied to be working. There was no significant gender difference for volunteering activities, as 221 (12. 90%) men and 226 (13. 19%) women each participated in volunteering. As for care-giving, there was a slight gender difference at p <. 10 level, with 54 (3. 2%) men and 76 (4. 5) women currently participating. Overall, the activity with most participants was work, with 1173 (68. 5%) participants, which was followed by ascriptive association groups and leisure activities with 874 (51. 0%) and 873 (51. 0%) participants respectively. Meanwhile, the activity with least participants was care-giving with 130 (7. 6%) participants, which is understandable as the definition for care-giving in this study is limited to nursing experience. Social participation of sample (N= 1713)ActivityMaleFemaleAllχ²Publicassociation161 (9. 4)137 (8. 0)298 (17. 4)3. 94*Leisureactivity424 (24. 8)449 (26. 2)873 (51. 0). 84Religiousactivity166 (9. 7)240 (14. 0)406 (23. 7)13. 35***Ascriptiveassociation536 (31. 3)338 (19. 7)874 (51. 0)112. 02***Work672 (39. 2)501 (29. 3)1173 (68. 5)107. 24***Volun-teering221 (12.

9)226 (13. 2)447(26. 1). 10Caregiving54(3. 2)76(4. 5)130(7. 6)2. 97†† p <. 10 , * p <. 05 , ** p <. 01 , *** p <. 0014. Social participation and self-esteemHierarchical regression analysis was employed to evaluate how the independent variables explained the young elderly's self esteem. For comparing purposes, men and women's data were analyzed separately. Sociodemographic variables were entered in the first model, and then the social participation variables were added in the second model. The regression results for the male participants are reported in . Sociodemographic variables explained about 22. 9% (adjusted R-square) of the variance in their self esteem. Self-rated living status and perceived health variables were significant at p <. 001 level, and education level variable was significant at p <. 05 level, while marital status was not significant in explaining men's self esteem. Social participation variables were entered in the second step, and explained about 27. 2% (adjusted R-square) of the variance in men's self esteem. This resulted in education level variable turning to be insignificant. Out of social participation variables, leisure activities, religious activities, ascriptive association activities, and volunteering activities proved to be significant in explaining men's self-esteem, while public association activities, work, and care-giving variables were not. Among the independent social participation variables that proved to be significant, leisure activities had the strongest association with men's self-esteem as its standardized beta value was the highest of the four with a value of 0. 161 (p <. 001). The next strongest association was found in volunteering activities with a value of 0. 076 (p <. 05), followed by ascriptive association activities (β= 0. 071, p <. 05) and religious activities (β= 0. 055, p <. 10). All VIFs were less than 3. Male subjects' social participation and

self-esteem (N= 836)

Variables	Model 1		Model 2	
	b	β	b	β
Sociodemographic variables				
Economic status	.848	.258***	.679	.206***
Perceived health	1.22	.291***	.985	.235***
Education	.377	.075*	.188	.037
Married	.481	.038	.519	.041
Social partici-pation variables				
Public association			.412	.044
Leisure activities			1.18	.161***
Religious activities			.505	.055†
Ascriptive association			.54	.071*
Work			.275	.03
Volun-teering			.634	.076*
Caregiving			.0050	
Model summary				
Adj. R²	.229		.272	
R² change			.043	
F-Value	62.98***		29.42***	

† p <. 10 , * p <. 05 , ** p <. 01 , *** p <. 001

Female participants' regression results are reported in . Sociodemographic variables explained about 14. 7% (adjusted R-square) of the variance in their self esteem. Self-rated living status and perceived health variables were significant at p <. 001 level, and education level variable was significant at p <. 05 level, while marital status was not significant in explaining self esteem. Social participation variables were added in the second model, and explained about 20. 4% (adjusted R-square) of the variance in women's self esteem. This resulted in education level variable turning to be insignificant, the same as was with male participants. Out of social participation variables, leisure activities, volunteering activities, and care-giving activities proved to be significant in explaining women's self-esteem, while public association activities, religious activities, and work variables were not. Among the independent social participation variables that proved to be significant, the strongest association with women's self-esteem was found in leisure activities, its standardized beta value being the highest of the three with a value of 0. 18 (p <. 001). The next strongest association was found in volunteering activities with a value of 0. 108 (p <. 01), followed by care-giving activities (β= 0. 073, p <. 05). All VIFs were less than 3. Female

subjects' social participation and self-esteem (N= 877)VariablesModel 1Model 2bβbβSociodemo-graphicvariablesEconomicstatus. 624. 185***. 455. 135***Perceivedhealth1. 083. 273***. 93. 234***Education. 374. 070*. 145. 027Married-. 067-. 007-. 176-. 02Socialparti-cipation variablesPublicassociation. 457. 479Leisureactivities1. 249. 180***Religiousactivities. 297. 038Ascriptiveassociation. 177. 025Work. 201. 029Volun-teering. 858. 108**Caregiving. 897. 073*ModelsummaryAdj. R². 147. 204R² change. 057F-Value38. 81***21. 45***† p <. 10 , * p <. 05 , ** p <. 01 , *** p <. 001

Discussions

As aging accompanies involuntary losses of both role and social interaction, the self-esteem of the elderly is generally considered to be at risk. Social participation, in that vein, is a convenient path through which the elderly could gain access to both role and social interaction, and become engaged with life. This study was conducted in order to examine Korean young elderly's social participation status and how it is associated with the participants' self-esteem. The results were as follows. Firstly, Korean young elderly's participation was well distributed across the seven social participation activities considered in this study. Echoing the results of relevant researches, there were significant gender differences in which gender participated more in certain activities. Secondly, participation in some of the activities was significantly associated with the young elderly's self-esteem, and there were gender differences as to what activities proved to be significant in association with self-esteem. Based on these findings, it seems safe to assume that Korean young elderly men and women differ in

their ways of engaging in social participation activities, and in what they gain from participating. The age range of the sample makes it natural that both men and women participate in work the most; they are not old enough to go into permanent retirement. In case of care-giving activity, since it was defined very narrowly compared to other activities, it is understandable that it is the least participated activity of the seven activities. Additionally, it must be considered as well that it is a gendered activity, which explains the significantly less participation of male participants. Other significant gender differences could be understood as a repetition of previous studies' results. Men are known to participate in public association activities, ascriptive association activities and work more than women, while religious activities are the one activity that women participate in more. Overall, the social participation status of the young elderly corresponds with what was already known in the literature. Also, the activities that proved to be significant related to the young elderly's self-esteem differed according to gender. While men and women shared leisure activities and volunteering activities as the activities that were associated with their self esteem, only men's self-esteem was significantly associated with ascriptive association activities and religious activities, in contrast with women's self-esteem being significantly associated with care-giving activities. This could be considered to be in parallel with the social participation status; ascriptive association activities and care-giving activities are gendered activities, while the religious activities remain unexplained. It is also not surprising that volunteering activities proved to be significant; the literature consistently identified volunteering to have significant association with self-esteem, and asserted it to be the ideal alternative for the roles that the elderly had, presumably, lost.

As for the question that what properties of these social participation activities could be related with higher self-esteem, it could be assumed that leisure activities, ascriptive association activities, and religious activities all provide opportunities to be connected with people as well as means of recreation, while volunteering activities and care-giving activities could be understood as productive activities, and in nature directly associated with self-esteem in the sense that being productive generally leads to approving oneself (Kim & Lee, 2008; Kart, 1990). It should also be noted that leisure activities held more significance than volunteering activity in both genders, raising doubt to the generally assumed superiority that productive activities have over other activities. This study exhibits a limitation in that social participation variables were chosen without clear criteria and appropriate categorization. Still, regardless of this limitation, this study has its value in that it employed a broader concept of social participation, and accordingly, examined activities that were with more variety than previous studies. The young elderly's engagement with activities from different facets of life were examined, and the gendered aspect of social participation was once again confirmed in the process. The association between social participation and self-esteem was analyzed by gender, and it could be concluded that the results were reflective of previous studies and theories. However, further researches are required to investigate the properties of the activities examined that caused some activities to be more significantly associated with self-esteem than others.