

Exploring Factors Affecting the Participation in Lifelong Education among the Older People in Shandong Province, China

Jun Soo-Koung¹, Xu Mengdi², Liu Ying², Liu Zhihao², Cui Weina²

¹ (First author) Associate professor, College of General Education, Namseoul University, skjun74@hanmail.net)

² Doctoral students, Graduate School of Namseoul University

Abstract

As China rapidly transitions into a super-aged society, understanding the psychosocial well-being of older adults has become increasingly important. This study aimed to explore the factors influencing lifelong education participation among retired elderly individuals in Shandong Province, China. Using data from 161 older adults aged 55 and above who had experience participating in lifelong education programs, this study conducted a four-step hierarchical regression analysis. The independent variables included sociodemographic characteristics (gender, age, education level), health and economic factors (perceived health and income), psychosocial factors (evaluative support, positive attitude toward life, and acceptance of past and present), and leisure factors (reading activities and meeting friends). The results revealed that gender, health status, economic status, and evaluative support significantly influenced participation in lifelong education. In particular, women, those with better health, higher economic levels, and stronger evaluative support were more actively engaged in lifelong learning. Furthermore, the study found that lifelong education participation positively affected self-integration and that social support mediated the relationship between lifelong education and ego-integrity. These findings underscore the importance of fostering supportive environments and inclusive educational programs to enhance the quality of life in later adulthood.

Key words: Lifelong Education Participation, Ego-integrity, Social Support, Chinese, Retired Elderly, Structural Equation Modeling

I. Introduction

In China is one of the countries experiencing the most rapid transition into a super-aged society. After entering an aging society in 2021, China is expected to become a super-aged society by around 2032, just 11 years later (KIEP, 2023). This rapid demographic shift is raising various challenges related to the quality of life of the elderly, including loss of identity, social isolation, and psychological instability after retirement (Jeong & Jeong, 2010; Do & Jang, 2015).

In this context, lifelong education plays a critical role in promoting self-integration, rebuilding social relationships, and revitalizing the lives of older adults. Participation in lifelong learning is not limited to

acquiring knowledge—it fosters psychological stability and enhances social support (Merriam & Kee, 2014; Wang & Seo, 2020). However, there is still a lack of comprehensive research analyzing the factors that influence lifelong education participation among older adults in China.

Therefore, this study aims to explore the factors that affect lifelong learning participation among older adults in Shandong Province, China. By employing hierarchical regression analysis with stepwise input of sociodemographic characteristics, health and economic factors, psychosocial variables, and leisure factors, this study investigates the key predictors of lifelong education participation.

The purpose of this study is to identify the factors that influence lifelong learning participation among older adults residing in Shandong Province, China. The specific objectives are as follows:

First, to identify the general characteristics of the participants, including gender, age, and education level.

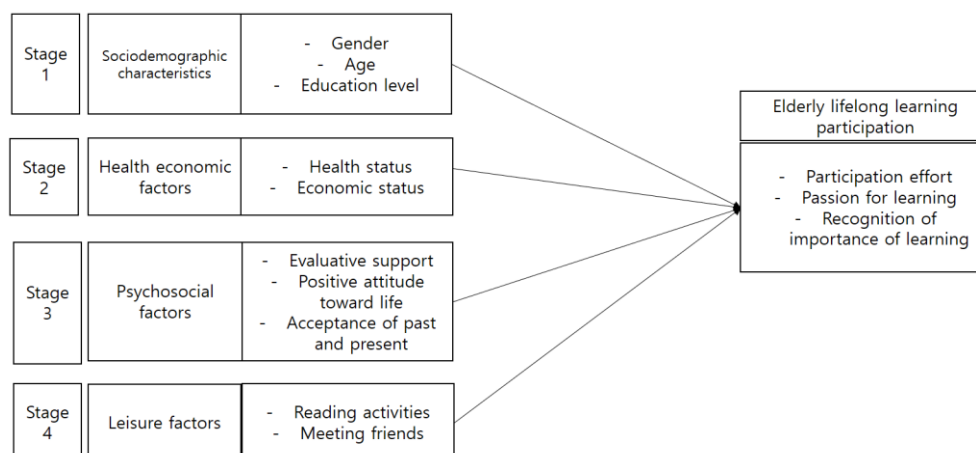
Second, to examine the levels of lifelong learning participation, health and economic factors, psychosocial factors, and leisure factors, and to verify the differences according to gender.

Third, to investigate the influence of sociodemographic characteristics, health-economic factors, psychosocial factors, and leisure factors on lifelong learning participation among the participants.

II. Research methods

1. Research model

This study aims to examine the factors influencing lifelong learning participation among older adults residing in Shandong Province, China. A hierarchical regression analysis was conducted in four steps. In **Step 1**, sociodemographic characteristics such as gender, age, and education level were entered. In **Step 2**, health-economic factors including health status and economic status were added. **Step 3** included psychosocial factors such as evaluative support, positive attitude toward life, and acceptance of past and present. In the **final step**, leisure factors such as reading activities and meeting friends were included. The regression model is illustrated in [Fig. 1].



[Figure 1] Research model

2. Subjects

This study targets the general older people aged 55 or older living in Shandong Province, China. A total of 165 questionnaires were distributed to the sample population of the study, and 161 questionnaires were used for statistical analysis after excluding 4 insincerely answered questionnaires. The survey was conducted from October 28 to November 7, 2024. Older adults who had participated in programs at a lifelong learning center located in Shandong were selected as the sample. The purpose of the study was explained to them, and questionnaires were distributed and collected from those who agreed to participate.

2. Instrument and Variables

The questionnaire consisted of 5 factors and 18 questions. The questionnaire consisted of sociodemographic backgrounds (3 questions), older people's lifelong education participation (3 questions), health-economic factors (2 questions), psychosocial factors (8 questions), and leisure factors (2 questions). The items of the questionnaires were made and chosen by the researcher. Regarding psychosocial factors, evaluative support was from Park Jiwon(1985). Positive attitude towards life and acceptance of past and present were from Ego-integrity tool by Kim Changbum(2009).

<Table 1> Variables and items of the instrument

Classification	Contents	No. of items
Sociodemographic characteristics	Gender	1
	Age	1
	Education level	1
Older people's lifelong education participation	Participation effort	1
	Passion for learning	1
	Recognition of importance of learning	1
Health economic factors	Health status	1
	Economic status	1
Psychosocial factors	Evaluative support	2
	Positive attitude toward life	2
	Acceptance of past and present	4
Leisure factors	Reading activities	1
	Meeting friends	1
		Total 39

4. Statistical analysis

The collected data were analyzed using SPSS version 18.0 as follows. First, the frequency analysis was conducted to analyze the students' general variables (gender, age, education level). Second, descriptive analysis was conducted to analyze the degree of Health economic factors, Psychosocial factors, and Leisure factors. Third, t-test and one-way ANOVA were conducted to examine the differences in Health economic factors, Psychosocial factors, and Leisure factors by general variables (gender, age, education level) of older people in Shandong, China. Fourth, 4 step hierarchical regression analysis was conducted to analyze the effects of gender, age, education level, health economic factors, psychosocial factors, and leisure factors. and socio-psychological variables on multicultural acceptance.

III. Results and Discussions

1. General characteristics of the subject

Table 2 presents the sociodemographic characteristics of the 161 research participants. In terms of **gender**, the majority of participants were female (n = 132, 82.0%), while males accounted for only 18.0% (n = 29). Regarding **age**, 55.3% (n = 89) of the participants were aged 60 or older, and 44.7% (n = 72) were under the age of 59. With respect to **education level**, 57.8% (n = 93) of the participants had completed college or higher education, whereas 42.2% (n = 68) had an education level below high school. As for **economic level**, 53.4% (n = 86) of the respondents reported a monthly income of over 5,000, while 46.6% (n = 75) earned below 5,000. These results indicate that the sample was largely composed of older adult women with relatively high educational and economic backgrounds.

<Table 2> Sociodemographic background of research participants (n=161)

Item	Classification	Frequency(No.)	PerCent(%)
Gender	Male	29	18.0
	Female	132	82.0
Age	below 59	72	44.7
	60 over	89	55.3
Education Level	below High-school	68	42.2
	College over	93	57.8
Economic Level	below 5000	75	46.6
	5000 over	86	53.4

2. Descriptive statistics of main variables

Table 3 presents the descriptive statistics and gender differences in older adults' lifelong education participation, health and economic factors, psychosocial factors, and leisure factors. The total number of participants was 161, including 29 males and 132 females. Independent sample t-tests were conducted to examine gender differences across each category. Among the factors related to older people's lifelong education participation, participation effort ($t = -2.806, p < .01$) and recognition of the importance of learning ($t = -2.849, p < .01$) showed statistically significant gender differences. In both cases, females scored significantly higher than males, indicating that older women are more actively engaged in lifelong learning and perceive its importance more strongly.

In the health and economic factors, a significant gender difference was found in health status ($t = -2.137, p < .05$), with females reporting a higher perception of their health. However, there was no significant difference in perceived economic status between males and females. Regarding psychosocial factors, evaluative support also showed a significant gender difference ($t = -2.688, p < .01$), with females perceiving greater support. There were no significant gender differences in positive attitude toward life and acceptance of past and present. Among the leisure factors, reading activities showed a near-significant difference ($t = 1.974$), with males reporting slightly higher participation. However, meeting friends showed no significant gender difference.

These results suggest that older women tend to be more engaged in learning and perceive higher levels of support and health, which has implications for designing gender-responsive lifelong education programs.

<Table 3> Differences by gender (N=161)

Categories		N	All	Gender Difference		
				Male (N=29)	Female (N=132)	t
				M±SD	M±SD	
Older people's lifelong education participation	Participation effort	161	4.24±.88	3.83±.97	4.33±.84	-2.806**
	Passion for learning	161	4.06±.93	3.83±.89	4.11±.94	-1.500
	Recognition of importance of learning	161	4.25±.81	3.86±.92	4.33±.77	-2.889**
Health economic factors	Health status	161	3.60±.50	3.43±.44	3.64±.51	-2.137*
	Economic status	161	3.96±.73	3.95±.62	3.96±.75	-.093
Psychosocial factors	Evaluative support	161	4.08±.73	3.76±.71	4.15±.71	-2.688**
	Positive attitude toward life	161	4.18±.62	3.93±.62	4.24±.61	-2.441*
	Acceptance of past and present	161	4.11±.72	4.01±.72	4.13±.71	-.844
Leisure factors	Reading activities	161	3.25±.90	3.55±.91	3.19±.89	1.973*
	Meeting friends	161	3.60±.70	3.72±.75	3.58±.70	.969

3. Factors Affecting Lifelong Education Participation by Hierarchical Analysis

To identify the factors affecting older adults' lifelong education participation, a hierarchical multiple regression analysis was conducted. In the first analysis (Table 6-1), gender, age, education level, health status, and economic status were entered as independent variables. In Model 1, only gender ($\beta = .221, p < .01$) significantly affected lifelong education participation, with an explained variance of 4.8% ($R^2 = .048$), which was marginally significant ($F = 2.640, p = .051$). In Model 2, after adding health and economic factors, health status ($\beta = .244, p < .001$) and economic status ($\beta = .376, p < .001$) emerged as significant predictors. The model explained 40.6% of the variance in lifelong education participation ($R^2 = .406$), and the regression model was statistically significant ($F = 21.226, p < .001$).

In Model 3, gender ($\beta = .161, p < .05$), health status ($\beta = .226, p < .01$), economic status ($\beta = .336, p < .001$),

and evaluative support ($\beta = .225, p < .01$) were significant predictors. The model explained 50.9% of the variance ($R^2 = .509, F = 19.688, p < .001$). In Model 4, which included leisure variables, gender ($\beta = .174, p < .05$), health status ($\beta = .215, p < .01$), economic status ($\beta = .312, p < .001$), and evaluative support ($\beta = .202, p < .01$) remained significant. The overall explanatory power of the model increased to 51.9% ($R^2 = .519$), and the model was statistically significant ($F = 16.154, p < .001$).

In summary, gender, health status, economic status, and evaluative support significantly influenced lifelong education participation among older adults. Especially, better health, higher economic status, stronger evaluative support, and being female were associated with greater participation in lifelong education.

<Table 4> Hierarchical Analysis of factors affecting lifelong education participation

(N=161)

		Model1				Model2			
		B	SE	β	t	B	SE	β	t
Personal background	Gender	.460	.172	.221	2.667**	.338	.140	.162	2.410*
	Age	.010	.130	.006	.080	.123	.105	.076	1.167
	Education level	-.147	.130	-.090	-1.127	-.194	.104	-.120	-1.875
Health/economic factors	Health status					.420	.114	.264	3.688***
	Economic status					.487	.076	.441	6.372***
		R ² =.048 Revised R ² =.030 F=2.640, p=.051				R ² =.406 Revised R ² =.387 F=21.226, p=.000			
		Model3				Model4			
		B	SE	β	t	B	SE	β	t
Personal background	Gender	.200	.132	.096	1.519	.231	.133	.111	1.742
	Age	.112	.098	.069	1.144	.085	.099	.053	.857
	Education level	-.163	.096	-.101	-1.695	-.098	.104	-.060	-.940
Health/economic factors	Health status	.263	.109	.165	2.425*	.276	.109	.173	2.539*
	Economic status	.247	.090	.223	2.754**	.230	.091	.208	2.515*
Psychosocial factors	Evaluative support	.233	.081	.210	2.855**	.229	.081	.207	2.815**
	Positive attitude toward life	.190	.123	.147	1.544	.179	.123	.138	1.459
	Acceptance of past and present	.161	.107	.143	1.504	.146	.107	.130	1.360
Leisure factors	Reading activities					.087	.058	.098	1.494
	Meeting friends					.042	.071	.037	.589
		R ² =.509 Revised R ² =.483 F=19.688, p=.000				R ² =.519 Revised R ² =.486 F=16.154, p=.000			

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

Note: Dummy variables for analysis, Gender(0=Female, 1=Male), Age(0=over60, 1=below59), Education (0=over college, 1=below high-school)

IV. Conclusions

This study analyzed the effect of lifelong education participation on self-integration among retired elderly individuals in Shandong Province, China, and examined the mediating role of social support in this relationship. The main findings are as follows: First, participation in lifelong education had a significant positive effect on self-integration, indicating that learning can serve as a means of self-realization even in later life. Second, lifelong learning contributed to strengthening social support, showing that relationships formed through learning help foster psychological stability. Third, social support positively influenced self-integration and played a mediating role in the relationship between lifelong education and self-integration.

These results suggest that participation in lifelong education contributes to enhancing the quality of life in later adulthood by improving self-integration and social support. Based on the findings, future studies should explore more diverse regions and populations and investigate the long-term effects and mechanisms of emotional support in depth.

NOTES

- Ahn, H. S., & Moon, J. W.** : The Effect of the Participation of the Elderly in Lifelong Education Activities on Self-compassion: Focusing on the Mediating Factors of Life Satisfaction and Volunteer Activities, *Journal of the Korean Contents Association*, 18(5), 2018, 592–599.
- Do, S. H., & Jang, J. Y.** : Changes in Psychological Health of Retirees, *Korean Journal of Psychology: Industry and Organization*, 28(2), 99–126. 2015
- Jeong, H. G., & Jeong, Y. S.** : A Study on Variables Affecting Retirement Satisfaction and Subjective Well-being, *Korean Journal of Psychology: Development*, 23(3), 51–70. 2010.
- KIEP (Korea Institute for International Economic Policy).** : *China's Policy Response to Low Birth Rate and Aging Population*. KIEP Beijing Office. 2023
- Kim, C. B.** : *A Study on Factors Affecting Self-integration of the Elderly who Live Alone* (Master's thesis). Yeungnam University. 2009
- Kim, D. B., Jeong, G. H., & Lee, E. J.** : The Effect of Participation in Lifelong Learning for the Elderly on Self-integration and the Mediating Effect of Life Satisfaction. *Korean Gerontological Studies*, 32(3), 802–817. 2012

- Lee, H. K.**
2024 : *The Effect of the Elderly's Leisure Music Activities on Successful Aging* (Doctoral dissertation). Daegu University of Oriental Medicine.
- Lee, Y. I.**
2020 : *An Integrated Study for the Development and Effectiveness Verification of the Creative Aging Elderly Education Program* (Doctoral dissertation). Kosin University.
- Lee, Y. K., Yeom, J. H., Hwang, N. H., & Yang, C. M.**
2013 : *Current Status and Policy Tasks of Elderly Education from the Perspective of Lifelong Education*. Korea Institute for Health and Social Affairs.
- Merriam, S., & Kee, Y.**
2014 : Promoting Community Well-being: The Case for Lifelong Learning for Older Adults. *Adult Education Quarterly*, 64(2), 128–144. <https://doi.org/10.1177/0741713613513633>
- Park, J. W.**
1985 : *A Study for the Development of the Social Support Scale* (Doctoral dissertation). Yonsei University.
- Wang, Y., & Seo, J. B.**
2020 : A Study on the Participation Motivation, Self-esteem, Psychological Empowerment, and Quality of life of Chinese Elderly Lifelong Learners. *Journal of Comprehensive Education Research*, 18(2), 43–61.