Article

Sociodemographic Characteristics and Leisure Participation through the Perspective of Leisure Inequalities in Later Life

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Abstract: This study examined the relationship between sociodemographic characteristics and leisure involvement in various meaningful activities under the political economy of aging and life course. The stepwise multiple and ordinal regression model revealed that the individual factors of older adults were significantly associated with leisure involvement: age (younger adults), gender (men), education level (higher education), perceived economic satisfaction (higher satisfaction with their financial condition), and perceived health (higher satisfaction with their health) variables were significantly related to more frequent participation in domestic leisure travel. Additionally, gender and education level were associated with leisure-time exercise; the four variables (gender, education level, economic activity, and perceived financial satisfaction) were related to leisure-time social activities. Contrary to our expectation, older adults who are older and with lower education were more likely to participate in volunteering activities. The results suggested that older adults' sociodemographic characteristics play an essential role in leisure behavior. The extent to which these characteristics affect leisure participation varies with different types of activities and cultural contexts.

Keywords: older adults; sociodemographics; leisure activity; political economy of aging theory; life course perspective; sustainable aging

1. Introduction

The growth of population aging is a significant global issue for all world regions at different paces and levels [1]. Such a demographic change would influence the older population's socioeconomic structure, social needs, and policy demands. The 2030 Agenda for Sustainable Development is to positively achieve sustainable growth and protect all people's human rights—notably, the most vulnerable, including older people [2]. Preparing for this growing population is essential to achieving the 2030 Agenda for Sustainable Development, with aging well goals regarding enhanced quality of life and good health and reduced gender, age, and economic inequalities in a sustainable aging society [2].

The political economy of aging theory posits that political and socioeconomic characteristics (e.g., age, gender, class, and race) and political/economic contexts interact to shape and determine older adults' positions, attitudes, or behavior in capitalist societies [3,4]. The socioeconomic inequalities could influence older adults' access to health care services, leisure activities, and lifestyles, leading to quality of later life [5]. Although Kemperman and Timmermans [6] found that type of leisure activities and participation are substantially related to sociodemographic characteristics (e.g., age, gender, and social status), little is known about the association between sociodemographic factors and diverse leisure activities in the aging population. Yet, previous leisure studies primarily focused on leisure-time physical activity and its benefits for healthy aging [7,8]. The life course perspective also focused on role transitions (e.g., marital status) that significantly influence the life and well-being of older adults [9]. In this view, individual development and aging resulted from

the relationship with demographic, economic, technological, and various socio-cultural factors that could shape inequalities among older adults [10].

Social gerontology theory helps guide research questions and hypotheses and explains findings in aging-related research [11]. Howe [12] also suggested that the combination of leisure and gerontology theory was a helpful method to understand leisure in later life thoroughly. Thus, incorporating these perspectives could help advance understanding of how age-related changes and sociodemographic factors lead to differences in leisure experience and, ultimately, healthy and sustainable aging. This study utilizes the life course perspective and the political economy of aging theory to guide research hypotheses regarding older adults' sociodemographic characteristics and leisure participation. Thus, the purpose of this study investigates the relationship between sociodemographic characteristics and leisure participation from a large representative sample of older Koreans. The study attempts to provide a new perspective regarding the impact of sociodemographic factors on leisure participation in late life. Identifying this relationship is a first step that may provide useful information to policymakers and leisure service practitioners regarding the development of leisure programs and policies in older adults.

2. Literature Review and Hypothetical Model

2.1. Sociodemographic Characteristics and Leisure Participation in Later Life

Individuals' sociodemographic characteristics—including, but not limited to, age, gender, marital status, and education—were significantly related to older adults' leisure participation in Western and Eastern cultures [13,14]. Most studies revealed a similar relationship between age and physical activity—those who are younger are more likely to engage in physical activity than those who are older [15]. Additionally, there were inconsistent results between other sociodemographics (e.g., education level, gender, and marital status) and leisure-time physical activity (LTPA). Some studies showed that a higher level of education was associated with more frequent physical activity [16], while others did not [17]. It was also less clear whether marital status and gender are associated with more frequent LTPA. While some studies showed that male and unmarried older people were positively associated with LTPA [18], others did not [14].

Although many studies have usually focused on physical activity (e.g., exercise) in leisure, little research has considered more diverse activities in later life [13,19,20] that fit into the context of LTPA. Strain et al. [20] included several activities (e.g., walking, outdoor yard work, church services/activities) and investigated changes in Canadian older adults' leisure activities based on their sociodemographics (age, gender, marital status, and education) in both 1985 and 1993. Age, gender, and education were related to a particular type of activity. However, consistent patterns did not emerge between the 1985 and 1993 samples regarding sociodemographics and leisure participation. The results indicated that a specific sociodemographic factor on leisure participation might change over time or a cohort effect.

Chou et al. [13] cross-sectionally examined the relationship between sociodemographics (gender, education, marital status, and employment status) and leisure activities (e.g., watching television/listening to the radio, socializing with relatives/friends, exercising, strolling on the street/shopping) in Hong Kong's older adults. Similar to the study of Strain et al. [20], a certain sociodemographic was related to a specific type of activity. The significance and magnitude of the association between sociodemographics and older adults' activities vary based on leisure type and culture. However, less is known about this link in the context of different leisure activities and cultural backgrounds. Previous studies have usually emphasized the connection between older adults' physical activity and sociodemographics rather than other types of leisure activities [15,16]. However, volunteering, a common productive activity for older adults, was a well-documented activity affecting well-being [21]. Thus, our study referred to meaningful leisure as a physical, social, and productive activity that provides multitudes of benefits for sustainable aging. This study

adopted two related social gerontology theories for hypotheses: the political economy of aging theory and life course perspectives.

2.2. Political Economy of Aging Theory

Critical gerontology theory, including the political economy of aging, provides insight into how differences and disparities across the life course affect social and economic well-being in later life [22]. Estes, Swan, and Gerard [23] called the political economy of aging theory an important alternative paradigm to the dominant view in gerontology, which emphasized the individual or micro level in isolation from broader social, political, and economic realities. The theory regards age as one major factor that influences older adults' aging experience and position. Older people tend to be one of the most marginalized groups in advanced industrial societies, facing more socioeconomic disadvantage than younger people [24–26]. Seniors are more likely to experience inequalities and isolation in their daily lives [27,28]. There are few opportunities to fulfill older adults' needs for their development. For example, older adults perceive that the community generally provides exercise opportunities targeted at young people, and thus the activities are not relevant to older people [29]. Similarly, there are not enough leisure programs/facilities designed for older adults and even fewer leisure opportunities for relatively 'old' older adults in Korea.

Historically, many older Korean women have not had access to good education and employment opportunities because of gender discrimination resulting from Confucianism's ideology [30]. Even today, Korea has gender-based wage and income disparities among OECD countries [31]. Thus, older women have more socioeconomic constraints related to leisure activities than older men. Older women particularly tend to take care of family members; as a result, they have the highest probability of not being involved in any leisure activities [32]. Across the globe, women remain marginalized when it comes to participation in leisure that would help them maintain physical health and well-being [33]. Given this evidence, we anticipate that the oldest-old and older women will exhibit comparatively lower levels of leisure participation than their counterparts.

Another critical factor in aging, education level, is the most consistent structural factor empirically associated with the aging experience [25]. Education level is considered one of the most critical factors for a higher socioeconomic standing [34,35]. Thus, people with higher education are more likely to have a higher social position and a better salary. Such inequality among older individuals leads to fewer leisure opportunities for uneducated or lower-income older adults. In this way, the economic activity of older adults can play an important role in participating in various paid leisure activities. Therefore, those who have higher education and are currently engaged in paid work will exhibit comparatively higher levels of leisure participation than those who are not. In a similar notion, we assume that being more satisfied with one's economic condition and perceived health will be positively related to leisure-time activities.

In light of these studies and the political economy of aging theory relating to sociodemographic characteristics of older adults, we offer the following hypotheses:

Hypothesis 1 (H1). *Younger age will be more positively related to leisure-time activities—(a) exercise, (b) domestic leisure travel, (c) community senior centers, (d) continuing education, (e)Social gathering among friends/family, and (f) volunteer activity—than older age.*

Hypothesis 2 (H2). *Older men would have a more positive relation to leisure-time activities than older women.*

Hypothesis 3 (H3). *Having a higher education level would be more positively related to leisure-time activities than having a lower education level.*

Hypothesis 4 (H4). *Being currently engaged in economic activity would be more positively related to leisure-time activities than not being currently involved in economic activities.*

Hypothesis 5 (H5). *Being more satisfied with one's economic condition would be more positively related to leisure-time activities.*

Hypothesis 6 (H6). *Being more satisfied with one's health condition would be positively related to leisure-time activities.*

2.3. Life Course Perspective

The life course perspective has been widely used to address most aging concepts from the biological, physical, social, and psychological aging progress viewpoints [10,11]. This perspective is a valuable way to explain findings and presents a broad range of questions from aging-related research [11]. The life course perspective can explain individuals' diverse roles, including family and societal work, and role changes across a lifespan since the gains and losses shaping human development from birth to death form a continual and multidirectional process [28]. For example, unfortunate events such as the death of a 'significant other' are major risk factors for older adults [36,37]. According to the broadly used Social Readjustment Rating Scale [38], this scale showed that life events related to a 'significant other' were the most stressful events among the individual's forty-three life events. Therefore, the life course perspective could address the relationship between 'significant other' and leisure participation in later life.

Previous studies presented that married older adults were more likely to participate in physical activities [39] and volunteering [40] than their single counterparts. In contrast, the life course perspective also supports that single older adults might make more effort to participate in activities since they are otherwise alone. To compensate for their loss (such as that of a spouse), social isolation, or certain disadvantages, single older people may want to be involved in alternative social activities from their stressful life event (e.g., widowhood or divorce) [41]. Marital status was also not related to physical activity [42]. These findings show mixed evidence for the role of older adults' significant other in leisure participation.

In summary, single older adults will be less likely to participate in a particular type of activity than older adults with a significant other because the experience of losing a significant other could bring extreme stress. At the same time, to overcome social isolation and role loss, single older adults will be more likely to participate in certain activities than their counterparts. The present study thus proposes the following hypothesis:

Hypothesis 7 (H7). *The presence of a significant other will be significantly related to the leisure-time activities of older adults.*

3. Methods

3.1. Participants

Secondary data analyses were conducted using a cross-sectional, national, and population-based survey of 'Korean Elderly Life Conditions and Welfare 2017' from the Ministry of Health and Welfare (MHW). Data were collected from older adults (aged 65 and older) in seventeen Korean cities from June 2017 to August 2017. Our study used a stratified two-stage cluster sampling design to obtain a representative sample of the entire country. In the first stage, primary sampling units were randomly constructed from enumerated districts of the 2010 Korean population and housing census with a probability proportionate to population size. Subsequently, the study selected the secondary sampling units from elderly households within each census tract in which household members were 65 years of age or older [43].

In total, the study obtained responses from 10,299 older adults (male 40.1%, female 59.9%, mean age 74.6 (S.D 6.356). As shown in Table 1, about 30% had had no formal schooling, 34.9% had received an elementary school education, 31.4% had received a middle and high school education, and only 6.4% had received higher education than college. A total of 62.3% had a significant other, and about 70% had not been engaged in economic activity. The satisfaction with their economic condition showed an average of

2.9 points, and their perceived health satisfaction showed an average of 2.9 points in older Koreans (Table 1).

Table 1. Description of measures.

	Variables	Codes or Range		%
Predictors	Gender	Male = 0		40.1
		Female = 1		59.9
	Education	No formal schooling = 0		27.2
		Elementary school = 1		34.9
		Middle/high school = 2		31.4
		College or higher = 3		6.4
	Significant Other	No = 0		37.7
		Yes= 1		62.3
	Economic Activity	Never = 0		9.8
		Currently doing = 1		31.3
		Currently not doing = 2		58.9
	Variables	Min	Max	Mean	S.D
	Age	65	106	74.6	6.356
	Satisfaction: Economic Condition	1 (very dissatisfied)	5 (very satisfied)	2.9	0.887
	Satisfaction: Health	1 (very dissatisfied)	5 (very satisfied)	2.9	1.009
Outcome Measures	Variables	Min	Max	Mean	S.D
	Exercise (days a week)	1	7	5.0	1.870
	Domestic leisure travel (times a year)	0	70	2.0	2.913
	Community senior centers (days a week)	0	7	3.8	2.020
	Variables	Codes or Range		%
	Continuing education	less than once a week = 1		39.8
		twice to three times a week = 2		48.8
		four times or more a week = 3		11.4
	Social activity	less than once a month = 1		21.6
		once a month = 2		48.9
		once every two weeks = 3		17.0
		once or more a week = 4		12.5
	Volunteering	less than once a month = 1		15.9
		once a month = 2		22.8
		more than once two weeks and less than once a week = 3		31.8
		twice to three times a week = 4		18.6
		four times or more a week = 5		10.9

3.2. Variables

Seven factors were considered as independent variables, including age, gender, education level, economic activity, satisfaction with one's financial and health condition, and the presence of a 'significant other' since the status and resources of older adults and their experiences of aging are conditioned by individuals' positions in the social structure and economic and political factors.

Many older Koreans do not engage in meaningful leisure activities outside their home. In a 2018 national survey from the Korean Ministry of Culture, Sports, and Tourism, watching television was the most favored leisure activity for seniors in their 60s (66.2%) and 70s (62.8%). This result is consistent with the leisure preference of older adults in this study. However, the study excluded sedentary activity because an active lifestyle and interpersonal relationships are critical components of successful aging and assist in a positive transition to older adults' changing roles in family and society [28,44]. Dependent variables were participation in six meaningful leisure activities: exercise, domestic leisure

travel in which the primary motivation is to take a vacation, community senior center participation, continuing education, social activities, and volunteering. The six leisure activities are relatively widespread among older Koreans, as well as socially productive and physical. The measurement for dependent and independent variables was listed in Table 1.

3.3. Analyses

Stepwise multiple and ordinal regression using backward elimination was conducted to examine the relationship between sociodemographic characteristics and older adults' leisure involvement. The common goal of multiple regression analyses is to determine which predictor variables significantly contribute to explaining the variability of independent variables [45]. Stepwise regression is a standard procedure for variable selection; it uses repeated significance tests when searching for the optimal combination of predictors. Notably, the backward elimination in stepwise regression methods is generally used to find the influential independent variables on the dependent variables by eliminating poor predictors [46]. Consequently, this study used this regression analysis to identify which sociodemographic factors can explain older people's leisure participation in diverse activities. The method of regression analysis was different depending on the dependent variables (continuous variables (exercise, domestic leisure travel, and senior center participation): multiple regression, ordinal variables (continuing education, social activity, and volunteering): ordinal regression).

4. Results

The study conducted multiple and ordinal regression analyses using the stepwise-backward to examine the association between older adults' sociodemographic characteristics and leisure involvement. Table 2 shows the initial model, and Table 3 shows the final regression model. Although the six regression models were statically significant, the explained variance varied by the activity type.

Table 2. Multiple and ordinal regression analysis for leisure-time activities (initial model).

Multiple Regression	β	S.E. of β	Beta	t	*p*-Value	VIF	
Exercise	$R = 0.163$, Adj $R^2 = 0.025$, $R^2 2 = 0.026$, $F (10, 6726) = 18.260$ ***						
(constant)	4.976	0.367		13.557	0.000		
Age	0.007	0.004	0.022	1.711	0.087	1.187	H1-a
Gender (0 = male)	−0.534	0.056	−0.141	−9.612	0.000	1.493	H2-a
Education (0 = no formal schooling)							
Elementary school	−0.063	0.064	−0.016	−0.976	0.329	1.836	H3-a
Middle/high school	−0.217	0.069	−0.055	−3.14	0.002	2.153	H3-a
College or higher	−0.442	0.101	−0.065	−4.39	0.000	1.507	H3-a
Economic Activity (0 = Never)							
Economic Activity_Currently Doing	−0.148	0.087	−0.036	−1.696	0.090	3.148	H4-a
Economic Activity_Currently Not Doing	0.127	0.081	0.033	1.561	0.119	3.122	H4-a
Satisfaction_Economic Condition	−0.02	0.028	−0.01	−0.716	0.474	1.227	H5-a
Satisfaction_Health Condition	−0.044	0.026	−0.023	−1.707	0.088	1.261	H6-a
Significant Other	0.101	0.054	0.026	1.875	0.061	1.341	H7-a
Domestic leisure travel	$R = 0.169$, Adj $R^2 = 0.026$, $R^2 = 0.029$, $F (10, 3353) = 9.890$ ***						
(constant)	3.331	0.863		3.859	0.000		
Age	−0.029	0.01	−0.055	−2.95	0.003	1.214	H1-b
Gender (0 = male)	−0.522	0.124	−0.088	−4.222	0.000	1.501	H2-b
Education (0 = no formal schooling)							
Elementary school	0.093	0.15	0.015	0.616	0.538	2.038	H3-b
Middle/high school	0.084	0.162	0.014	0.52	0.603	2.462	H3-b
College or higher	0.548	0.216	0.057	2.533	0.011	1.755	H3-b
Economic Activity (0 = Never)							
Economic Activity_Currently Doing	−0.235	0.194	−0.04	−1.212	0.226	3.701	H4-b
Economic Activity_Currently Not Doing	−0.131	0.187	−0.022	−0.699	0.484	3.543	H4-b
Satisfaction_Economic Condition	0.275	0.064	0.08	4.267	0.000	1.199	H5-b
Satisfaction_Health	0.118	0.057	0.039	2.054	0.04	1.245	H6-b

Table 2. *Cont.*

Multiple Regression	β	S.E. of β	Beta	t	*p*-Value	VIF	
Significant Other	−0.218	0.123	−0.035	−1.774	0.076	1.321	H7-b
Senior Center		R = 0.251, Adj R^2 = 0.034, R^2 = 0.063, F (10, 10070) = 106.739 ***					
(constant)	0.352	1.244		0.283	0.777		
Age	0.036	0.014	0.154	2.646	0.009	1.164	H1-c
Gender (0 = male)	0.018	0.187	0.007	0.096	0.924	1.593	H2-c
Education (0 = no formal schooling)							
Elementary school	0.299	0.184	0.108	1.621	0.106	1.511	H3-c
Middle/high school	−0.012	0.21	−0.004	−0.059	0.953	1.772	H3-c
College or higher	−0.252	0.433	−0.034	−0.583	0.560	1.18	H3-c
Economic Activity (0 = Never)							
Economic Activity_Currently Doing	−0.341	0.314	−0.129	−1.088	0.278	4.798	H4-c
Economic Activity_Currently Not Doing	−0.138	0.313	−0.052	−0.442	0.659	4.811	H4-c
Satisfaction_Economic Condition	−0.107	0.099	−0.067	−1.084	0.279	1.297	H5-c
Satisfaction_Health	0.091	0.082	0.067	1.118	0.265	1.225	H6-c
Significant Other	−0.166	0.178	−0.063	−0.93	0.353	1.553	H7-c

Ordinal Regression	β Estimate	S.E. of β Estimate	Ward	PAR	
Continuing Education		MFI = 31.835 ***, Pseudo R^2 = 0.022, TPL = 10.875 (*p* = 0.367)			
Age	−0.006	0.006	0.998	0.318	H1-d
Gender (0 = male)	−0.172	0.085	4.075	0.044	H2-d
Education (0 = no formal schooling)					
Elementary school	0.035	0.084	0.170	0.680	H3-d
Middle/high school	0.210	0.092	5.235	0.022	H3-d
College or higher	0.290	0.136	4.567	0.033	H3-d
Economic Activity (0 = Never)					
Economic Activity_Currently Doing	−0.027	0.111	0.059	0.809	H4-d
Economic Activity_Currently Not Doing	0.106	0.102	1.083	0.298	H4-d
Satisfaction_Economic Condition	−0.016	0.039	0.171	0.679	H5-d
Satisfaction_Health	0.005	0.036	0.017	0.898	H6-d
Significant Other	−0.027	0.070	0.152	0.697	H7-d
Social Activity		MFI = 183.389 ***, Pseudo R^2 = 0.041, TPL = 87.210 (*p* = 0.000)			
Age	0.000	0.003	0.020	0.888	H1-e
Gender (0 = male)	0.111	0.040	7.602	0.006	H2-e
Education (0 = no formal schooling)					
Elementary school	0.140	0.055	6.366	0.012	H3-e
Middle/high school	0.338	0.057	35.223	0.000	H3-e
College or higher	0.574	0.076	56.992	0.000	H3-e
Economic Activity (0 = Never)					
Economic Activity_Currently Doing	−0.223	0.065	11.623	0.001	H4-e
Economic Activity_Currently Not Doing	−0.116	0.063	3.363	0.067	H4-e
Satisfaction_Economic Condition	0.126	0.022	33.913	0.000	H5-e
Satisfaction_Health	−0.015	0.020	0.603	0.438	H6-e
Significant Other	0.039	0.042	0.825	0.364	H7-e
Volunteering		MFI = 29.328 ***, Pseudo R^2 = 0.075, TPL = 40.261 (*p* = 0.459)			
Age	0.028	0.012	5.591	0.018	H1-f
Gender (0 = male)	−0.286	0.139	4.224	0.040	H2-f
Education (0 = no formal schooling)					
Elementary school	−0.757	0.245	9.517	0.002	H3-f
Middle/high school	−0.697	0.237	8.621	0.003	H3-f
College or higher	−0.497	0.273	3.307	0.069	H3-f
Economic Activity (0 = Never)					
Economic Activity_Currently Doing	−0.265	0.227	1.365	0.243	H4-f
Economic Activity_Currently Not Doing	−0.207	0.224	0.853	0.356	H4-f
Satisfaction_Economic Condition	0.053	0.074	0.499	0.480	H5-f
Satisfaction_Health	−0.073	0.068	1.159	0.282	H6-f
Significant Other	−0.068	0.144	0.224	0.636	H7-f

Notes: *** *p* < 0.001.

Table 3. Stepwise multiple and ordinal regression analysis for leisure-time activities (final model).

Multiple Regression	β	S.E. of β	Beta	t	*p*-Value	VIF	Testing Hypotheses	
Exercise		R = 0.163, Adj R² = 0.025, R² 2 = 0.026, F (10, 6726) = 18.260 ***						
(constant)	5.381	0.045		118.478	0.000			
Gender (0 = male)	−0.550	0.048	−0.145	−11.432	0.000	1.117	H2-a	C
Education(0=no formal schooling)								
Middle/high school	−0.208	0.050	−0.053	−4.160	0.000	1.128	H3-a	C
College or higher	−0.406	0.087	−0.060	−4.663	0.000	1.125	H3-a	C
Domestic leisure travel		R = 0.165, Adj R² = 0.026, R² = 0.027, F (5, 3358) = 18.703 ***						
(constant)	2.736	0.714		3.832	0.000			
Age	−0.025	0.009	−0.048	−2.789	0.005	1.014	H1-b	C
Gender (0 = male)	−0.420	0.105	−0.071	−4.005	0.000	1.081	H2-b	C
Education (0 = no formal schooling)								
College or higher	0.501	0.169	0.052	2.966	0.003	1.072	H3-b	C
Satisfaction_Economic Condition	0.273	0.064	0.079	4.272	0.000	1.176	H5-b	C
Satisfaction_Health	0.122	0.057	0.040	2.156	0.031	1.213	H6-b	C
Senior Center		R = 0.154, Adj R² = 0.021, R² = 0.024, F (1, 332) = 8.079 ***						
(constant)	0.119	0.950		0.125	0.901			
Age	0.035	0.012	0.154	2.842	0.005	1.000	H1-c	S

Ordinal Regression	β Estimate	S.E. of β Estimate	Ward	PAR	testing hypotheses	
Continuing Education		MFI = 26.591 ***, Pseudo R² = 0.019, TPL = 0.581 (*p* = 0.901)				
Gender (0 = male)	−0.177	0.076	5.446	0.020	H2-d	C
Education (0 = no formal schooling)						
Middle/high school	0.191	0.068	7.989	0.005	H3-d	C
College or higher	0.279	0.116	5.830	0.016	H3-d	C
Social Activity		MFI = 178.051 ***, Pseudo R² = 0.040, TPL = 74.392 (*p* = 0.000)				
Gender (0 = male)	0.127	0.036	12.647	0.000	H2-e	S
Education (0 = no formal schooling)						
Elementary school	0.149	0.054	7.606	0.006	H3-e	C
Middle/high school	0.354	0.055	42.159	0.000	H3-e	C
College or higher	0.578	0.075	59.799	0.000	H3-e	C
Economic Activity (0 = Never)						
Economic Activity_Currently Doing	−0.124	0.035	12.820	0.000	H4-e	S
Satisfaction_Economic Condition	0.124	0.020	38.399	0.000	H5-e	C
Volunteering		MFI = 21.718 ***, Pseudo R² = 0.056, TPL = 10.908 (*p* = 0.537)				
Age	0.036	0.011	9.872	0.002	H1-f	S
Education (0 = no formal schooling)						
Elementary school	−0.512	0.161	10.132	0.001	H3-f	S
Middle/high school	−0.388	0.142	7.476	0.006	H3-f	S

Notes: C: the hypothesis is confirmed, N: the hypothesis is not confirmed, S: the hypothesis is not confirmed, but the test result is statically significant in the present study, *** *p* < 0.001.

The gender and education level variables among sociodemographic variables were statistically significant to explain leisure-time exercise (Adjusted R² = 0.019, F (3, 6764) = 18.260, *p* < 0.001) and continuing education (MFI = 26.591 *** Pseudo R² = 0.019, TPL = 0.581). The findings revealed that older men were more likely to be involved in exercise and continuing education than older women. However, the education level in the two leisure activities indicated different results. Those who have higher education were more likely to be involved in continuing education. On the other hand, those with lower education levels enjoyed more leisure-time exercise.

Variables such as age, gender, education level, and satisfaction with one's economic and health condition were statistically significant in explaining domestic leisure-time (Adjusted R² = 0.026, F (10, 3358) = 18.703, *p* < 0.001). The findings showed that older adults, male older adults, higher education, higher satisfaction with one's economic condition, and

higher satisfaction with one's health increased the likelihood of involvement in domestic leisure travel.

The age variable was statistically significant to explain senior center participation (Adjusted R^2 = 0.021, F (1, 332) = 8.079, $p < 0.001$), but the hypothesis was not confirmed. The findings showed that older adults were more likely to participate in a senior center.

The four variables (gender, education level, an economic activity, and satisfaction-economic condition) were statistically significant in explaining leisure-time social activity (MFI = 178.051 *** Pseudo R^2 = 0.040, TPL = 74.392). However, the economic activity and gender variables were not confirmed as a hypothesis. The findings showed that those who have higher education and higher economic satisfaction, female older adults, and those who never engaged in economic activity were more likely to be involved in social activity

Lastly, two sociodemographic variables (age and education level) were significant in explaining volunteering (MFI = 21.718 Pseudo R^2 = 0.056, TPL = 10.908). Contrary to our expectation, those with older age and lower education levels were more likely to participate in volunteering than those with younger age and higher education level. Table 3 summarizes the results of testing research hypotheses.

However, the R^2 of this research model is very low. This low R^2, associated with significant variance, makes the research model less reliable in linear estimation. Thus, it is necessary to utilize survey data to better estimate leisure behavior for older adults and use more advanced statistical analysis for follow-up studies.

5. Discussion and Conclusions

This study identified a significant relationship between sociodemographic characteristics and older adults' leisure participation from the political economy of aging and life course perspective. The stepwise multiple and ordinal regression model showed that the sociodemographic variables were more strongly related to a particular activity in this study (see Table 3).

Regarding age, the oldest-old exhibited comparatively lower levels of participation in domestic leisure travel than the young-old. Yet, those who are older are more likely to participate in the senior community center and volunteering activities than those who are younger. These findings could be rationalized in the life course and the political economy of aging perspective, in which travel activity involvement declines with age because of health and mobility challenges [47]. Interestingly, the senior community center named Kyung-Ro-Dang is an indoor space that older people can easily access near their homes to meet friends and pursue their sedentary hobbies. Therefore, relatively older adults, who have less opportunity to socialize with others and be involved in leisure activities due to their limited physical functions, could more easily access senior community halls than other activities.

When examining the gender variable, older men were more likely to participate in leisure-time exercise, travel, and continuing education (except for social activities). This finding supports conceptualizing that older women have more socioeconomic constraints related to leisure activities than older men in Korean society. Older men are more likely to participate in leisure travel, exercise, and continuing education that positively affect their physical and cognitive abilities and subjective well-being than older women [28]. This finding is similar to the study of Chou et al. [19] that showed that older Hong Kong men were more likely to exercise in the morning than older women. However, female older adults were more likely to participate in social activities than male older adults. This could imply that older men tend to be more involved in physical and productive leisure activities, and older women tend to participate more in social leisure activities.

When looking at education and economic conditions, we find that older adults with higher education and higher satisfaction with their financial situation and health participated in leisure travel and social activity more frequently. In particular, older adults who have higher education are more likely to continue education later. This fact is consistent with western studies that show higher income and education levels are associated with

more leisure involvement in later life [16,20]. This could imply that higher socioeconomic positions allow older adults more leisure opportunities; lower-income adults may feel financial constraints on participation in diverse leisure activities. In addition, the perceived economic condition and health and gender variables were not significantly related to participation in volunteer activity. This could suggest that socioeconomic characteristics such as financial status, health condition, and marital status are not solid predictors of participation in volunteer activities in later life. However, King et al. [21] show a significant association between higher involvement in volunteering and higher income and higher education. However, the finding showed that older adults with lower levels of education participate in more volunteer activities than older adults with higher levels of education. Interestingly, older adults had a more positive relationship to volunteering than younger adults. Therefore, further study is needed to confirm the link between sociodemographics and volunteerism in later life.

From the life course perspective, this study showed that a significant other in later life was not statistically related to all activities in the Korean sample. This result differs from some research that statistically validates that married older adults are more likely to volunteer than widowed men and women [40]; unmarried older adults frequently participate in physical activities [18]; married older adults tend to be more involved in exercise [39]; or marital status is not related to exercise [42]. These inconsistent results call for further investigation.

In sum, the results suggest that social gerontology is a relevant theory for studying leisure activities to explain older adults' socially constructed characteristics. Although certain sociodemographics were not statistically associated with the expected leisure participation (e.g., gender and senior center and volunteer activity, income class and volunteer activity, the presence of a significant other, and travel and volunteer and club activity). Leisure experiences display heterogeneous patterns according to activity type (e.g., passive vs. active leisure) and cultural background (e.g., Korean vs. Western culture) and even across different people, places, and times in the same community. In this context, there still remains the question about the utility of social gerontology to explain the variations and complexity of leisure behavior. Therefore, this study suggests future research to clarify the role of sociodemographic characteristics in individuals' leisure involvement, representing different cultural contexts, social-historical settings, and activity types.

6. Research Implications and Limitations

This study could provide valuable implications for policymakers and businesses. For example, it is crucial for them to investigate which activity type is most appropriate for specific sociodemographic segments so that policymakers can effectively utilize the sociodemographic data to build the senior center in the right places (i.e., aged community, according to current results). Managerially, leisure practitioners should focus more on potential target markets among the older population. For example, in terms of the specific segmentation, those with younger age, higher education, and higher satisfaction with economic/health status were more likely to travel than others in this study. Thus, travel-related businesses could target older adults with their competitive advantages and differentiated services. To appeal to the older adults who have higher education and economic status, marketers need to consider their financial capacity and intellectual level to provide appropriate travel services (e.g., luxurious vacation packages).

Although this study provided several significant findings, it has several limitations. First, a cross-sectional study could not account for trends and future directions of the observed relations between sociodemographics and leisure participation. A longitudinal approach is also required to understand the predictors for older adults' leisure participation and suggest significant trends for policymakers and practitioners. Second, this research considered only the commonly observed sociodemographics that affect older people's leisure participation. Future study needs to measure other variables (e.g., health status, personality, and attitudes to leisure) that may influence older adults' leisure. Third, this

study considered older Koreans only, so it cannot be generalized to other countries. There are different cultures between eastern and western countries. Future investigations need to consider a cross-cultural study. Fourth, although the research model of this study is statistically significant, the R^2 is very low. This low R^2, associated with significant variance, makes the model less reliable in linear estimation. Thus, it is necessary to utilize the survey data to better estimate leisure behavior for older adults and use more advanced statistical analysis for follow-up studies. Lastly, there may still exist theoretical knowledge gaps in social gerontology theories adopted for leisure studies. As noted, this study established theoretical frameworks for older adults' leisure participation using the political economy of aging and life course perspective. Although the gerontology theories seem to be useful when explaining older adults' diverse changes and aging experiences, the frameworks could not perfectly fit the leisure context and different cultures, as shown in the results of this study. Therefore, social gerontology theories need to be developed and describe older adults' leisure behavior.

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