



**ARTICLE**

# Leisure Activities, Happiness, Life Satisfaction, and Health Perception of Older Korean Adults

Junhyoung Kim<sup>1,\*</sup>, Kevin K. Byon<sup>2</sup> and Jaehyun Kim<sup>3</sup>

<sup>1</sup>Department of Health & Wellness Design, Indiana University, Bloomington, 47405, USA

<sup>2</sup>Department of Kinesiology, Indiana University, Bloomington, 47405, USA

<sup>3</sup>Department of Recreation, Therapeutic Recreation & Tourism, State University of New York, Brockport, 14420, USA

\*Corresponding Author: Junhyoung Kim. Email: kim9@iu.edu

Received: 12 December 2020 Accepted: 25 January 2021

## ABSTRACT

The purpose of the present study was to investigate the relationship between types of leisure activities and happiness, life satisfaction, and health perception of older Korean adults during the COVID-19 era. Using snowballing and purposive sampling methods, 123 respondents participated in the study. The results show that participation in outdoor activities and home-based activities served as a strong predictor of happiness, life satisfaction, and health perceptions among older Korean adults. These findings suggest that engaging in outdoor activities and home-based activities is likely to increase the psychological and mental health of older Korean adults during the COVID-19 era.

## KEYWORDS

Leisure; happiness; life satisfaction; health perception; older adults; COVID-19

## 1 Introduction

As a global health threat, the spread of COVID-19 has affected all segments of the world's population, resulting in physical, mental, interpersonal, economic, and social challenges. Governmental policies have promoted self-quarantining, social distancing, and wearing face masks to control the spread of infection. These guidelines have led to limited social interactions and daily activities as well as tensions within homes such as domestic violence [1,2]. Due to the social isolation and stress associated with the COVID-19 pandemic, many people are experiencing high levels of psychological problems that may include but are not limited to mental distress, depressive symptoms, anxiety, and a fear of infection [3–5]. For example, Ettman et al. [4] investigated the prevalence of depressive symptoms among adults living in the U.S. before and during the COVID-19. They found that the symptoms were three times higher than before the pandemic.

Older adults are considered as one of the highest risk groups affected by the COVID-19 pandemic because they are likely to have a weaker immune system and lower neuroendocrine than other age groups [6]. According to a report recently issued by the World Health Organization [7], the COVID-19 mortality rate of older adults has been drastically increasing, which leads to even stronger quarantine measures. As a result, multiple studies have found that the COVID-19 pandemic produced a cascade effect that exacerbates social disconnectedness, loneliness, and perceived health risks among older adults [8,9]. A



recent study found that older Dutch adults experienced increased social and emotional loneliness and mental health problems due to personal losses and a lack of social support during the COVID-19 pandemic [10]. In addition to these psychological problems and the elevated health risks associated with the aging process, older adults tend to experience mobility limitations and financial struggles, making them even more vulnerable to diminished mental health [11].

One crucial health promotion strategy is to engage in leisure activities. Leisure engagement has been found to reduce stress levels, increase positive emotions, and promote overall health and wellbeing [12–14]. For example, in a six-year longitudinal study, Mence [14] found that daily participation in leisure activity was positively associated with older adults' happiness and functionality. Among various types of leisure activities, scholars stress the importance of physical activity and physical fitness, which have been associated with lower mortality risk and better health outcomes such as longevity for older adults [15,16]. Other studies suggest the importance of social activity for older adults' mental health [17–19]. These studies found that social activity served as a vehicle for promoting positive social interactions and reducing negative psychological symptoms (e.g., depression, loneliness) among older adults.

Despite the various restrictions imposed during the COVID-19 pandemic, older adults may engage in leisure activities in modified forms, which can be expected to provide health benefits. However, there has been little investigation of older Korean adults' leisure behaviors in the COVID-19 era and the health benefits derived from engagement in leisure activities. Prior studies have indicated that older Korean adults engage most frequently in sedentary leisure activities (e.g., watching television, resting, and relaxation), social activities, religious activities, and cultural activities [20,21]. Yoon et al. [22] investigated the relationship between leisure activities and life satisfaction among older Korean adults. They found that certain leisure activities, such as volunteer, religious, and social activities predicted life satisfaction. In light of the importance of leisure engagement among older Korean adults, the present study focuses on the relationship between various types of leisure and mental health in the era of COVID-19. In this study, we employed happiness, life satisfaction, and health perception as mental health measures. Despite a growing body of studies on health and COVID-19 among older Korean adults, the association of types of leisure activities with these outcomes has not been explored.

For an international perspective on the relationship between leisure and mental health benefits, Choi [23] reported data showing that South Korea had the highest diagnostic rate for COVID-19, and in spite of a sharp growth in COVID-19 cases early in the pandemic, in South Korea the transmission was rapidly and effectively brought under control. In addition, in a study of South Korea's response to COVID-19, Dighe et al. [24] highlighted various strategies, such as strictly enforced prevention policies, individual- or cluster-based interventions, and easily accessible testing sites.

## **2 COVID-19, Leisure, and Health**

The COVID-19 pandemic has created a variety of life challenges for people, including the threat of physical illness, social isolation, a sense of vulnerability, feelings of confinement, and other psychological problems [3,25,26]. These challenges often diminish people's health perceptions and wellbeing. For example, Rossi et al. [26] have found that under the pressure of constantly increasing COVID-19 cases, healthcare workers experience high levels of post-traumatic stress disorders (49.38%), anxiety (19.8%), perceived stress (21.9%), and severe depression (24.73%).

Wu et al. [27] found that the COVID-19 related social and psychological problems (e.g., social isolation, loneliness) of older adults diminish their physical and mental health status. According to van Tilburg et al. [10], seven months after the beginning of the global pandemic (October 2019), both emotional distress and social loneliness increased among older adults in a Dutch community. Robb et al. [9] investigated the impact of COVID-19 on older adults' mental and physical health in the United Kingdom. They found that 27.2% of 7,127 survey participants reported that they felt loneliness, and 40% reported sleep

disturbances. Lara et al. [8] also found support for the idea that higher social isolation and loneliness are significantly associated with declining cognitive functions among older adults, which can exacerbate the detrimental effects of COVID-19 quarantining.

Leisure scholars stress the importance of leisure engagement as a means to reduce psychological problems, increase positive emotions, expand social networks, and promote physical health [28–30]. For example, Pöllänen [29] found that crafting as a leisure activity can help women develop optimism, positive relationships, and strategies for coping with negative feelings. Choi [23] who found that older people actively engaged in physical activity experienced reduction of depression during the COVID-19, suggested that encouraging older adults to participate in leisure-time physical activity is important for their health and wellbeing. However, Qin et al. [30] found that under strict regulations by public health authorities, older adults faced the loss of opportunities to participate in physical activity as well as to socialize with others, participate in community-based programs and activities, and pursue a variety of other leisure activities.

Given the paucity of information about older adults' leisure behaviors in the COVID-19 era, the first purpose of this study was to examine the patterns of leisure behaviors of older adults. We hypothesized that participants would report experiencing different types of leisure activities. The second purpose was to investigate which kinds of leisure activities are associated with psychological and mental health benefits, including happiness, life satisfaction, and health perceptions. Consequently, we hypothesized that certain leisure activities would predict more mental health benefits than others. This study's findings are expected to provide theoretical knowledge as to which leisure activities during the public health crisis are associated with health benefits, which was not available in the extant literature. Also, the findings of the current study would provide health care providers and therapists with actionable strategies to develop more tailored leisure activity program designs and contents to better meet the needs of older adult's population.

### 3 Methods

#### 3.1 Sample and Procedure

We conducted a cross-sectional study for which we employed snowballing and purposive sampling methods to recruit participants who were Korean and over 55 years old residing in South Korea. The research team contacted the directors of senior centers located in the metropolitan areas of South Korea. These centers offered a variety of programs and activities for community-dwelling older Korean adults under the COVID-19 pandemic. With their permission, we were allowed to place the study flyer on the notice boards, and potential participants contacted us via email or phone call. The data collection occurred between March 2020 and September 2020. In strict compliance with each facility's guidelines, we distributed a self-administered paper-pencil survey at the sites and picked them up afterward. When any participants had difficulties in understanding survey questions, the directors of each facility assisted them. Also, using snowball sampling suggested by Cohen et al. [31], the research team recruited more participants. Out of 145 surveys completed those with unmarked responses were excluded, leaving 123 surveys for subsequent data analyses, for an 84.1% response rate. The Institutional Review Board of the sponsoring university approved the study, and participation in the study was voluntary.

#### 3.2 Measures

##### 3.2.1 Types of Leisure Involvement

The Leisure Participation Involvement (LPI) scale developed by Ragheb [32] was used to measure the frequency of leisure activity participation based on seven types of activities: (a) *outdoor activities* (e.g., hiking, fishing, camping biking), (b) *sports activities* (e.g., golf, hockey, dance, tennis), (c) *home-based activities* (e.g., painting, playing a musical instrument, reading), (d) *entertainment* (e.g., watching TV, playing computer games, attending concerts), (e) *social activities* (e.g., socializing with friends, eating

out, traveling, family time), (f) *volunteer activities*, and (g) *civic activities* (e.g., church attendance, community service activities). A sample item used was “How often have you participated in sports activities during the COVID-19 pandemic?” Thus, seven items elicited participants’ frequency of participation in each type of leisure activity. These items were assessed on a scale ranging from 1 (*never*) to 4 (*frequently*).

### 3.2.2 *Life Satisfaction*

Life satisfaction was measured with a five-item scale derived from Diener et al.’s [33] Satisfaction with Life Scale (SWLS). A sample item was “In most ways, my life is close to my ideal”. The items were assessed on a 7-point Likert scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Higher scores indicated greater life satisfaction. The SWLS yielded a Cronbach’s alpha of 0.89 in the present study.

### 3.2.3 *Happiness*

Levels of happiness were assessed using a four-item scale developed by Lyubomirsky et al. [34] Examples of items included “In general, I am a happy person,” and “Compared to most of my peers, I am more than happy.” The items were measured on a 7-point Likert scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Higher scores indicated a greater sense of happiness. Initially, the Cronbach’s alpha reliability coefficient of the scale was too low ( $\alpha = 0.38$ ), but after deleting the negatively worded (reversed) item (i.e., Although I am not depressed, I am generally not very happy), the Cronbach’s alpha increased to  $\alpha = 0.88$ . Thus, we decided to use the three items measuring happiness in the subsequent data analysis.

### 3.2.4 *Health Perception*

Health perception was measured by one question: “In general, how would you rate your health?” The response options ranged from (1) = *poor* to (5) = *excellent*. This one-item scale on health perceptions has been widely used in leisure and health studies [35].

## 3.3 *Data Analysis*

We used SPSS version 24.0 for all data analyses. Descriptive statistics were employed to report frequencies, means, and standard deviations concerning demographics and the focal variables. Pearson correlation coefficients (Tab. 3) were used to examine the relationship between the independent and dependent variables. As for a dichotomous variable (i.e., gender; Female = 0, Male = 1), a point-biserial correlation coefficient was used as a correlation measure. We conducted a hierarchical multiple regression analysis to examine whether any types of leisure activity significantly predict older adults’ life satisfaction, happiness, and health perception. We also implemented a two-block analysis to examine the relative contribution of the seven different leisure types to the outcome variables after controlling for the effects of demographic factors. We entered the demographic variables (i.e., age, gender, and education) into the first block of the regression model and all types of leisure activities were entered into the second block.

## 4 *Results*

Tab. 1 reports the demographic information of the participants, including gender, age, and education levels. The sample of 123 older adults was composed of 67 females (54.5%), and 56 males (45.5%). The largest age group was 60 to 69 years old (34.1%), followed by 70–79 years old (31.7%). The most common educational level was a college degree (39.8%), followed by a high school diploma (32.5%) and a graduate degree (14.6%).

Tab. 2 shows the means and standard deviations of the study variables. The type of activities participants engaged in most frequently were social activities ( $M = 3.9$ ,  $SD = 1.5$ ), followed by outdoor ( $M = 3.8$ ,  $SD = 1.7$ ) and entertainment ( $M = 3.8$ ,  $SD = 1.7$ ) activities. On a 7-point Likert scales, the average life satisfaction score was 4.3 ( $SD = 1.0$ ), and the mean happiness score was 4.8 ( $SD = 1.3$ ). The mean health perception was 2.6 on a scale of 1–5 ( $SD = 1.0$ ).

**Table 1:** Demographics of the sample

Characteristics	<i>N</i>	%
Age		
<60	31	25.2
60–69	42	34.1
70–79	39	31.7
80–89	11	8.9
Gender		
Male	56	45.5
Female	67	54.5
Education		
Middle school graduate	12	9.8
High school graduate	40	32.5
Some college	4	3.3
College graduate	49	39.8
Graduate college	18	14.6

**Table 2:** Means and standard deviations of study variables

Variables	<i>M</i>	<i>SD</i>
<b>Independent Variables</b>		
Outdoor activities	3.8	1.7
Sports activities	2.6	1.8
Home-based activities	3.0	1.7
Entertainment	3.8	1.7
Social activities	3.9	1.5
Volunteer activities	3.0	1.8
Civic activities	3.3	1.9
<b>Dependent Variables</b>		
Life satisfaction	4.3	1.0
Happiness	4.8	1.3
Health perception	2.6	1.0

Note: Type of Leisure Involvement were assessed on a 4-point Likert scale. Life satisfaction and happiness were assessed on a 7-point Likert scale. Health perception was assessed on a 5-point Likert scale.

Pearson correlation coefficients were shown in [Tab. 3](#). Of the seven leisure types, life satisfaction was significantly associated with outdoor activities ( $r = 0.27, p < 0.01$ ), home-based activities ( $r = 0.31, p < 0.01$ ), and volunteer activities ( $r = 0.18, p < 0.05$ ). Happiness was significantly related to outdoor activities ( $r = 0.30, p < 0.01$ ), home-based activities ( $r = 0.24, p < 0.01$ ), volunteer activities ( $r = 0.19, p < 0.05$ ),

and civic activities ( $r = 0.69, p < .01$ ). Health perception was significantly associated with outdoor activities ( $r = 0.33, p < 0.01$ ), sports activities ( $r = 0.25, p < 0.01$ ), home-based activities ( $r = 0.41, p < 0.01$ ), and volunteer activities ( $r = 0.27, p < 0.01$ ). None of the demographic variables were significantly related to the dependent variables.

**Table 3:** Pearson correlations between the independent and dependent variables

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Age	1												
2. Gender	0.25**	1											
3. Education	-0.16	0.03	1										
4. Outdoor activities	0.12	-0.05	-0.01	1									
5. Sports activities	-0.06	-0.08	0.11	0.42**	1								
6. Home-based	-0.06	-0.05	0.09	0.40**	0.59**	1							
7. Entertainment	0.07	0.04	0.09	0.30**	0.31**	0.30**	1						
8. Social activities	-0.11	-0.26**	0.11	0.33**	0.33**	0.36**	0.31**	1					
9. Volunteer activities	-0.12	-0.14	-0.00	0.24**	0.48**	0.49**	0.18*	0.53**	1				
10. Civic activities	-0.15	-0.11	-0.02	0.16	0.34**	0.42**	0.23*	0.45**	0.69**	1			
11. Life satisfaction	0.01	-0.11	0.04	0.27**	0.10	0.31**	-0.04	0.12	0.18*	0.12	1		
12. Happiness	-0.06	-0.10	0.02	0.30**	-0.00	0.24**	0.02	0.23**	0.14	0.19*	0.69**	1	
13. Health perception	-0.04	-0.00	0.10	0.33**	0.25**	0.41**	0.13	0.11	0.27**	0.15	0.42**	0.32**	1

Note: \* $p < 0.05$ . \*\* $p < 0.01$ .

The hierarchical regression analysis (Tab. 4) for life satisfaction showed that the model with demographics explained 1.7% of the variance,  $F(3, 122) = 0.679, p > 0.05, R^2 = 0.017$ . None of demographic variables was significantly associated with life satisfaction. After we entered the seven leisure types into the second block, the model explained 18.5% of additional variance in life satisfaction,  $F(10, 122) = 2.538, p < 0.05, R^2 = 0.185$ . Specifically, our results indicated that outdoor activities ( $\beta = 0.252, p < 0.05$ ) and indoor activities ( $\beta = 0.338, p < 0.05$ ) were positively associated with life satisfaction.

**Table 4:** Hierarchical regression of life satisfaction

Variables	<i>B</i>	<i>SE</i>	$\beta$
<b>Block1</b>			
Age	0.057	0.106	0.051
Gender	0.263	0.195	0.127
Education	0.041	0.074	0.052
<i>R</i> <sup>2</sup> Change		0.017	
N		0.123	
<b>Block2</b>			
Age	0.048	0.102	0.043
Gender	0.223	0.191	0.108
Education	0.051	0.071	0.064
Outdoor Activities	0.148	0.060	0.252*

(Continued)

<b>Table 4 (continued).</b>			
Variables	<i>B</i>	<i>SE</i>	$\beta$
Sports Activities	-0.115	0.065	-0.203
Home-based Activities	0.206	0.070	0.338**
Entertainment Activities	-0.093	0.058	-0.154
Social Activities	-0.037	0.076	-0.055
Volunteering Activities	0.061	0.076	0.108
Civic Activities	-0.007	0.066	-0.108
<i>R</i> <sup>2</sup> Change		0.168**	
N		123	

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

With regard to happiness, the results (Tab. 5) showed that no demographic variables were significant associated with happiness ( $F(3, 122) = 0.491, p > 0.05, R^2 = 0.012$ ). The seven leisure types explained 20.9% of additional variance in happiness,  $F(10, 122) = 2.953, p < 0.05, R^2 = 0.209$ . Outdoor activities ( $\beta = 0.318, p < 0.05$ ) and indoor activities ( $\beta = 0.247, p < 0.05$ ) were found to be statistically significant predictors of happiness whereas sports activities ( $\beta = -0.316, p < 0.05$ ) was negatively related to happiness.

**Table 5:** Hierarchical regression of happiness

Variables	<i>B</i>	<i>SE</i>	$\beta$
<b>Block1</b>			
Age	0.037	0.132	0.027
Gender	0.288	0.244	0.112
Education	0.033	0.092	0.033
<i>R</i> <sup>2</sup> Change		0.012	
N		123	
<b>Block2</b>			
Age	0.015	0.125	0.011
Gender	0.157	0.234	0.061
Education	0.044	0.087	0.044
Outdoor Activities	0.233	0.073	0.318**
Sports Activities	-0.222	0.080	-0.316**
Home-based Activities	0.187	0.085	0.247*
Entertainment Activities	-0.087	0.071	-0.115
Social Activities	0.101	0.093	0.120
Volunteering Activities	-0.040	0.093	-0.057

(Continued)

<b>Table 5 (continued).</b>			
Variables	<i>B</i>	<i>SE</i>	$\beta$
Civic Activities	0.099	0.081	0.148
<i>R<sup>2</sup>Change</i>	0.196**		
N	123		

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

The hierarchical regression analysis for health perception (Tab. 6) revealed that the model with demographic variables (i.e., age, gender, and education) explained a mere 1.1% of the variance,  $F(3, 122) = 0.454$ ,  $p > 0.05$ ,  $R^2 = 0.011$ . The seven leisure types entered into the second block accounted for 24.1% variance in health perception,  $F(10, 122) = 3.565$ ,  $p < 0.05$ ,  $R^2 = 0.241$ . Specifically, outdoor activities ( $\beta = 0.249$ ,  $p < 0.05$ ) and indoor activities ( $\beta = 0.341$ ,  $p < 0.05$ ) were found to have a positive impact on health perception.

**Table 6:** Hierarchical regression of health perception

Variables	<i>B</i>	<i>SE</i>	$\beta$
<b>Block1</b>			
Age	-0.021	0.092	-0.021
Gender	-0.002	0.170	-0.001
Education	0.070	0.064	0.101
<i>R<sup>2</sup>Change</i>	0.011		
N	123		
<b>Block2</b>			
Age	-0.041	0.085	-0.043
Gender	-0.015	0.160	-0.008
Education	0.066	0.059	0.095
Outdoor Activities	0.127	0.050	0.249*
Sports Activities	-0.047	0.054	-0.096
Home-based Activities	0.180	0.058	0.341**
Entertainment Activities	0.005	0.048	0.010
Social Activities	-0.093	0.063	-0.158
Volunteering Activities	0.117	0.064	0.238
Civic Activities	-0.049	0.055	-0.104
<i>R<sup>2</sup>Change</i>	0.230***		
N	123		

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .



## 5 Discussion

The present study was a preliminary investigation of the types of leisure associated with psychological and mental health benefits of older Korean adults during the public health crisis. While the COVID-19 pandemic contributed to diminished mental health (e.g., depression, loneliness, isolation) and limited opportunities to engage in activities, this study underscored the importance of leisure as a way of promoting mental health among older adults. The overall results indicated that certain leisure activities contributed more to psychological and mental health benefits among older Korean adults than other leisure types. Specifically, participation in outdoor activities and home-based activities served as a strong predictor of happiness, life satisfaction, and health perceptions among older Korean adults. These findings suggest that engaging in outdoor activities and home-based activities is likely to increase the psychological and mental health of older Korean adults during the COVID-19 era.

Given the context (COVID-19) of the current study, the findings were not only new to the literature but also lend support to the promotion of health benefits reported in the leisure literature [36–38]. For instance, Kerr et al. [37] found that participation in outdoor recreation has been associated with reducing depressive symptoms and fear of falling among older adults. The present study's results are aligned with these previous findings, confirming that participation in outdoor activities is positively associated with favorable mental health outcomes for this population. This finding suggests that the COVID-19 emergency, during which outdoor activities are considered safer from infection than indoor activities, may produce older adults' opportunities to engage in visiting parks and trails, hiking, fishing, and camping. By engaging in these outdoor-based activities, they can reduce negative psychological concerns and problems and increase positive feelings and emotions. Thus, this study suggests that participating in these outdoor activities may increase their positive mental health outcomes in the context of the COVID-19 pandemic.

Prior studies have indicated that many older Korean adults participated mainly in sedentary leisure-time behaviors such as watching television, resting, and relaxation at home [20,21]. In light of this leisure preference, our study supports a positive association between home-based activities and happiness, life satisfaction, and health perception. Given the strict regulations governing behavior and social distancing in public places, participants may engage in home-based activities such as reading, playing instruments, and pursuing hobbies without experiencing barriers or risk of infection while gaining the mental health benefits of leisure. Some investigations found that home-based activities boosted older adults' motivation for physical activity, their self-efficacy, and their quality of life [39,40]. Due to the wide variety of technology-based programs enabling individuals to participate leisure activities remotely, it may be assumed that older Korean adults have access to various types of activities they can engage in while sequestering at home.

One interesting yet unexpected finding of the present study is that physical activity participation was negatively associated with happiness among the participants. The data in the present study also showed that sport participation had the lowest frequency among older Korean adults. One speculation for these results is that COVID-19 restrictions limited and/or modified involvement in physical activities. For example, social distancing restrictions might have reduced participants' motivation in engaging with physical activities and therefore, their perception of happiness can be negatively affected. In addition, older adult participants may experience fears of infection outside the home and associate more risk with fully engaging in physical activity during this pandemic, which might have affected their association with various physical activities during the pandemic.

As with any research, limitations should be acknowledged. First, we collected the data from only one point in time (i.e., during the COVID-19). Thus, any changes in leisure behaviors from pre COVID-19 were not considered in the present study. Therefore, future scholars should consider collecting data from multiple points in time (i.e., pre, during, and post pandemic), allowing researchers to better understand

any trend of leisure behavior changes that can be associated with psychological and mental health benefits. Results derived from this type of a longitudinal investigation would provide public health researchers and practitioners with insights useful for planning leisure activities programs that can be expected to match health benefits. Second, we aimed to investigate which types of leisure activities were associated with psychological and mental health outcomes. In the data analysis, we treated each of the seven types of leisure activities as composite scores, which were calculated as a weighted sum of various manifests. This allowed us to understand which type of leisure activity as a higher-order factor specifically contributed to specific health benefits (i.e., happiness, life satisfaction, and health perception). However, older adults tend to keep their routine with leisure activities instead of engaging in multiple leisure programs particularly during the public health crisis. Thus, future studies should treat leisure activity as a manifest variable, which enables researchers to better understand the effects of specific leisure behavior on health outcomes.

Although we found the leisure activities as antecedents associated with the health outcomes among older Korean adults, the variance explained in the health outcome variables in the present study was small (11%) to moderate (24%). Future scholars should identify additional variables to further improve the hypothesized model's predictive power by considering individuals' differences (e.g., functional abilities, activity levels before the pandemic), which were found to influence older adults' health outcomes future studies.

Despite these limitations, as an initial exploration of the types of leisure activities associated with happiness, life satisfaction, and health perception of older Korean adults, the present study found the importance of outdoor and home-based leisure activities as drivers for mental health benefits. These results can lead to practical suggestions on how to promote the mental health of Korean older adults. For example, interacting with nature in parks and other outdoor settings can be therapeutic and health-sustaining. In particular, designing and implementing home-based activities in which physical activities are embedded could make an important contribution to older adults' mental and physical health during the COVID-19 pandemic and beyond. Thus, public health professionals need to design and develop outdoor recreation programs and home-based physical activity programs that are appealing and accessible to older adults. For example, leisure service providers and recreational therapists need to determine the leisure interests of older Korean adults and their personal strengths for engaging in outdoor and home-based activities during the COVID-19 era. Providing programs and activities appropriate for their leisure interests and strengths will help older Korean adults engage in leisure activities that are conducive to their mental health.

**Funding Statement:** This research was supported by the 2020 Korean Studies Grant Program of the Academy of Korean Studies (AKS-2020-R-20).

**Conflicts of Interest:** The authors declare that they have no conflicts of interest to report regarding the present study.

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