

The Effect of Physical Activity Experiences and Attitudes on Mood Status in the Elderly and Young Adults

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Abstract

Background/Objectives: This study aims to investigate the effect of physical activity experiences and attitudes on the mood according to the elderly and young adults.

Methods/Statistical analysis: To carry out the study, statistical processing was performed using SPSS 18.0 for 296 senior citizen welfare centers and university students in area C.

Findings: First, as a result of a comparative analysis of physical activity experiences and attitudes according to the elderly and the young adults, the elderly were more interested in and experienced in physical activity experiences and attitudes than the young adults. Second, anxiety, depression, and anger were higher in the elderly than in the younger group. Still, in terms of vitality, the young adults were more elevated than, the elderly. Third, it was found that both the elderly and young adults had no effect on anxiety, depression, and anger. In terms of physical activity experiences and attitudes, it was found that physical activity attitudes affected vitality.

Improvements/Applications: physical activity experiences and attitudes can increase vitality and become a driving force in life for the elderly and young adults, so it is necessary to focus on participating in physical activity.

Keywords: The elderly, Young adults, Physical activity experiences, Attitude, The mood states

1. Introduction

In modern society, humans are interested in various physical activities to improve their quality of life and maintain health. In particular, old age is more interested in fitness as retirement and leisure increase. In Korea, the elderly population aged 65 or older is expected to be 16.5% in 2021, 20.3% in 2025, and 43.9% in 2060 due to rapid aging [1,] and the increasing number of elderly is highlighting the importance of the elderly health in terms of welfare. In response, the elderly recognizes the importance of physical activity for successful aging and participate in physical activities to increase life satisfaction and maintain mental and physical health. Many scholars have suggested positive results in social perspectives [2] and personal happiness [3] through studies that show that physical activities of the elderly have a positive effect from various perspectives [4,5]. [2] "The elderly quit their jobs and retire, and after retirement, they experience a sense of contraction as the social network shrinks. However, the participation of the elderly in sports activities can be a breakthrough that can restore social relations and reduce social isolation.

On the other hand, college students who represent youth in Korea spend a lot of time preparing for study and employment in a situation where it is becoming difficult to find a job with the passage of the time. In addition,

the reality is that there is not enough time to do physical activities because many students are doing school life while working part-time at the same time to earn tuition and pocket money [6].

Regular physical activities in young adults can prevent cardiovascular disease, high blood pressure, diabetes, cancer, etc. [7], and physical activities are reported to have low participation in regular physical activities despite various effects of reducing medical expenses from a welfare perspective [8]. In addition, the recent COVID-19 pandemic has limited physical activity, increased exposure time to smartphones and SNS, and physical problems such as speech destruction, game addiction, turtle neck syndrome, carpal tunnel syndrome, and eye fatigue [9,10]

Another notable result is that physical activity has a lot of influence on mood [11] showed that the group with high physical activity had higher mood conditions than the group with low physical activity.

Based on the results of revitalizing life and psychological stability through physical activities and affecting the quality of life [12], a basic survey will be conducted on the physical activity of the elderly and young adults.

It is very meaningful to examine the mood states of the Elderly and Young Adults according to their experiences and attitudes toward physical activity, and to compare and analyze how they affect their moods. Based on this, it will be an opportunity to recognize the importance of physical activity in adolescence and to experience various sports activities through the aging process.

Until now, many studies have been conducted on physical activity for each elderly and young adults. However, few studies have been conducted on comparative analysis of physical activity and mood conditions of the elderly and young adults.

Therefore, the purpose of this study is to compare and analyze the physical activity experience and attitude of the elderly and young adults except for the middle and elderly who can experience physical activity with a job and analyze how the physical activity experience affects their mood state. These studies will provide the importance of the participation and experience of the elderly in physical activities in the future to the youth and provide implications for actively participating in physical activities.

Based on these research purposes, the research problems of this study were set as follows.

First, what is the comparative analysis of the physical activity experience and physical attitude of the elderly and young adults?

Second, what is the comparative analysis of the mood state of the elderly and young adults?

Third, what are the effects of physical activity experience and physical attitude of the elderly and young adults on mood?

2. Materials and Methods

2.1. Research subject

The sampling of this study was compared and analyzed by using wireless sampling for the elderly in their 60s or older and young adults in their 20s. Specifically, the youth group sampled 149 students at S University in Area C, and the elderly group selected 147 senior citizens at the Senior Welfare Center in Area C. The 296 sampled people were used for the final analysis without missing answers.

The demographic and sociological characteristics of the study subjects are shown in <Table 1> below. There were 52 men and 95 women, 45 people aged 61 to 65, 40 people aged 66 to 70, 29 people aged 71 to 75, and 94 women aged 75 or older, 68 first graders, 31-second graders, 27 third graders, and 23 fourth graders.

Table 1: Initial Set of features used for the experimentation

Elderly		n	%	Young adults		n	%
Gender	male	52	35.4	Gender	male	55	36.9
	female	95	64.6		female	94	63.1
Age	61-65	45	30.6	Grade year	Freshman	68	23.0
	66-70	40	27.2		Sophomore	31	10.5
	71-75	29	19.7		Junior	27	9.1
	76years or older	33	22.4		Senior	23	7.8

2.2. Research tool

A questionnaire was used as a research tool to achieve the purpose of this study. The composition of the questionnaire consisted of 2 questions about demographic characteristics: the elderly (gender, age), the youth (gender, grade), 3 questions about physical activity experience, 3 questions about physical attitude, and 34 questions about mood status.

This study drafted a questionnaire by agreeing with the instructor of each major on the experience and attitude of the study as a basic survey of the physical education division of humanities, music, biology, physical education, and food, and minimized the number of questions in the original questionnaire. However, the test paper for measuring mood conditions used the profile of mood states (POMS) of [13], consisting of 34 questions, and [14] study considered three emotions identified by factor analysis as sub-factors of mood. All of the survey questions were measured on a 5-point Likert scale.

2.3. Survey process

The investigation process of the elderly: The researcher visited the targeted universities and distributed the questionnaires in person accompanied by two research assistants, who received pre-education and have experience in conducting a survey in the past. The completed questionnaires were collected after the participants answered the self-administration method. To encourage more sincere answers to the questionnaire, we explained the purpose of the research to the guidance teachers and asked for their understanding before visiting the Senior Welfare Center.

The investigation process of the young adults: The questions were created on the online Naver Form questionnaire, and the URL address was given to the young adults through SNS or Kakao Talk, and after they were written on their own, they were automatically collected in Excel.

2.3. Data processing

With the collected data, correlation analysis, t-test and multiple regression analyses were conducted using the BMI SPSS statistics program

3. Results and Discussion

3.1. The comparative analysis of the physical activity experience and physical attitude of the elderly and young adults

After exploratory factor analysis, the results of analyzing Pearson's correlation to confirm the direction and relationship between each other for each factor scale with proven single dimensionality are shown in <Table 2> below.

According to <Table 2>, there was a significant correlation between exogenous variables, and since the values of all correlation coefficients did not exceed .85, discriminant validity was secured according to the criteria. In addition, it is judged that there is no problem with multicollinearity because it was smaller in all variables than the standard value of multicollinearity of .80, which indicates the correlation between independent variables.

Table 2: Correlation analysis

	(1)	(2)	(3)	(4)	(5)
Physical activity experience(1)	1				
Physical attitude(2)	.591**	1			
Anxiety-depression(3)	-.172*	-.142*	1		
Vitality(4)	.395**	.465**	-.212**	1	
Anger(5)	.023	-.006	.751**	-.033	1

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

<Table 3> shows a comparative analysis of physical activity experience and physical attitude according to the elderly and young adults. Both physical activity experience and physical attitude were higher for the elderly (M=2.62/M=3.45) than young adults and there was a significant difference in both.

Table 3: The physical activity experience and physical attitude of the elderly and young adults

Factor	Subject	M	SD	t
Physical activity experience	elderly	2.62	0.88	.892*
	young adults	2.52	1.08	
Physical attitude	elderly	3.45	0.97	.286**
	young adults	3.41	1.14	

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

3.2. The comparative analysis of the mood state of the elderly and young adults

<Table 4> shows a comparative analysis of mood conditions according to the elderly and young adults. Both anxiety depression and anger showed higher levels of the elderly (M=1.99/M=1.63) than young adults, but there was no significant difference, and young adults (M=2.73) were higher than the elderly in vitality.

Table 4: The physical experience and physical attitude of the elderly and young adults

Factor	Subject	M	SD	t
Anxiety-depression	elderly	1.99	0.65	.762
	young adults	1.93	0.70	
Vitality	elderly	2.61	0.65	11.408**
	young adults	2.73	0.83	
Anger	elderly	1.63	0.63	2.250
	young adults	1.47	0.60	

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

3.3. The effect of physical activity experience and physical attitude of the elderly and young adults on mood

As a result of conducting multiple regression analysis to verify the effect of physical activity experience and

physical attitude on mood of the elderly, it is shown in <Table 5>.

It was analyzed that the physical activity experience and physical attitude of the elderly showed 23.4% ($R^2=.055$) of anxiety depression, 41.2% ($R^2=.170$) of vitality, and 12.8% ($R^2=.016$) of anger.

Table 5: Multiple regression analysis to verify the effect of physical activity experience and physical attitude on the mood of the elderly

Factor	Anxiety-depression					Vitality					Anger				
	B	SE	β	t	P	B	SE	β	t	P	B	SE	β	t	P
	2.571	0.207		12.447	.000	1.615	0.192		8.435	.000	1.688	0.203		8.323	.000
Physical activity experience	-0.067	0.071	-0.091	-0.950	.344	0.064	0.065	0.087	0.975	.331	0.091	0.069	0.128	1.316	.190
Physical attitude	-0.116	0.064	-0.173	-1.816	.071	0.239	0.059	0.359	4.019	.000	-0.087	0.063	-0.134	-1.379	.170
	F=4.177,R=.234,R ² =.055					F=14.736,R=.412,R ² =.170					F=1.190,R=.128,R ² =.016				

* $p < .05$, ** $p < .001$

As a result of conducting multiple regression analysis to verify the effect of physical activity experience and sports attitude on the mood of young adults, it is shown in < Table 6> about the physical activity experience and attitudes of young adults.

It was analyzed that it showed 17.2% ($R^2=.003$) explanatory power in anxiety depression, 7.1% ($R^2=.005$) in vitality, and 7.1% ($R^2=.005$) in anger.

Table 6: Multiple regression analysis to verify the effect of physical activity experience and physical attitude on the mood of young adults

Factor	Anxiety-depression					Vitality					Anger				
	B	SE	β	t	P	B	SE	β	t	P	B	SE	β	t	P
	2.165	0.183		11.855	0.000	1.366	0.184		7.418	0.000	1.411	0.159		8.873	0.000
Physical activity experience	-0.127	0.068	-0.196	-1.861	0.065	0.201	0.069	0.261	2.917	0.004	-0.041	0.060	-0.074	-0.692	0.490
Physical attitude	0.026	0.065	0.043	0.409	0.683	0.250	0.065	0.344	3.843	0.000	0.047	0.056	0.089	0.833	0.406
	F=2.229,R=.172,R ² =.003					F=31.360,R=.071,R ² =.005					F=0.369,R=.071,R ² =.005				

* $p < .05$, ** $p < .001$

4. Discussion

The American College of Sports Medicine (ACSM) emphasizes the importance of physical activity to promote people's health and recommends moderate physical activity for at least 30 minutes a week, or high physical activity for at least 3 days and 20 minutes a week [15].

Based on the results of this study, I would like to provide some implications. First, as a result of a comparative analysis of physical activity experience and attitude according to the elderly and young adult, it was found that the elderly were more interested in physical activity experience and attitude than the young adults.

For this reason, it is judged that the elderly makes constant efforts to protect their health while learning the importance of physical activity in their lives. It was found that the elderly showed more interest in physical activity experience and attitude than the youth. Although young adults are adults, they still need their parents'

care and have difficulty making decisions on their own. In addition, it is a time to prepare for the home of life, and while graduating from college and preparing for employment, it spends time studying, doing homework, and building specifications. To solve these problems, it is important to strengthen individuals' ability to understand the causes of regular physical activity or give up halfway, and to overcome factors that may be obstacles [16].

Second, anxiety depression and anger were higher in the elderly than in the youth group, but in vitality, the youth group was higher than the elderly group.

This reason is a basic problem experienced by the elderly. Psychological problems such as lethargy, loneliness, and social isolation develop into depression and directly or indirectly affect the elderly's suicide because they experience negative life events such as age-related weakness, death of close spouses or family members, retirement, economic loss, and health weakness [17]. Therefore, it would be very desirable to participate in physical activities to solve the anxiety and anger of the elderly.

Third, both the elderly and young adults were found to have no effect on anxiety depression and anger in physical activity experience and attitude, and physical activity attitude was found to influence vitality.

Physical activity experience and attitude can be an important sources of energy to calm anxiety depression and anger. It also makes everyone, old or young, worth living and becomes an important vitality. Research results [18] support the results of this study that exercise, which is perfect for physical and psychological health, has a positive physical, psychological, and social effect.

5. Conclusion

The purpose of this study is to investigate the effect of physical activity experience and attitude on the mood according to the elderly and young adults. In order to conduct the study, statistical processing was conducted using SPSS 18.0 for 296 senior welfare centers and four-year college students located in Area C, and the following conclusions were obtained. First, as a result of a comparative analysis of physical activity experience and attitude according to the elderly and young adults, it was found that the elderly were more interested in physical activity experience and attitude than the young adults. Second, anxiety depression and anger were higher in the elderly than in the youth group, but in vitality, the youth group was higher than the elderly group. Third, both the elderly and young adults were found to have no effect on anxiety depression and anger in physical activity experience and attitude, and physical activity attitude was found to have an effect on vitality. Therefore, physical activity experience and attitude can increase the vitality of life and become the driving force of life for both the elderly and young adults, so you should pay attention to participating in physical activities.

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