

The Elderly's Physical Activity Experience in the COVID-19 Pandemic Situation

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Abstract

The study explored the experience and meaning of physical activity in the elderly in the pandemic situation of the new coronavirus infection. The study was conducted for 16 weeks by applying the case study method. Data were collected through in-depth interviews and observations with nine participants aged 65 or older. Older people, who usually exercised more than three times a week, felt fear as the pandemic of the new coronavirus infection began and they could not go out without seeing people. Due to the ongoing pandemic of the new coronavirus infection, I was unable to participate in physical activities. The elderly, who are no longer physically active, have decreased physical function and memory, increasing concerns and fears about their health. The elderly tried to recover their health by themselves because they could not see people, could not go out, and could not go out of the house for a long time. They included taking a walk with their dog, creating a physical activity routine at home, and walking without taking public transportation. The pandemic of the new coronavirus infection has isolated the elderly from society, and it has been recognized that it is important to provide a variety of physical activity programs that the elderly can do on their own. The quality of life will improve if the elderly live healthy lives. The government should be able to develop and provide various programs for the elderly to actively participate in physical activities. The importance of physical activity programs and the development of programs will have to be sustained in follow-up studies so that the elderly can continue physical activity due to the resurgent infectious disease.

Key words: COVID-19, pandemic, senior, physical activity, elderly

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Introduction

The unexplained pneumonia, which began in early 2020, spread around the world at an alarming rate. The World Health Organization(WHO) named this pneumonia COVID-19 and declared it as a pandemic. Since there was no knowing when its treatment would be developed, nations around the globe closed their borders and had people reduce contact chances as much as possible to slow down its spread. Governments made it mandatory to wear a face mask and implemented the social distancing measure. COVID-19 has a very high fatality as people with underlying conditions or the elderly aged 60 or older can become severe or even die after getting infected. COVID-19, which is an infectious respiratory syndrome with such symptoms as fever, cough, and difficulty with breathing, would result in a death after a definite diagnosis(Kim, 2020; Kim, Hong,2021).

The risk elements of COVID-19 have even more serious impacts on the elderly with relatively weak immunity. The COVID-19 pandemic situations not only threatened the health of people, but also drove them toward depression and lethargy due to the fear and dread of infection(Hong, Cho, 2021; Namkung, 2021). In addition, opportunities to participate in physical activities drastically dropped as non-contact activities became a part of daily life to minimize contacts among people. Social distance introduced to prevent the infection of COVID-19 severed social exchanges for many people, who complained about a sense of isolation, anxiety, and depression. The severance of social exchanges had negative impacts on their mental health(Bae, 2022).The Ministry of Health and Welfare announced the results of "2021 Survey on People's Mental Health since COVID-19," reporting that the prolonged COVID-19 pandemic and social distancing had negative effects on the mental health of people. The elderly especially suffered greater social isolation than the other age groups as cultural centers, welfare centers, and senior citizen centers were closed down where they used to have social exchanges. As COVID-19 continued to spread, the elderly gave up many of the chances to participate in social activities voluntarily and unwillingly due to their relatively weak immunity(Sa, Han, 2021; Seong, Kim & Moon, 2021). Such sudden changes increased their depression and anxiety, whose symptoms deteriorated their dementia and had impacts on their cognitive decline(Bae, 2022). The reduction of physical activities, social activities, and social exchanges among the elderly amid COVID-19 will cause a variety of health issues for them. The health management issue of the elderly due to the pandemic should not be simply considered as a responsibility of individual effort or determination. It should be approached and solved with a social system for the elderly. This study thus set out to examine the experiences of the elderly still under the prolonged pandemic situations and their perceptions of physical activities amid the pandemic and explore how they coped with and addressed such an issue in the prolonged pandemic setting, providing basic data to figure out what systems and programs would be needed to promote their physical activities and health in the social system as well as their personal efforts.

Methods

This study adopted the qualitative case study method, a qualitative methodology, to explore the meanings of their physical activities and find values in them since the outbreak of COVID-19.

Participants

Research participants were selected according to the criterion-based selection method defined by Goetz and Le Compte(1984) to select research participants fit for the research topic. They were currently participating in sports, culture, and humanities programs at the A Senior Citizens Center in Gangdong-gu, Seoul. <Table 1> shows the individual characteristics of the subjects.

Procedures

Data was collected with an in-depth interview with the research participants and a participant observation of their participation in a sports program in February~May, 2022. In the study, the investigator had an individual interview four times and a group interview twice to find meanings in their perceptions of the importance and value of physical activities amid COVID-19. For an in-depth interview, the investigator employed the "oral interview method" devised by the German sociologist F. Schutze(1987). Individual interviews and group interviews were conducted for about 1 hour to 1 hour and 30 minutes. Interviews were conducted at sports centers where research participants exercise and cafes near sports centers. Individual interviews were conducted to ask questions about their life difficulties under the COVID-19 pandemic situations, their difficulties due to restricted physical activities, and their efforts to overcome them. In group interviews, they were encouraged to talk naturally about what they did not reveal in individual interviews. The investigator obtained consent to observe their lessons from their instructor in a sports program to understand their emotions and thoughts related to physical activities amid COVID-19 that had been rampant for about three years. Specializing in physical education in college, the investigator participated in lessons with the subjects for a participant observation as a complete participant, which is a method of a participant observation classified by Patton(1990) and used to prevent the artificial manipulation of participants' actions. Observation as a complete participant is to participate in the classes of the research participants together. The investigator participated in the researchers' classes and observed various aspects of the research participants during class.

Table 1. Demographic characteristics

Number	Name	Gender	Age	Type of Exercise	Engagement (per week)
1	SHI	female	69	yoga	4
2	KHR	male	69	badminton	3
3	PSK	female	70	swimming	3
4	OHJ	female	71	swimming	3
5	LIN	male	71	badminton	3
6	HEU	female	72	yoga	4
7	KOH	male	72	yoga	5
8	BHS	female	73	swimming	3
9	LKI	female	73	line dancing	4
10	PSK	female	73	line dancing	4
11	MGH	female	73	yoga	4
12	GKI	female	75	swimming	3
13	NAK	male	75	yoga, swimming	5

Data Analysis

In a qualitative study, data is collected and analyzed at the same time in a mutually complementary manner with the meanings and interpretations of a data analysis varying according to interpretation methods. In the study, the interview materials collected were transcribed. It went through a transcription process, encoded for each derived subject, and went through a process of discovering the subject in each content. And based on this, case records and inductive category analysis were conducted. And the investigator used a constant comparative analysis and inductive categorical analysis based on the analysis methods of Struass and Corbin(1990) to prevent errors. In a specific analysis process, the investigator compared the transcription data of the participants' interviews and the participant observation data of their lessons(Pekrun, Goetz, Titz & Perry, 2002) to cross-check them. In this process, the investigator analyzed repeating meanings around the common and different perceptions of physical activities among the senior citizens amid the COVID-19 pandemic in relation to the research questions. In a specific analysis process, the investigator compared the transcription data of the participants' interviews and the participant observation data of their lessons(Pekrun, Goetz, Titz & Perry, 2002) to cross-check them. In this process, the investigator analyzed repeating meanings around the common and different perceptions of physical activities among the senior citizens amid the COVID-19 pandemic in relation to the research questions.

The reliability of a study

The investigator asked the participants to review again the data that she interpreted and had the parts of different interpretations between them revised and supplemented to increase the validity and veracity of the study in the process of analyzing and interpreting qualitative research data. The investigator then asked two Physical Education professors and one Physical Education professor that consistently conducted qualitative researches for peer debriefing. In the study, the veracity of data was secured with triangulation to reach the final agreement of results interpreted and classified by the investigator.

Results

The COVID-19 Pandemic has begun

1) A stopped world

People had fear and shocks to see constantly changing policies such as distancing and a ban on gathering and the death toll reports by news programs due to the COVID-19 pandemic. The abrupt outbreak of COVID-19 in the beginning of 2020 cost me an ordinary daily life.

It felt like the clock had stopped. I had plans for my future. I made plans about which meetings and activities. I would continue. All of these came to an abrupt halt due to COVID-19.

<S. H. I>

I used to go to Catholic church four days a week, singing in the choir, doing practice, participating in a Mass, and having a meal with friends. These were so naturally parts of my daily life. Another element of my daily routine was a circuit exercise for 30 minutes in the evening. None of these are allowed now. It's a standstill like in movies!

<K. H. R>

Most of the research participants were senior citizens in their seventies. They have a hard time adjusting to changes in the world compared with younger generations. They led a daily life based on their plans for old age, and their daily lives passed naturally. Once their daily lives came to a stop, they felt lonely and worried about their future life in old age.

2) People I can't meet

COVID-19 prevented me from seeing my family. In my family, family gatherings used to be natural. I can no longer enjoy one of them. According to the new regulation, family members of a certain number or fewer are only allowed to gather to prevent the spread of COVID-19. When I got together with my family for meal. I was worried about infections. COVID-19 eventually severed my relations with my family.

<P.S.K>

My daughter lived close to me and visited me often before COVID-19. Now we are both cautious about spreading the virus to each other. There are no visits between us, and I have no one to talk to all day long. I used to go shopping and dining with her often. Now we have to be careful for each other. The rule says that family members above the designated number should not gather. I feel safe that I don't visit her and that she doesn't visit me.

<O.H.J>

It's fortunate that we're healthy, but I have my mother-in-law in a nursing home...This is just a separation by the pandemic. I am worried about her and wish to visit her, but no visits are allowed...I am also worried if she might be infected in the nursing home. She must be terribly lonely.

<H.E.U>

Like the case of Research Participant "H.E.U" senior citizens that had their old parent in a nursing home were prohibited from a visit and were left with nothing but worrying about the health conditions of their parents. There was a greater risk of COVID-19 infections at nursing homes where old people gathered and led a communal life. Even though the government policy prohibited her from visiting her mother-in-law, Research Participant B was suffering the guilt of not taking care of her right.

3) Days of fear and fear

In the early days of COVID-19, people lack in accurate information about the virus. They believed that they could get infected just by sharing the same space as confirmed cases or brushing against them. As a consequence, workers began to work remotely, and students began to learn online due to the closing of school. The elderly with relatively weak immunity had a fear of going outside and volunteered to isolate themselves within home to prevent any infections from others in the outside world.

I felt like everything touched by others were contaminated with germs. My children asked me not to go outside and stay home because it's dangerous.

<L.I.N>

Upon getting parcel deliveries, I sprayed alcohol on them unconditionally before opening them. When I went outside, I wore plastic gloves to prevent my hands from getting contaminated. I also refused to get in an elevator with others. To think of it, I have not gone outside for many days except for a really important occasion.

<K.O.H>

The research participants regarded everyone that they might pass by in the outside world as terrors to spread the COVID-19 virus to them. They decided to stay at home and abstain from going out. Recalling the days when they were isolated at home with no going out, they said that their home transformed from a safe haven to a prison over time.

COVID-19 Pandemic Never Ends

1) Unexpected fear of death

The abrupt outbreak of COVID-19 brought huge confusion and shocks to all people, who struggled to adjust to unexpected changes to their daily lives. The elderly suffered even greater psychological confusion and shocks and grew tired both psychologically and physically due to the ongoing pandemic.

I wondered if it would end in a month or two months. I didn't see its end in sight. I was afraid that my life would end in this way.

<B.H.S>

I was living a wonderful life when a horrible disease began to spread suddenly. I was fearful and scared day after day against my will. I thought that I could face my death earlier than I thought.

<L.K.I>

The research participants most of whom were in their seventies said to themselves that there was no way of escaping from the COVID-19 risk however cautious they were every time they heard some of their acquaintances got infected. They also connected their shock and fear of COVID-19 to their death. They thought that a sudden infectious disease whose cause was unknown and whose treatment

was not developed happened in their old age and could drive them to death, talking about how fearful the situation felt to them in those days.

2) Debilitating bodily functions

As the COVID-19 pandemic prolonged, the participants got to reduce their physical and social activities considerably. Their sports center was closed down. Their cultural center where they used to enjoy their hobbies was also closed down. They were left alone at home and felt that their body functions deteriorated.

As I spent more time at home, my legs certainly felt weaker. I was standing doing the dishes, feeling that my legs lost strength.

<P.S.K>

I am most worried about dementia. I am not allowed to go outside and meet people. I can't even meet my own family often. I just watch TV vacantly, eat when I feel hungry, and sleep when I am sleepy...Is this living? I was so worried that I could develop dementia this way.

<M.G.H>

The research participants experienced a physical malfunction along with their reduced physical and social activities, and it became another worry of theirs in addition to getting infected with COVID-19. Since they are slower to restore their body functions than young people, the elderly have a difficult time with restoring their lost physical abilities to their original state(park, 2021).

When their brains do not benefit from diverse stimuli from social activities and exchanges, they can be easily exposed to a risk of dementia(Yoon, Kim, 2019). For these reasons, old people were exposed to more risks amid COVID-19 than young people.

3) A broken life plan

In a life cycle, old age is the time to fill one's life with meaningful things and finish things right. When they were young, they were busy leading a fierce life and bringing up their children. Once their children grew up, got a job, or got married, leaving them. Now that old people have fulfilled a big assignment, it is time for them to focus fully on themselves.

I have never worried about what to do tomorrow when I go to sleep before COVID-19. As I am living almost in confinement, I think about what to do tomorrow before going to sleep. I used to always have things to do and schedules to follow. I was happy with them...I have never thought that I would have such thoughts in my life.

<G. K. I>

I was comfortable and happy every day. When bringing up my kinds, I was too busy to think of my "being." Now that I am old, I find my life easy and happy finally. I love it so much. Such happy days in my old age are gone due to COVID-19. My calendar used to be filled with my schedules. When I saw an empty one, I wondered how I should live my life now.

<N.A.K>

The research participants spend approximately thirty years of their lives on sacrificing for their families with individual variations. In old age, they finally got to focus on themselves fully, leaving their old hectic lives behind. They had very high satisfaction and stability with their old age life. Getting old means the body getting old and weak. It may seem like being close to the end of life. The research participants, however, said that their quality of life in old age was much higher than that in young age and that they felt like a third act opened up a new life. Cracks began to happen to their stability and satisfaction after the outbreak of COVID-19. They felt that their lives were worthless instead of days filled with expectations and excitement. Anticipating that such a life would continue, they felt very lethargic.

Efforts to escape the invisible tunnel

1) Walks with a companion dog

Since the outbreak of COVID-19, the research participants have made a shift of emotions and sentiments from fear and dread to lethargy and depression. They spent a difficult day due to lethargy and depression under the pandemic situations whose end was not in sight. They were still making attempts to change their lives by having contemplations and thoughts to escape from the situations in their own ways.

My children usually walk their dogs in the evening after they come from work. Since I have all the time in the world in my hands, I walk my dog twice or even thrice a day. I take it easy to walk my dog, which usually takes about 40 minutes. I would take a rest along the route. It has now become a little fun in my life.

<H.E.U>

My dog is eight years old, and her name is "Hari." I used to walk her once a day before COVID-19. Since the outbreak of COVID-19, I have nothing left to do. So I began to walk a lot. One day I thought that I would be helpful to walk with my dog often instead of by myself. I walk "Hari" twice a day in the morning and evening and walk by myself for an hour during the day. As a result, the amount of my exercise has increased considerably.

<G. K. I>

Some of the research participants made it an important daily plan to walk with their dogs to escape from the isolated life due to COVID-19 and inject vitality to their lives. They realized that it was important to go outside in order to compensate for the lack of exercise and escape from a dull daily life. They chose walking as a means of making their bodies healthy again and planned and practiced a walk with a companion dog to add more fun to their walking routine. Many researches have reported that walking with a companion dog increases the pleasure of walking and that communion with a companion dog gives emotional stability and happiness. Like these findings, the research participants said that they promoted their health and felt stable and happy at the same time while walking with their companion dogs.

2) The exercise plan that I make

As gathering facilities such as sports centers were closed down due to the infection risk with no certain possibilities of their resumption, people thought of and practiced a variety of exercises they could do alone at home or outdoors. The research participants also prepared some indoor exercise instruments and began home training.

I said to myself that I could not live in this way any longer and thought of what I could do at home. I did light stretches for 30 minutes every morning. My children bought me a bicycle and squat machine so that I could do exercise at home. I rode the bicycle for 30 minutes and did 80 squats a day according to my plan.

<L.K.I>

The research participants thought of and practice various exercises that they could do by themselves as their access to a sports center was denied. Research Participant A created her own exercise routine and followed it every day, doing easy and simple exercise at home.

I searched for an exercise I could do at home and came up with climbing stairs. My apartment is on the eighth floor. At first, I thought to myself that let's climb stairs as high as I could and take the elevator when it became hard. That's the way I did exercise at home.

<P.S.K>

One of the research participants promoted his health by climbing stairs, which he did not do before COVID-19, in addition to his home training routine. Exercise is a very important element in the old age lives of the research participants. In their isolated and difficult situations amid COVID-19, they found the only thing that they could do without asking for help from others in exercise. They searched for and practiced exercise spontaneously, and this process made their lethargic daily life energetic again.

3) All daily activities are at the center of everything

The research participants in their old age went further from the stage of creating one's own route, making an exercise plan, and doing home training and began to develop a habit of traveling a distance equivalent to one or two metro stops on foot. Like the case of a research participant below, they searched for a place that was not crowded and allowed them to enjoy time by themselves among many different places they could access on foot and started to find and experience little fun elements one by one in a daily life.

I used to read two daily newspapers consistently rather than books before COVID-19. Since the outbreak of COVID-19, I suddenly had much more time in my hands and thought of reading books. There was a library, and it would take me about 80 minutes

to walk there slowly back and forth instead of taking a subway. I thought it was like going to work every morning.

<M.G.H>

After walking to the library and lending a book, I would encounter a little cafe in the park on my way back home. Since the cafe had outdoor tables, I would enjoy a cup of coffee and read the book I lent at one of the outdoor tables when the weather was fine. They sell coffee at a very low price of 1,500 won at the cafe. When the outdoor tables were all taken, I would have a coffee to go and sit on a park bench to enjoy the coffee. It was such a marvelous experience.

<P.S.K>

The research participants had a change of thought, going through the pandemic whose end was nobody's guess. Meetings and exchanges with people were at the center of all of their activities before the pandemic, and now they realized that there were many more things that they could do by themselves than expected. Their daily lives used to be filled with various activities of getting along with others before the pandemic, and now they felt a need to keep and promote their health by finding and enjoying things that they could do by themselves. Their change of thought derived from their realization that it was important to prepare their so-called "autonomous power" to navigate another outbreak of an infectious disease like COVID-19 in the right way. In old age, people try to find pleasure and fill their lives with getting along with others rather than setting a goal of achieving something on their own (Lee, Yoon & Sung, 2017; Lee, Shin, 2020). Undergoing the pandemic situations for more than two years, the research participants had a turning point to earn the wisdom of planning and creating a new life on their own in the process of promoting their physical health continuously. They were cultivating an ability of leading their lives independently by finding things that they could do by themselves, exercises that they could try by themselves, and pleasure that they could enjoy by themselves.

Conclusions

This study set out to examine the impacts of the prolonged COVID-19 pandemic on the elderly and the changes it caused to their daily lives and analyze how their participation in physical activities changed during the pandemic situation. The study looked into the efforts they made in their daily lives that were altered after the outbreak of the pandemic not to lose their health and keep and promote

their health. In the early days of the pandemic, the elderly felt like their daily lives came to an abrupt halt and voluntarily isolated their lives at home not to expose themselves to the infection risk. Their daily lives were difficult due to their fear of infection, their loneliness following their severed relations with others, and their depression due to the pandemic whose end was not in sight (Lee, Yang, 2021). As the pandemic situation prolonged, they looked back on their lives. Their thoughts spread to an unexpected death, the preciousness of a daily life that was taken for granted, and a crack into a stable life. In this process, they thought about a change of life direction to make new and different plans from the past. They decided to live a happy and fun life for the remaining days in the pandemic situation rather than expecting it to end soon. Realizing that it was important to reorganize their bodies and minds that had weakened for the last two years to live a happy life not restricted by COVID-19 for the remaining days, they resumed their physical activities that were on hold for the last couple of years. First, they "went on a walk with their companion dogs" At the same time increasing their activity level by increasing the number of their walks with their companion dogs, they also got psychological consolation and reduced solitude by sharing their feelings with their dogs. Second, they "created a solo exercise routine" Since no access was allowed to publicly used facilities, they began to exercise with an instrument that allowed for solo exercise without asking for help from others. They made efforts to promote their physical fitness including riding an indoor bicycle, doing squats, doing stretches, and climbing stairs according to their daily plans. And thirdly, they "put the center of their daily lives on physical activities". Unlike in the past when they used to use a subway or bus to travel even a short distance, they walked for a short distance unconditionally, increasing their physical activity level and promoting their health. In this process, they found little fun and pleasure of their own to promote their mental health as well as their physical health. Conducting the present study, the investigator found that South Korea suffered a huge shortage of health programs in terms of development and distribution to help the elderly lead healthy life in old age.

Discussions

Despite social severance due to the COVID-19 pandemic, young people made use of their online connectivity to watch exercise programs and maintain their health. Korea has entered an ultra-aged society, but there are not many leisure activities or exercise programs that the elderly can enjoy. Young people learned sports and did home training through online media in the COVID-19 pandemic situation. However, there is little media for the elderly to watch and learn from exercise. The elderly had access only to a very limited amount of exercise program content and found mostly theoretical information about healthy foods and health (Hong, Cho, 2021). As the facilities they used were closed down due

to "social distancing," the elderly, who did not benefit from the abundance of opportunities for physical activities compared to other age groups even before the pandemic, were deprived of chances for physical activities and exposure to a risk of losing health in a flash(Kim, Chang, 2020). They depend on a variety of facilities where old people gather to participate in physical activities. Once their access to such facilities is blocked, they are inevitably a risk of losing their health. It is thus needed to develop and prepare methods that will replace such facilities. The level of physical activity programs for the elderly has remained the same as ten years ago in South Korea even though their emotional and intellectual level has continued to rise(An, 2021; No, 2021). Elderly people who lack physical activity are exposed to various chronic diseases. Lack of physical activity leads to high blood pressure, diabetes, and cardiovascular disease. Loss of physical health also causes mental health problems. It is not easy for the elderly to participate in their physical activities on their own. The state and community should provide opportunities to participate in various physical activities for the elderly. The COVID-19 pandemic informed us that policies and facilities that take into account the characteristics of the elderly should be created in the upcoming era of infectious diseases. An array of exercise techniques are developed and spread. It should be the same with exercise techniques and instruments for the elderly to fit their level. They will enable the elderly to participate in physical activities that accommodate their competencies and tastes, contributing to their better health and their lives filled with vitality. COVID-19 hit the world when there were no preparations for it. Another pandemic can happen at any time. It is thus required to continue to develop and distribute programs that help the elderly participate in physical activities remotely and easily to keep and promote their physical and mental health and even engage in non-contact social exchanges.

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Received : October 31

Reviewed : December 15

Accepted : December 23