A Study on the Activation of Figure Skating for People with Disabilities

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Abstract

**Purpose:** This study aims to examine and suggest development directions to revitalize the process of figure skating with disability in Korea.

**Method:** In this study, literature analysis was conducted by investigating research data on figure skating for the people with disability in order to examine the process in Korea and suggest ways to revitalize it. In addition, data of sports organizations such as the Korea Paralympic committee and Special Olympics Korea were collected to find out the need for sports for the people with disability, the characteristics and value of skating, and to find ways to revitalize figure skating.

**Results:** This study grasped the current status and collected and analyzed data to cope with the changing environment of sports for the people with disability and the changes occurring in the field of figure skating for the people with disability. The conclusions and suggestions are as follows.

First, as a representative organization of winter sports for people with disability, figure skating can be included in the national winter competition for people with disability, and balanced development should be established by establishing a linkage system from sports people with disability to professional sports for the purpose of improving and developing performance. When planning projects related to professional sports, sports for all, and school sports for people with disabilities, the purpose of establishing pleasant experiences, social skills, and health improvement through physical activities, and fostering professional athletes and developing performance. Third, there should be many stadiums where athletes can officially practice. Dongcheon Ice Rink was established for the first time for the people with disability, but it is regrettable that there are other cases where training for the people with disability on the ice rink is restricted for safety reasons.

**Conclusion:** Based on the results of the study, Skating events for the people with disability are divided into short track and figure skating, and are held annually at the National Winter Games for the people with disability and the Special Olympics Winter Games. As a result, it is considered meaningful to find various ways to revitalize figure skating for the people with disability so that they can induce more participation than before COVID-19. In the future, if we create an environment where people with disability can train freely, more figure skaters will be created. Finally, in the follow-up study, it is considered that there is a need for expanded research targeting experts in the special sports field, leaders by event, and participants.

**Keywords:** Figure Skating, Special Olympic, People with Disability, Intellectual Disability, Ice Rink

1. Introduction

The ice skating include speed skating, short track and figure skating has attracted a lot of public
attention. Especially Figure skating is becoming popular as a sport for life because it can make body posture correct and affect not only balance, sensory organization, and exercise but also self-efficacy and social development[1][2]. Also, figure skating develops a sense of balance and vestibularity physically for people with physical disabilities and improve social skills and cognitive skills for people with developmental disabilities[3][4][5]. In addition, sports activities can have positive effects physically, socially, and psychologically for people with physical and mental difficulties[6][7][8][9]. And for this reason, figure skating is a profitable sport for disabled people[1]. Korean skaters participate in the Special Olympics Korea Winter Games every year and participate in the quadrennial Special Winter Olympics as a national team member. Various positive effects can be expected physically and mentally through such continuous participation in figure skating for the people with disability. The process of connecting from sports for all for the people with disability to professional sports the people with disability for the purpose of improving and developing their performance may be planned. So far, studies have shown that participation in sports activities improves social skills to lead a self-reliant life for the intellectually disability[10][11][12], and that participation in competitions is related to the impact of participation in sports for the people with disability[13].

Recent studies on the disabled have shown a tendency to be very interested in well-being, happiness, and quality of life of the disabled, which are physically, emotionally, and socially constrained. An important key to this study is what is needed and how can be improved for the well-being of the disabled, so previous studies have dealt with the importance of exploring and verifying various variables for the well-being of the people with disability. In particular, studies related to physical education report participation in sports as an important factor in relation to the well-being of the disabled. Most of these results are that many of the effects of participating in sports activities have a positive effect on the people with disability[14][15][16][17]. However, there is no research to participate in figure skating for the people with disability, so research to find various ways is needed.

This study aims to examine and suggest development directions to revitalize the process of figure skating for people with disability in Korea.

2. Research Method

In this study, literature analysis was conducted by investigating research data on figure skating for the people with disability in order to examine the process of figure skating in Korea and suggest ways to revitalize it. In addition, the data of sports organizations such as the Korea Paralympic committee and Special Olympics Korea were collected to find out the need for the sport, the characteristics and value of skating, and to find ways to revitalize figure skating. The researchers have been conducting research related to figure skating for the people with disability and reviewed 30 academic papers for this study. For the authenticity of the data, it was revised and supplemented through a review with two professors majoring in special sports and one figure skating leader for people with disability. The research procedure is as follows <Figure 1>.

Figure 1. The research procedure.
3. The Need for the Sports for the People with Disability

3.1. People with disability

After participating in the second Tel Aviv Paralympic Games in 1968, the national competitiveness of disabled sports began to develop a lot and brought about a change in the perception of the people with disability in Korea. The government’s policy orientation played a major role in promoting Korea’s sports for the disabled to the international community. Sports for the disabled were handled by the Ministry of Health and Welfare and the Korea Welfare Association for the Disabled until 2005, and at that time, sports policies for the people with disability focused on welfare rather than sports. In addition, the establishment of the Korea Paralympic Committee and the transfer of work to the Ministry of Culture and Tourism laid the foundation for strengthening the meaning of sports and sports activities for the people with disability can contribute to social integration by improving the quality of life and enhancing the psychological unity and autonomy of the people with disabilities [19][20]. In addition, the possibility of leading a healthy life and happiness for individuals with disabilities increases [16].

Sports for All is a sports activity that can be easily done in everyday life and is a beneficial living culture for the use of leisure time, health, maintenance, and formation of new human relationships. Sports for all can be said to be a physical activity that promotes individual physical, mental, and social development and improves a sense of community with others by actively and continuously participating in sports activities throughout the life. Therefore, the indicator of daily sports is becoming one of the measures to evaluate the welfare state [21].

Stuart and Kenneth (1990) reported that regular physical activity expresses playful elements in individuals with disabilities, which increases life satisfaction [22][23]. And participation in sports for the disabled can play a very important role in the fact that it can be expanded to reduce medical expenses [16].

Until now, disabled people have not had enough opportunities to participate in daily sports due to lack of public awareness and social indifference. In the past, the disabled, who were underprivileged, had to be satisfied with their basic lives, but as society stabilizes, interest in equal educational opportunities and social participation opportunities increases, interest in physical and mental health through exercise is increasing. Accordingly, the demand for the promotion of sports for the disabled is gradually expanding [21].

Now, sports for the disabled have emerged as an area of importance for the needs of the times along with the non-disabled in terms of not only individual health management, but also social participation, satisfaction of needs, and improvement of welfare standards. For the disabled, the value of sports obtained through physical activities is important not only for non-disabled people but also for participants in sports for the disabled in terms of overcoming obstacles and integrating them as social workers [24][25][26].

In this way, the participation of club members in the competition is seen to play a major role in inducing the positive impact of daily sports, such as the research results shown in the disabled sports awareness and exercise sentiment [27][28][29]. In particular, with the emergence of such competitions, it is thought that the base of sports for all will expand and participation in sports for all will eventually lead to the participation of professional sports.

Professional sports refers to the promotion of health through physical education and the creation of various conditions in which one can demonstrate one’s skills through sports beyond the limits of human ability [30]. It covers a wide range of areas, including hosting various domestic competitions, selecting and systematically and scientifically fostering and managing outstanding athletes, training facilities for athletes, and operating and supporting sports organizations and the Korea Paralympic Committee [21]. Professional sports for the disabled is an important part of sports in Korea, where the Korean Sports Association for the Disabled, sports organizations, and sports organizations by type of disability cooperate with each other organically with the support of the government and local governments. It also plays a pivotal role in improving the credibility of the competition by enhancing the image and status.
of the country, promoting national unity and pride, leading the revitalization of sports for the disabled, and holding international competitions. Summer events include goal ball, golf, basketball, billiards, dance sports, wheelchair rugby, ron ball, volleyn ball, badminton, boccia, bowling, shooting, cycling, swimming, horseback riding, archery, judo, track and field, soccer, table tennis, taekwondo, wheelchair fencing, and winter sports.

3.2. The value of figure skating for the people with disability

Figure skating is reported to have a positive effect on the development of balance, sensory tissue, and exercise, making disabled people’s body posture correct. In addition, the participation of skating can affect the self-efficacy and social development of people with disability\,[29]. For people with physical disabilities who have difficulty moving due to physical discomfort, figure skating can help develop a sense of balance and vestibularity physically, and improve sociality and cognitive skills for people with developmental disabilities\,[3][4][5].

It is known that sports activities can have positive effects physically, socially, and psychologically for people with physical and mental difficulties. These studies show the positive effect of figure skating for people with disability\,[3][4][28][31].

3.3. Korea Paralympic winter game

Korea Paralympic winter game, which started as the first one in 1981, has been held 41 times until 2021, and 42 times are scheduled for 2022. In 2005, the Ministry of Culture, Sports and Tourism established a sports team for the people with disability and the Korea Sports Council for the people with disability, and the government-led support for professional sports for the people with disability naturally increased, laying the foundation for the development of sports for the people with disability\,[21].

Korea Paralympic game marked the World Year, which was enacted by the UN in 1981, and Korea Paralympic winter game was finally held. Prior to that, there were several competitions for each disability, including the National Free Youth Sports Festival hosted by the Establishment Center, the Korea Paralympic game hosted by the Korea Veterans Association, and the National Intellectual Disability Football Competition, but the first comprehensive sports event involving all people with disability.

The purpose of the competition is first to improve the performance of athletes through sports activities, second to discover excellent new players and foster social adaptation skills through national sports, third to create a social atmosphere for them and the general public, and fourth to enhance public understanding of the people with disability. In addition, the basic direction of the competition is first to minimize the burden of using national sports facilities and equipment, second, to provide opportunities to expand convenience facilities for the disabled, and third, to induce autonomous participation of citizens of the venue.

Hosted by the Korea Paralympic Committee, Korea Paralympic winter game will be held under the auspices of the Ministry of Culture, Sports and Tourism and the Korea Sports Promotion Foundation. Korea Paralympic winter game may be attended by the people with disability, the visual impairment, the intellectual (developmental) disability, and the hearing impaired. There are seven events, including alpine skiing, snowboarding, cross-country skiing, biathlon, ice hockey, curling, and ice skating, but not figure skating. The categories are divided into the Elite Division and the Club Division. It is divided into six events: alpine skiing (physical disability, blind, deaf), snowboarding (physical disability, deaf), cross-country skiing (physical disability, blind, deaf), biathlon (physical disability, blind), ice hockey (physical disability, deaf).

It is divided into three categories: Alpine skiing (intellectual (developmental) disability), cross-country skiing (intellectual (developmental) disability), and ice skating (short-track) (physical disability, hearing, and intellectual (developmental) disability). The following is the current status of participation in the Korea Paralympic winter game <Table 1>.
Table 1. The participation status of Korea paralympic winter game[32].

<table>
<thead>
<tr>
<th>Round</th>
<th>Period</th>
<th>Place</th>
<th>Official Athlete</th>
<th>Official Official</th>
<th>Total</th>
<th>Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>20.2.11~2.14</td>
<td>Gangwon-do</td>
<td>7</td>
<td>459</td>
<td>520</td>
<td>Physical, intellectual(developmental) disability, hearing, visual impairment</td>
</tr>
<tr>
<td>16</td>
<td>19.2.12~2.15</td>
<td>Gangwon-do, Seoul</td>
<td>7</td>
<td>394</td>
<td>490</td>
<td>Physical, intellectual(developmental) disability, hearing, visual impairment</td>
</tr>
<tr>
<td>14</td>
<td>17.2.7~2.10</td>
<td>Gangwon-do</td>
<td>7</td>
<td>421</td>
<td>459</td>
<td>Person with amputation, intellectual, hearing, visual impairment</td>
</tr>
<tr>
<td>13</td>
<td>16.2.16~2.19</td>
<td>Gangwon-do</td>
<td>6/1</td>
<td>405</td>
<td>413</td>
<td>Person with spinal cord injury, amputation, with cerebral palsy, hearing, visual impairment, intellectual disability</td>
</tr>
<tr>
<td>12</td>
<td>15.02.09~02.12</td>
<td>Gangwon-do, Seoul</td>
<td>6</td>
<td>376</td>
<td>378</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
</tr>
<tr>
<td>11</td>
<td>14.2.11~2.14</td>
<td>Gangwon-do</td>
<td>5</td>
<td>344</td>
<td>385</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
</tr>
<tr>
<td>10</td>
<td>13.2.25~2.28</td>
<td>Gangwon-do</td>
<td>5</td>
<td>372</td>
<td>366</td>
<td>Person with amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
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<td>9</td>
<td>12.2.28~3.02</td>
<td>Jeolla-do</td>
<td>5</td>
<td>365</td>
<td>366</td>
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<tr>
<td>8</td>
<td>11.2.15~2.18</td>
<td>Gangwon-do</td>
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<td>338</td>
<td>347</td>
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<tr>
<td>7</td>
<td>10.1.26~1.29</td>
<td>Gangwon-do, Seoul</td>
<td>5</td>
<td>330</td>
<td>330</td>
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<tr>
<td>6</td>
<td>09.2.10~2.13</td>
<td>Gangwon-do</td>
<td>5</td>
<td>304</td>
<td>303</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
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<tr>
<td>5</td>
<td>08.2.19~2.22</td>
<td>Gangwon-do</td>
<td>5</td>
<td>215</td>
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<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
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<tr>
<td>4</td>
<td>07.2.21~2.24</td>
<td>Gangwon-do</td>
<td>4/1</td>
<td>117</td>
<td>107</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
</tr>
<tr>
<td>3</td>
<td>06.2.22~2.24</td>
<td>Gangwon-do</td>
<td>3/1</td>
<td>102</td>
<td>107</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
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<tr>
<td>2</td>
<td>05.2.17~2.18</td>
<td>Gangwon-do</td>
<td>3</td>
<td>80</td>
<td>70</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual Impairment, intellectual disability</td>
</tr>
<tr>
<td>1</td>
<td>04.2.23~2.25</td>
<td>Gangwon-do</td>
<td>4</td>
<td>100</td>
<td>50</td>
<td>Person with spinal cord injury, amputation, cerebral palsy, hearing, visual impairment, intellectual disability</td>
</tr>
</tbody>
</table>

3.4. Special olympic winter game

With the establishment of the Korea Paralympic committee in 2005, a turning point in the sports environment for the disabled in Korea, it joined as a member organization by type of disability. In 2008, it was newly established as the Korea Special Olympic Committee, and after continuing its activities at
home and abroad, it successfully hosted and hosted the 2013 Pyeongchang Special Olympics[33].

The Special Olympics Korea National Winter Competition first began in 2012 and has now been held for the fourth time. Through the hosting of these national winter competitions, it provides opportunities for people with developmental disabilities across the country to participate in winter events, and is used as a selection material for the World Winter Games through the results of the competition. Alpine skiing, snowboarding, cross-country skiing, snowshoeing, short track, speed skating, and figure skating are in operation for a total of six events, and have been held once in 2012, twice in 2016, three times in 2019, and four times in 2022 <Table 2>.

Table 2. The participation status of special olympic Korea national winter competition.

<table>
<thead>
<tr>
<th>Round</th>
<th>Year</th>
<th>Number</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2012 special olympic Korea national winter competition</td>
<td>313</td>
<td>Gangwon-do</td>
</tr>
<tr>
<td>2</td>
<td>2016 special olympic Korea national winter competition</td>
<td>520</td>
<td>Gangwon-do</td>
</tr>
<tr>
<td>3</td>
<td>2019 special olympic Korea national winter competition</td>
<td>360</td>
<td>Gangwon-do, Seoul</td>
</tr>
<tr>
<td>4</td>
<td>2022 special olympic Korea national winter competition</td>
<td>77</td>
<td>Gyeonggi-do</td>
</tr>
</tbody>
</table>

Through an agreement with the International Olympic Committee (IOC), the Special Olympics are hosting a world competition where the name 'Olympics' can be officially used along with the Olympics and Paralympics. Starting with the first competition (Chicago, USA) in 1968, the summer and winter competitions are held alternately every two years. Figure skaters are practicing and making efforts for the Special Olympic Winter Games, which are held once every four years, but they need the annual figure skating competition. South Korea successfully hosted the Special Olympics Winter Games in Pyeongchang in 2013 and 11 figure skaters participated in the event, resulting in good results. As of 2022, there are only six skaters and more are needed.

4. Conclusion and Suggestions

This study grasped the current status and collected and analyzed data to cope with the changing environment of sports for the disabled and the changes occurring in the field of figure skating for the disabled. The conclusions and suggestions are as follows. First, as a representative organization of winter sports for the disabled, figure skating can be included in the national winter competition for the disabled, which can play a role in the increase of the ice skating population with the Special Olympic Korea Committee. Figure skating has a special Olympic Winter Games where people with development disabilities can participate, and if figure skating is also held at the National Sports Festival for the Disabled, the number of figure skaters could increase further. Skating events for the disabled are divided into short track and figure skating, and are held annually at the National Winter Games for the people with disability and the Special Olympics Winter Games.

Second, various positive effects can be physically and mentally through the continuous participation of people with disability in figure skating, and balanced development should be established by establishing a linkage system from sports people with disability to professional sports for the purpose of improving and developing performance. When planning projects related to professional sports, sports for all, and school sports for persons with disabilities, the purpose of establishing pleasant experiences, social skills, and health improvement through physical activities, and fostering professional athletes and developing performance. In 2022, 51 out of 481 winter athletes specialized in ice skating for the people with disability. In the past two years, many athletes have quit their activities as skating activities and skating events have been canceled due to the COVID-19 situation. As a result, it is considered meaningful to find various ways to revitalize figure skating for the people with disability so that they
can induce more participation than before COVID-19.

Third, there should be many ice rink for people with disability where athletes can officially practice. Dongcheon Ice Rink was established for the first time for people with disability, but it is regrettable that there are other cases where training for the people with disability on the ice rink is restricted for safety reasons. In the future, if we create an environment where people with disability can train freely, more figure skaters will be created.

Finally, in the follow-up study, it is considered that there is a need for expanded research targeting experts in the special sports field, leaders by event, and participants.

5. References
5.1. Journal articles


5.2. Book


6. Appendix
6.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK</td>
<td>- Set of concepts ✔</td>
</tr>
<tr>
<td></td>
<td>- Design ✔</td>
</tr>
<tr>
<td></td>
<td>- Getting results ✔</td>
</tr>
<tr>
<td></td>
<td>- Analysis ✔</td>
</tr>
<tr>
<td></td>
<td>- Make a significant contribution to collection ✔</td>
</tr>
<tr>
<td></td>
<td>- Final approval of the paper ✔</td>
</tr>
<tr>
<td></td>
<td>- Corresponding ✔</td>
</tr>
<tr>
<td></td>
<td>- Play a decisive role in modification ✔</td>
</tr>
<tr>
<td></td>
<td>- Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔</td>
</tr>
<tr>
<td></td>
<td>- Participants in Drafting and Revising Papers ✔</td>
</tr>
<tr>
<td></td>
<td>- Someone who can explain all aspects of the paper ✔</td>
</tr>
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