Abstract

**Purpose:** The purpose of this study is to find out the perception of the Poomsae competition among the athletes participating in the Free style Poomsae competition and explore future-oriented improvement measures based on this.

**Method:** Accordingly examine the researchers collected data from the subjects through in-depth interviews, which is a qualitative research method, to achieve the purpose of the research. This led to a comprehensive conclusion.

**Results:** First, the players said that the Free style Poomsae competition was important for the colorful and difficult acrobatic and technical kicks, which are different from the existing Poomsae. Secondly, the poor scoring of kicks required by the current Free style Poomsae scoring system is causing difficulties for many players, as they are judged by the judge's subjective judgment on the field. Third, unlike authorized Poomsae because the frame is not set, the Free style Poomsae perform various techniques within the time limit. Fourth, he mentioned that the current international sports Poomsae competition has different directions, and that athletes are practicing skills with a lot of emphasis on acrobatic rather than preparing for two things. Fifth, for the revitalization of the freestyle Poomsae, the competition was the biggest.

**Conclusion:** By lowering the barriers of scoring technology, the participation rate should be increased by creating the Free style Poomsae stadium culture where players of all ages can easily participate. If you can produce and participate in the competition by utilizing the spirit and traditional movements of Taekwondo, not by kicking, acrobatic, or gymnastic skills, it will greatly affect the participation rate of Poomsae competition.

**Keywords** Taekwondo, Free Style Poomsae, Perception, Improvement, Poomsae Players

1. Introduction

Taekwondo is Korean traditional martial art that has developed into a unique form by breathing together in Korean history and is a Korean cultural heritage that is recognized for its value and excellence as it is spread around the world at a speed incomparable to other martial arts[1]. The name of Poomsae was revised from "Poosem" to "Poomsae" after consultation with the Korean Language Society at the Technical Council of the Kukkiwon on February 22, 1987[2]. In addition, Poomsae is a comprehensive combination of Taekwondo attack and defense techniques within a limited range. It is also designed to effectively and reasonably block the corresponding technique along the Poomsae line when attacked by a virtual enemy and to acquire the techniques to counterattack[3][4].

As Korea's leading brand with more than 80 million trainees from 209 countries around the world and a representative martial arts sport, the Ministry of Culture, Sports and Tourism adopted...
Taekwondo as one of Korea’s top three intangible cultural brands along with Hangeul and Arirang on February 13, 2014[5]. Amid this interest, it was adopted as an official event for the 2000 Sydney Olympics, and Taekwondo sparring event is also held at the 2018 Jakarta Palembang Asian Games and the 2020 Tokyo Olympics, drawing attention from not only Korea but also from all over the world.

Poomsae events were also quickly played by attracting various competitions based on the approval of domestic and foreign sports organizations and institutions, as well as the great interest in competing events. Starting with the first World Taekwondo Poomsae Championship in 2006, it began to be adopted as an official event at the Summer Universiade and the Asian Championships. Due to the interest and participation of people around the world, it has achieved the feat of being adopted as an official event at the 2018 Jakarta Palembang Asian Games. Furthermore, each organization and institution are actively moving to have Poomsae as an event at the Olympic Games.

As making Poomsae an event progressed rapidly, it attracted various world competitions, but the monotony and boredom of the repetitive movements of the official Poomsae were pointed out as problems. As an alternative, they first introduced and demonstrated creative Poomsae at the 1992 World Taekwondo Hanmadang Competition, but gradually disappeared from the actual competition due to the difficulty of the evaluation criteria and various problems. In addition, although it is currently specified in the competition rules, it is difficult to find creative Poomsae except for a few competitions, including the World Taekwondo Hanmadang. In addition, the Kukkiwon, the World Taekwondo Federation, and the Korea Taekwondo Association demonstrated several times while jointly developing “Bigak” and “Hallyu,” which are Poomsae for competitions, to promote creative Poomsae, but failed to popularize them among Taekwondo population[5].

The World Taekwondo Federation adopted freestyle Poomsae as a demonstration event at the 6th Vladivostok World Taekwondo Poomsae Championship and then adopted it as an official event at the 7th World Taekwondo Poomsae Championship in Tunja, Colombia in December 2012. The World Taekwondo Federation did not let Korean national team players participate in the competitions to give athletes from other countries a chance to win. However, in order to prepare for big competitions such as the Asian Games, they participated in the freestyle Poomsae category of the 2018 Taipei World Taekwondo Poomsae Championships, and South Korea raised its status as a Taekwondo leader as a Korean player was selected as the best player of the event.

Unlike official Poomsae and new Poomsae, the freestyle Poomsae is not a Poomsae that is repeatedly performed according to a frame with a fixed number of movements along the fixed performance line, but is a performance that allows the performer to show freestyle expressions such as various kicks and acrobatic techniques using freestyle movements and jumps to music. When looking at the competitions, the players show many skills with high difficulty and a different atmosphere from the official Poomsae competition. South Korean players have consistently continued to take the top spot in freestyle Poomsae competitions as well as official Poomsae events, as they have experienced world competitions such as the Asian Games, Universiade, and Asian Championships.

However, in recent years, when freestyle Poomsae has been played as an event like official Poomsae, the skills of the players have quickly leveled. In addition, the freestyle Poomsae competitions are focused on technique-oriented fancy kicks and acrobatic movements rather than orthodox Taekwondo movements as it is expressed in freestyle movements except for a few essential movements, not designated movements like official Poomsae. According to the 2020 Korea Taekwondo Association’s freestyle Poomsae scoring table, it is distributed with 6.0 points for techniques and 4.0 for performance. In the case of technique, 1.0 point is given to each element of kicks performed according to the difficulty of kicks and practicality, including jump side kicks, jump front kicks, rotating kicks, consecutive kicks, acrobatic movements, and basic movements. Scoring is being conducted mainly on kicks for Taekwondo demonstration, not kicks used in existing official Poomsae competitions. In addition, even for Poomsae competitions, the players are not supplementing the basic movements of Taekwondo, but are focusing more on acrobatics, gymnastics, and demonstration kick elements. As a result, the Taekwondo demonstration team members are showing superior skills than the Poomsae team members in Poomsae competitions[6].
As Taekwondo Poomsae is played in competitions, research on the development of the Poomsae competition continues, but research based on Poomsae players’ view of the freestyle Poomsae competitions is still insufficient. Therefore, this study aims to find out the players’ perceptions of freestyle Poomsae and explore ways to develop the freestyle Poomsae competition. So, the purpose of the research is to provide basic data for the revitalization of the freestyle Poomsae competitions through in-depth research on them.

2. Research Method

In order to achieve the purpose of this study, a literature review was conducted on prior studies related to the Taekwondo official Poomsae competitions and freestyle Poomsae. The researcher visited the research participants in person and conducted an in-depth interview with a semi-structured interview method. Within the last three years, the views of the players who won a number of Taekwondo official Poomsae and freestyle Poomsae competitions were used. The collected data were processed through investigator triangulation method of qualitative research approach to find out the current Poomsae competition and to explore better Poomsae competition development alternatives.

Accordingly, the research subjects and research tools are as follows.

2.1. Research participants

As for the study subject selection method, one of the non-probability sampling methods used in qualitative case studies, the purposeful sampling method was implemented. The purposeful sampling method is a method of sampling subjects who can represent characteristics suitable for research theme and obtaining in-depth information from research participants who are judged to be suited to the research purpose[7].

Based on this, the study plans to select athletes from college and adult division who have won national-scale official Poomsae and freestyle Poomsae competitions approved by the Korea Taekwondo Association[8].

The reason why college and adult players were selected as research subjects was that they were judged to be representative factors in the direction of improving the problems that the players directly feel in the competitions. The characteristics of the study subjects are shown in <Table 1>.

Table 1. Team competition, doubles competition(Korea taekwondo association, 2020).

<table>
<thead>
<tr>
<th>Division</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary school(low)</td>
<td>Taegeuk 3·4·5·6·7·8, Koyro</td>
</tr>
<tr>
<td>Elementary school(middle)</td>
<td>Taegeuk 4·5·6·7·8, Koyro, Keumgang</td>
</tr>
<tr>
<td>Elementary school(high)</td>
<td>Taegeuk 5·6·7·8, Koyro, Keumgang, Taebaek</td>
</tr>
<tr>
<td>Middle school</td>
<td>Taegeuk 5·6·7·8, Koyro, Keumgang, Taebaek, Pyongwon</td>
</tr>
<tr>
<td>High school</td>
<td>Taegeuk 6·7·8, Koyro, Keumgang, Taebaek, Pyongwon, Sipjin</td>
</tr>
<tr>
<td>College</td>
<td>Taegeuk 7·8, Koyro, Keumgang, Taebaek, Pyongwon, Sipjin, Jitae</td>
</tr>
<tr>
<td>Adult</td>
<td>Taegeuk 7·8, Koyro, Keumgang, Taebaek, Pyongwon, Sipjin, Jitae</td>
</tr>
<tr>
<td>Older adult</td>
<td>Koyro, Keumgang, Taebaek, Pyongwon, Sipjin, Jitae, Chonkwon</td>
</tr>
</tbody>
</table>

2.2. Measuring tool

In order to find out the perception of Poomsae players about the Taekwondo freestyle Poomsae competitions, it is planned to conduct an in-depth interview, which is a representative method of qualitative research, with seven participants selected. The questions are shown in <Table 2>.
Table 2. Evaluation item classification and scoring table (Korea Taekwondo Association, 2020).

<table>
<thead>
<tr>
<th>Point</th>
<th>Item</th>
<th>Qualification</th>
<th>Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>Accuracy</td>
<td>Basic movements</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detailed movements for each Poomsae</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>Expression</td>
<td>Balance</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Speed, strength</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coordination (forcefulness and gentleness, force control, rhythm)</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expression of energy</td>
<td>2.0</td>
</tr>
</tbody>
</table>

2.3. Data processing

The data collected through the study participants were processed with an expert meeting with an advisor and Taekwondo Poomsae expert to secure the reliability and validity of the study results. In addition, in order to increase the validity of the research results, the triangular verification method, a sub-verification step of qualitative research, was used, and conclusions were drawn through this.

3. Results and Discussions

In order to achieve the purpose of this study, athletes who have won both official Poomsae and freestyle Poomsae competitions were selected as subjects of the study, and an in-depth interview method, one of the qualitative research methods, was conducted to the study participants.

The purpose of this study is to find out the perception of Poomsae athletes about the Taekwondo freestyle Poomsae Competitions and further provide a plan for the development of Poomsae competitions.

3.1. The players' perception of the freestyle Poomsae competitions

The Taekwondo Poomsae competitions are currently divided into freestyle Poomsae competitions and an official Poomsae competition, and is one of the rapidly growing Taekwondo events as it has been adopted in many international competitions.

"In the past, when many people heard the word Taekwondo, what they thought was mostly sparring. However, I think it is good that Poomsae can appeal the diversity of Taekwondo to the public as it is widely known on social media after implementing freestyle Poomsae. However, I think we can lose the essence of Taekwondo if focused too much on fancy skills. If so many players are obsessed with techniques themselves, they will easily be injured and can neglect basic movements. In addition, just as sparring has lost the practicality of Taekwondo due to the introduction of electronic equipment and gears, I think freestyle poomsae is just a fascinating skill for the general public but has no effect as a practical martial art. And I think it is difficult to get everyone’s understanding because it is not easy for various age groups to perform freestyle Poomsae properly." <GGG>

The athletes who participated in this study said that in the freestyle Poomsae event of the Poomsae competitions, unlike with the official Poomsae, they showed fancy and stylish skills with music without restrictions on movement. However, in the case of the accuracy of Taekwondo’s basic movements as a Poomsae player, rather than practicing the proficiency and expressiveness of Poomsae obtained through training, it focuses on gymnastics, acrobatic movements, and technical kicks. It is said that high-level techniques focused on technical kicks and acrobatics rather than basic movements of
Taekwondo are needed to get good scores, and the freestyle Poomsae currently in effect is far from the traditional concept of Taekwondo Poomsae.

3.2. Players' perception of scoring freestyle Poomsae performance

Recently, many players have been participating in freestyle Poomsae competitions. However, over a long period of time, the Poomsae competition continues to cause many problems due to the judge's subjective judgment and competition rules. Therefore, problems with evaluation standards and ambiguous competition rules that are changing little by little every year should be resolved and clear regulations should be made[7][8].

“Like the official Poomsae, the criteria for scoring freestyle Poomsae are the difficulty of kicks, accuracy, completeness of Poomsae, creativity, and performance, and expression of energy. However, the scoring criteria are not completely clear compared to official Poomsae. Since it is freestyle, it is difficult to judge in what way the player made a mistake. The reference point is also set among the judges, but the score varies depending on the perspective they see, and I think this is the ambiguous part.” <EEE>

"Even when performing the existing competition time of 60-70 seconds, it took more time than expected for one person to recover from using all of his/her energy after performing all of the Taekwondo moves, kicks, and acrobatic moves. However, if the time is increased to 90 to 100 seconds, the player's physical strength and concentration will be further reduced, and more injuries will occur when performing the acrobatic movements that must come out at the end. And I think if too much time increases, it will be boring to spectate.” <BBB>

Participants in the study are negatively responding to the scoring method required for the freestyle Poomsae competition guidelines, and emphasize that athletes who express their skills with more accurate performance should receive higher scores than those with inaccurate expressions due to high difficulty.

3.3. Perception of changing competition rules

In freestyle Poomsae, the player shows various techniques in the limited time.

"I think the specific rules of the competition are the most urgent issue. I think we should introduce an additional point system, not point deduction system. And I hope that the system will be changed to a total of seven judges, three technical judges, two video judges, and two judges who score artistic quality of the performance. And the reason why we need to introduce an additional point system, not a point deduction system, is that judges just tend to look for mistakes.” <GGG>

“From 2020, the time for freestyle Poomsae has increased by 30 seconds from 90 to 100 seconds. I don’t think there’s a good result in freestyle Poomsae just because the time increased 30 seconds more. Even when it was 60-70 seconds, the players consumed a lot of physical strength and suffered frequent mistakes and injuries. It depends on how players use it, but I think it can get boring because they will spend a lot of time doing hand movements due to increased energy consumption.”<CCC>

“Previously, freestyle Poomsae was finished by performing skills and moves a few times rather than basic Taekwondo movements, so I think it’s okay because they should incorporate more Taekwondo movements. And I think we should prevent boredom by adding Taekwondo’s basic movements, which are more important than the proportion of fancy techniques, as we can utilize a lot of isometric movements and techniques just because we have increased time. Also, it needs to be a freestyle Poomsae, not a freestyle technique competition.”<DDD>

Participants in the study say they need more detailed and clear rules for Taekwondo freestyle Poomsae competitions. They emphasized that point deductions are needed for the accuracy and ambiguous movements of hand gestures and stance rather than techniques performed.
3.4. The problem with the preparation process of freestyle Poomsae competitions

Participants in the study said that since official Poomsae and freestyle Poomsae are competitions with different directions, for freestyle Poomsae, they are practicing their skills with a lot of focus on acrobatics rather than preparing the two in detail. The reason for this is believed to be that the technical kicks account for a very high proportion of the technical score.[9][10][11].

"Since there is a lot of lack of freestyle Poomsae skills, I mainly focus on practicing skills. As you practice techniques, you lack the skill of the official Poomsae, so you always practice the official Poomsae first during exercise time and then pay attention to preventing injury. I think it is difficult to do both because the muscles and joints used in official Poomsae and freestyle Poomsae are different. When preparing high-level techniques for freestyle Poomsae, you often experience many regrets of giving up the official Poomsae. And I think there's the risk of injury is a big issue too." <GGG>

Participants in the study said that since official Poomsae and freestyle Poomsae are competitions with different directions, for freestyle Poomsae, they are practicing their skills with a lot of focus on acrobatics rather than preparing the two in detail. The reason for this is believed to be that the technical kick part occupies a fairly high proportion of the technical score[8][12]. Although it is a competition to select the national team of Poomsae, the players feel the risk of injuries caused by acrobatic moves and difficulties in high-level techniques.

In addition, as difficult techniques require a lot of physical strength, the risk of injury is increasing and there are many physical and mental difficulties.

3.5. Competition factors

Recently, Poomsae competitions have helped promote Taekwondo a lot. With the adoption of Taekwondo Poomsae events at the World Championships, Universiade, and Asian Games, freestyle Poomsae has attracted a lot of attention from Taekwondo players around the world as well as domestic Taekwondo players. In order to be adopted as an official Olympic event following the Asian Games, a lot of effort must be made in the competition, and continuous attention from Taekwondo organizations is needed[13][14].

"I think freestyle Poomsae is to express yourself with Taekwondo. Free Poomsae has been getting a lot of attention now, but I think accurate deduction points, accurate competition rules, training of judges, and improvements on ambiguous technical expressions should be marked in order to make it more active. Also, rather than demonstrating with too high level of techniques, I think it’s better to lower the difficulty a little so that players of all ages can participate."<DDD>

"It is better to score only with high expression and what level of difficulty the skills have been set where they will enter, rather than unconditionally getting good scores by doing a lot of skills in the freestyle Poomsae competition. Also, it would be nice to score how accurately you used the movement and expressed it well in other movements other than that part."<FFF>

"I think the specific rules of the competition are the most urgent issue. I think we should introduce an additional point system, not point deduction system. And I hope that the system will be changed to a total of seven judges, three technical judges, two video judges, and two judges who score artistic quality of the performance. And the reason why we need to introduce an additional point system, not a point deduction system, is that judges just tend to look for mistakes."<GGG>

Participants in the study say they need more detailed and clear rules of the Taekwondo freestyle Poomsae competitions. They emphasized that point deductions are needed for the accuracy and ambiguous movements of hand gestures and stance rather than the current techniques.

They also said that for freestyle Poomsae players can practice skills safely if they are given space to practice because they use all the skills using the whole area. In addition, freestyle Poomsae currently uses high-level techniques, making it difficult for players to participate in competitions. They said that
lowering the barriers to scoring techniques could allow players of various ages to practice freestyle Poomsae[15][16][17].

4. Conclusion and Suggestions

The purpose of this study is to find out the perception on Poomsae competitions held by the players participating in freestyle Poomsae competitions and to explore future-oriented improvement measures based on this. Accordingly, in order to achieve the research purpose, the researcher collected data from the study subjects through in-depth interviews, a qualitative research method. Through this, a comprehensive conclusion was drawn as follows[18].

First, the players said that in freestyle Poomsae competitions fancy kicks and acrobatic moves are important different from existing official Poomsae. This is because high-level techniques must be performed to receive higher scores than the accuracy, proficiency, expression, discipline, and flow of basic movements of Taekwondo Poomsae.

Currently, the reality is that technique-oriented competitions are underway. In addition, the players participating in the competition are also using their hand skills and various movements without even knowing the exact name. If you deduct points for skills that cannot be considered Taekwondo skills and add essential movements as stipulated in the competition rules, the freestyle Poomsae competition will play a big role in the development of the competition without losing its unique appearance[19].

Second, many players are showing difficulties due to the inaccurate allocation of kicks required for the freestyle Poomsae scoring method, as it is evaluated by the judge’s subjective judgment on the field. They pointed out that it is necessary to establish clear scoring standards that can be objectively judged by both players and spectators participating in the competition. Based on the exact height and expression of the rotating kick, the number of kicks that accurately folds the knee during aerial kicks, and the additional points for performing movements above the standard acrobatics technique, and there are limitations and improvements to consider introducing cameras and video[20].

Third, unlike official Poomsae, freestyle Poomsae does not have a fixed frame, so various techniques are performed within the limited time. Due to the increased competition time, players can express essential kicks and Taekwondo movements more leisurely and stylishly regardless of time. However, it is said that more practice as much as the increased time can cause physical problems, anxiety about injuries, and limitations in creating movements. It also stresses that the competition schedule can get boring[21][22][23].

Fourth, the official Poomsae and the freestyle Poomsae have different directions for the international comprehensive sports Poomsae competition currently in effect. So, the players mentioned that they are practicing skills with a lot of emphasis on acrobatics rather than preparing for both events. This is because kicks that use high difficulty account for a large portion of the score, and the risk of injury due to difficulties in high-level techniques are mentioned[24].

Fifth, the competition elements were highlighted the most in order to revitalize freestyle Poomsae. It requires a clear scoring method based on point deductions for ambiguous movements and essential hand moves. If that happens, the completeness of the performance will increase without losing the tradition of Poomsae by showing the discipline and flow of Taekwondo, not just requiring the techniques themselves[25].

By lowering the barriers to scoring techniques, the participation rate should be increased by creating a freestyle Poomsae culture where players of all ages can easily participate. If you can produce and participate in the Poomsae competition using the spirit and traditional movements of Taekwondo, not technical kicks, acrobatics, or gymnastics, it will have a great impact on the participation rate of the Poomsae competition[26][27].
5. References

5.1. Journal articles


5.2. Thesis degree


5.3. Books


6. Appendix

6.1. Authors contribution

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