A Research on the INJURY by Exercise among TAEKWONDO Poomsae Athletes in Korean Universities

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Abstract

The present research strives to offer aid for the prevention and curing of athlete injuries by grasping the cause and cure for sports injuries of Taekwondo Poomsae(A systematic sequence of moves in Korean martial arts) athletes in Korean Universities. For this, an in-dept interview was conducted with 7 college athletes enlisted in the Korea Taekwondo Association presently in 2019, and by taking into account the opinions of research participants and through the comparing and examining of various measures from previous researches, a research result was derived.

Firstly, the experience of sports injury among Taekwondo Poomsae athletes in Korean universities was most common during their high school days.

Secondly, the technique which causes the most injury among the Poomsae in Taekwondo was found to be training in kicking, namely moves such as Yeopchagi.

Thirdly, in Taekwondo Poomsae, in most cases athletes were injured during the training procedure rather than during the competition.

Fourthly, after the injury was experienced there was no instance of psychological rehabilitation.

Lastly, in order to prevent damage, not only the athlete but also the instructor must cooperate, and a systematic basic health training system, a personal health maintenance system, and new psychological rehabilitation programs for those injured need to be applied.

The prevention of accidents can be done by the appropriate practicing of the basic moves and learning of the techniques, an adequate warm up before the competition, a systematic exercising program’s planning and training, and care taken by a routine psychological counseling and efforts to avoid a slump. Also, there is the need to accumulate knowledge on the cause of wounds and its prevention, and conduct safety instruction sessions.

[Keywords] Martial arts, Taekwondo, Poomsae Athlete, Sports Injury, Psychological Rehabilitation

1. Introduction

1.1. The need for research

There were first attempts to render Taekwondo Poomsae into a competition in the First Taekwondo Hanmadang Contest(1992) organized by the World Taekwondo Headquarters, and with this as the starting point a Poomsae contest was activated and Taekwondo Poomsae spread with Taekwondo training sites serving the major participants [1]. Afterwards, with the enactment of Korea Taekwondo Association’s Poomsae competition rules, the sports were actively made into a competition. Presently with the World Taekwondo Poomsae Athletic contest being conducted, and the sports being officially chosen by the Asian Game, The Summer Universiade and the World Master Game, there are also movements to make the sports a major game in a comprehensive sports competition by continent[2].
The development of Taekwondo techniques caused variations in Taekwondo moves and the complexity of technique. Poomsae requires the carrying out of each move through the control over the intensity, shouts, eye level and breathing; it also needs techniques which have a higher aesthetic level and difficulty in order to reach a level superior to that of the competitor. The Yeopchagi of authorized Poomsae which is a move in which the athlete kicks straight up and over his own height is considered the “flower of Poomsae” [3]. But competition due to the competitions resulted in a more intense technique training in order to complete moves which are more difficult to carry out, leading to the injury of athletes occurring more often[4].

Until today, researches related to Taekwondo injuries often concentrated on those who competed in one on one competitions[5], and only recently have researches been conducted on injury through movement demonstrations and the breaking apart of objects. However, there have been few researches on sports injury with Poomsae athletes as the subjects[6].

Especially, sports injuries often occurring during training or competitions affect the psychological aspects of the athlete[7], causing slumps, fatigues and stress and even leading to the athlete giving up on his career, which is why psychological damages must be managed with care[8].

In order to prevent injury, knowledge is needed on its mechanism, and the instructor and athletes will have to carefully reexamine the present state of sports injuries occurring in Taekwondo Poomsae athletes, and the necessary measures for its prevention or treatment[9].

Thus, this research aims to start a discussion on the causes and treatment of sports injuries as perceived by the Taekwondo Poomsae athletes in Korean universities, derive a plan for an improvement, and reexamine the knowledge and change of perception on sports injuries among instructors and athletes.

### 1.2. The object of the study

This research is one on the sports injury on Taekwondo Poomsae Athletes in Korean Universities, and was conducted for the research purpose of comprehending the body part which was injured, the form of injury, the time when it occurred and its cause, all due to the attributes of the Taekwondo Poomsae as a competition,, and later shed light on an effective solution.

### 2. Research Methods

#### 2.1. Research participants

In order to meet the aim of the present research, the research participants were selected according to the standards conferred on and chosen by the group of professionals who were colleagues serving consultants to the research. The constituents of the group were a professional on sport injuries, two professors majoring in Taekwondo studies, and two professional Taekwondo instructors. The total of five professionals offered the following selection criteria in order to constitute the research participant. One, the athlete must be one who maintained his status and was enlisted for more than five years as a Korean Taekwondo Association athlete. Second, the athlete must be one who participated in domestic contests more than ten times. Third, the athlete must have been awarded more than once within the domestic contests. According to these criteria 7 Poomsae athletes were chosen as research participants. The general attributes of the research participants are as shown on <Table 1>.

<table>
<thead>
<tr>
<th>No.</th>
<th>Gender</th>
<th>Grade</th>
<th>Career</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant A</td>
<td>Man</td>
<td>4</td>
<td>9 years</td>
</tr>
<tr>
<td>Participant B</td>
<td>Man</td>
<td>3</td>
<td>7 years</td>
</tr>
<tr>
<td>Participant C</td>
<td>Man</td>
<td>3</td>
<td>8 years</td>
</tr>
</tbody>
</table>
### Table 2. Question content.

<table>
<thead>
<tr>
<th>Question content</th>
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<tbody>
<tr>
<td>When did you first experience a sports injury?</td>
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<tr>
<td>Why were you injured?</td>
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<tr>
<td>Which technique or training causes an injury most often while training for Taekwondo Poomsae?</td>
</tr>
<tr>
<td>When are you most often injured while completing a Taekwondo Poomsae?</td>
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<tr>
<td>How do you treat a sports injury?</td>
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<tr>
<td>What is a problem you faced after a sports injury?</td>
</tr>
<tr>
<td>What measures would you take to prevent sports injuries?</td>
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### 2.2. Research means

In the course of the research a main research means used was in-depth interview. In order for the interview to be conducted effectively, a structured question guide was used. While the in-depth interview was being done, the situation was recorded, and later the participant’s answer was coded into words using a computer program and made a text file. The question guide for the interview was set after consulting the group of professionals. The basic questions for the in-depth interview is as seen on <Table 2>.

### 3. The Cause of Sports Injury among Taekwondo Poomsae Athletes and Means of Improvement

#### 3.1. The period in which injuries occur in Taekwondo Poomsae

Upon inquiring Taekwondo Poomsae athletes in Universities on the time of their injury, it was found that they suffered the most injuries during their high school days. Such a result was derived from the fact that there is a fierce competition in High school competitions, intensive training has to be done in order to apply for college, and there are many competitions to be attended.

Most research participants were found to suffer their first injuries during high school. It can be seen this is due to the fact that a scientific and systematic training program has not been offered, and that the training is done concentrating on techniques rather than basic bodily capacities, which is an inner factor of sports injuries.

#### 3.2. Wound inducing techniques in Taekwondo Poomsae

The techniques which causes injuries in Taekwondo Poomsae most often were kicks such as the move of side kicking. Most research participants mentioned that they suffered the most injuries on the waist and hamstrings while kicking. Thus, the instructors
need to specifically intensify the stretching during warm ups and cool downs for exaggerated techniques such as kicking, and in particular take special measures to strengthen the stretching on muscle parts used while kicking[10].

3.3. The situations which cause wounds in Taekwondo Poomsae

In Taekwondo Poomsae, the research participants mention that they are more often wounded while training rather than in a competition. According to the attributes of a Poomsae game, in order to win the athlete must minimize his error or mistakes than his opponent, and in order to carry out the move in perfection while training the athlete is wounded by overworking himself or repeatedly practicing a move in the wrong way.

3.4. Problems after the sports injury

Most of the research participants appeared to have experienced a negative shift in emotions such as psychological stress, depression, and anxiety after experiencing an injury. It is easy to overlook negative ways and emotions caused by the damage. Should the psychological rehabilitation not be done in earnest, an extreme circumstance such as a serious slump or the giving up on the sport can occur. Thus, it is important to acknowledge that psychological rehabilitation is as crucial as a physical one[11].

3.5. Measures to prevent sports injury of Poomsae athletes

In order to prevent sports injury, firstly there has to be an improvement on basic bodily capacity through professional training[12]. The moves in Taekwondo Poomsae need to be maintained for a certain period of time with adequate breathing and requires a momentary energy, which is why in order to prevent being wounded while executing such techniques the basic capacity of the body needs developing.

Secondly, an organized system regarding the athlete’s ability needs constructing in order to prevent bodily damage. Before participating in a competition, detailed monitoring such as body examination, the enhancing of basic body capacity, warm ups and cool downs, the putting on of protective appliances and safety checks are necessary.

Thirdly, a psychological rehabilitation program after an injury is urgently needed. Poomsae athletes experience bodily damages often during training. Their stress, depression and anxiety, negative emotions and actions should not be overlooked. Through psychological training to prepare the athletes for such circumstances, we can prevent sports damage effectively.

4. Conclusion and Suggestion

The present research examined the cause of sports damage and the real-life treatment as Taekwondo Poomsae athletes in Universities and strove to find measures of improvement. The conclusions are as follows.

Firstly, the sports injury in Taekwondo Poomsae occurs most often during high school days. Secondly, the technique training which causes the most injuries in the sports was in kicking such as Yeopchagi. Thirdly, injuries during the sports more often occurred in training rather than in actual competitions. Fourth, there was no instance of psychological rehabilitation after the injury.

Lastly, in order to prevent the physical damages of Taekwondo Poomsae athletes, not only athletes but instructors need to unite. In particular, a structured training system for the basic bodily capacity, a personal body maintenance system, and a psychological rehab program in case of injuries need to be set into action. In order to prevent unfortunate accidents, basic postures need adequate practicing and the techniques need be learnt, warm ups before competitions need be conducted, the planning and training of a systematic exercise program needs executing, and care must be taken in physical counseling and prevention of a slump. In addition, knowledge must be accumulated and a safety education done on the cause and prevention of wounds.
5. References

5.1. Journal articles


5.2. Thesis degree


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