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# Research on the Cause and Protection of Wrist Joint Injury among Aerobics Students of Beijing Sport University

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## Abstract

**Competitive calisthenics can reflect the comprehensive ability of athletes. With the development of competitive calisthenics, the requirements for athletes' level are getting higher and higher. In the difficult practice and competition, the participation of wrist joints is indispensable, so as to increase the damage of wrist joints and affect the performance of athletes' competitive level.Through the literature material law, questionnaire survey method, mathematical statistics and other related research, the art institute of Beijing sports university aerobics special students by analyzing the present situation, the damage characteristics of wrist injuries and the summary, analysis the cause carpal tunnel, and protection.The research results show that the Beijing sports university aerobics players ego to protect consciousness is weak, not enough attention to ideological, lack of sports injury of theory knowledge, inaccurate techniques as well as the physical quality to reach;Beijing sports university aerobics special students avoid wrist injury is the main way of improving the incorrect action technology, development of physical quality, the reasonable arrangement of training, such as strengthening the study of theoretical knowledge, Beijing sports university aerobics special students the wrist injury directly affect their health and athletic ability, hinder their athletic skills.**

## Keywords

**Aerobics; Wrist joints; Injure.**

## 1. Introduction

Competitive aerobics started late in China, but it is developing very fast, especially in colleges and universities. It has more complex and high-intensity sets of movements, which can fully demonstrate the overall quality of athletes. Sports injuries often appear in aerobics sports, and the injury status is directly related to the athletes' performance. In training and competitions, the wrist joints are often used to complete difficult movements, thereby increasing wrist injuries, affecting the improvement of aerobics athletes' competitive ability, and in severe cases affecting their sports careers.

This paper takes the wrist injury of the aerobics students specializing in the aerobics of Beijing Sport University as the research object, and investigates, analyzes and summarizes the wrist injury, injury mode and injury characteristics of competitive aerobics. And find the deficiencies and defects in the training, so as to further improve the training method, reduce the injury of the wrist joint, and improve the training efficiency. To provide a useful reference for the research on wrist injury in competitive aerobics.

In recent years, competitive aerobics has developed rapidly in my country, and the corresponding risk of sports injuries has gradually increased. A number of studies have shown that due to the characteristics of aerobics itself, such as strict time requirements, high movement requirements, fast music accompaniment, coherent and coordinated movements, etc., if athletes do not pay attention. Shoulders, elbows, wrists, waist, thighs, knees, calves, and ankles are the more prone areas to injury in aerobics training. Among them, the most

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vulnerable to injury is the ankle [1]. In addition, the type of injury most likely to occur in competitive aerobics athletes is closed injury, among which joint strain, sprain and muscle strain are the most common, and chronic injury [2-3] is the main type.

Cai Jiajing pointed out in "Research on Cognition and Prevention of Sports Injuries in School Team Athletes of Beijing Sports University" that through the investigation of the injury status and cognitive situation of school team students, it was found that most of the injuries occurred in the usual training, mainly due to the lack of preparation activities. Adequate, poor physical fitness. Most athletes have a contemptuous attitude towards injuries and their cognition is not high, which greatly increases the incidence of sports injuries [4]. Lin Haiqi and Song Chao pointed out in "Investigation and Analysis of College Students' Sports Injuries and Its Influencing Factors" that the most important factor restricting college students' national fitness is sports injuries. According to the investigation and analysis of the characteristics of sports injuries among students in different majors and specialties, the injury rate of sports majors is significantly higher than that of liberal arts, science and engineering majors [5]. Li Yufeng pointed out in "Application Research on Sports Injury Prevention and Training Methods for Gymnastics Athletes" that sports injuries are often prone to occur during training for gymnasts. Gymnasts have sports injuries, which have a great impact on their daily training and gymnastics career. Physical fitness should be strengthened, sports injuries should be strengthened, and plans should be scientifically arranged [6]. Sun Tao's "Survey on the Current Situation of Sports Injuries of Aerobics Specialized Students in Harbin Institute of Physical Education" pointed out that sports injuries are prone to occur in competitive aerobics athletes, mainly in 10 parts such as wrists, legs, ankles, knees, etc. Most of the injuries are Acute injury, but the degree of injury is mainly mild injury. The cause of injury is mainly subjective, such as one's own technical movements and physical fitness and other problems [7]. Gao Wenyue, Yang Yong, Zang Kecheng "The Causes and Preventive Measures of Wrist Injury in Professional Athletes" proposes a series of treatment and preventive measures by investigating the cause, mechanism, clinical manifestation and diagnosis of the injury. Professional athletes are prone to sports injuries because of the long training time. If they do not pay attention to the injury in the early stage and ignore the best time for treatment, the injury will be further serious and affect the sports career. Wrist injuries are more common in sports that use too much upper extremity [8]. Wang Chunxia and Yu Xiao pointed out in the article "Research on the Pathogenic Factors and Countermeasures of Wrist Joints of Competitive Aerobics Players in Colleges and Universities" that basically all college students engaged in competitive aerobics in colleges and universities. Among them, the training years are relatively low, the level is low, and the knowledge of the causes and prevention of wrist joint injuries is less known. Therefore, injuries are particularly prone to occur in the training of competitive aerobics, especially the push-up movements in the high difficulty of group C. Poor wrist strength and insufficient physical fitness to support difficult movements, coupled with regular control, lack of proper grasp of the rhythm of music, lack of experience, and excessive psychological tension are all factors that are prone to wrist injury [9].

To sum up, wrist joint injuries are common in the career of competitive aerobics. High-frequency use of wrist joints to complete difficult movements, but lack of self-quality, poor wrist strength and lack of awareness and knowledge of wrist joint injuries. Therefore, training increases the risk of injury to the wrist joint. Competitive aerobics is inseparable from the participation of the wrist joint in most of the difficulty and links. Once the wrist is injured, it will affect the career of competitive aerobics. Therefore, it is particularly important to understand the cause and protection of wrist injury.

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## 2. Research Objects and Methods

The cause and prevention of wrist joint injury in the aerobics special students of Beijing Sport University School of Arts were selected as the research object. The method of literature research, questionnaire survey, interview, and mathematical statistics were used; according to the research purpose and content, through the comparison of Chinese and foreign literature, the analysis and discussion were carried out, and a comprehensive analysis was carried out with reference to "Sports Injury Treatment".

The students of the aerobics specialization program of the School of Arts of Beijing Sport University were selected as the survey objects. The contents of the questionnaire included the injury site, injury type, and cause. In 2019, 45 questionnaires were distributed, 41 were recovered, and 41 were valid questionnaires. For the 2020 class, 30 questionnaires were distributed, 24 were recovered, and 24 were valid questionnaires. In 2021, 35 questionnaires were distributed, 35 were recovered, and 35 were valid questionnaires. A total of 110 questionnaires were distributed, 100 were recovered, and the recovery rate was 91%. There were 100 valid questionnaires, and the effective rate was 100%. Use Excel to sort out the original data of the questionnaire to obtain valid data, and conduct a systematic analysis of the statistically sorted data.

**Table 1.** Statistics on the distribution and recovery of questionnaires for athletes

| Questionnaire | Number of releases | Number of recycling | Recovery rate | valid questionaire | Efficient |
|---|---|---|---|---|---|
| Special student of aerobics at the School of Art, Beijing Sport University | 110 | 100 | 91% | 100 | 98% |

In order to better study the current situation, causes and preventive measures of wrist joint injuries among the aerobics students of Beijing Sport University School of Arts Opinions provide reliability, scientificity and rationality for the research of the thesis.

**Table 2.** Basic information of the interview n=3

| Interviewee | employer | job title |
|---|---|---|
| Xianjun Meng | Aerobics Teaching and Research Office of Beijing Sports University | Professor |
| Song Yan | Aerobics Teaching and Research Office of Beijing Sports University | Professor |
| Xin Li | Aerobics Teaching and Research Office of Beijing Sports University | Professor |

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# 3. Results and Analysis

## 3.1. A Survey on the Basic Situation of Sports Injuries Among Students in the Aerobics Specialization Program of the School of Arts, Beijing Sport University

There is a close relationship between the sports injury rate and the aerobics special project. Through the investigation and research on the aerobics specialization students at all levels of the Beijing Sport University School of Art, the sports injury rate is analyzed.See Table 3.

**Table 3.** Statistical table of the number of wrist joint injuries among the aerobics special students of Beijing Sport University School of Arts n=100

| | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | total | proportion |
|---|---|---|---|---|---|
| have a sports injury | 38 | 20 | 28 | 86 | 86% |
| No sports injuries | 3 | 4 | 7 | 14 | 14% |

According to Table 3, the number of injured in 2019 was 38, and 3 were not injured, the number of injured in 2020 was 20, and 4 were not injured, and the number of injured in 2021 was 28, and 7 were not injured. The total number of people with sports injuries was 86, accounting for 86%. The total number of people without sports injuries was 14, accounting for 14%. The proportion of people with sports injuries is significantly greater than the number of people without sports injuries. Through the investigation, it is found that in the competitive aerobics career, most athletes have suffered sports injuries during training or competition. Sports injuries will cause psychological and physical damage to athletes, hinder the improvement of athletes' technical level, and even in severe cases. Interrupted sports career.

Sports injuries are injuries that occur in sports and are closely related to the number of years of training. Investigation and analysis on the training years of the aerobics special students in the School of Arts of Beijing Sport University.See Table 4.

**Table 4.** Survey on the training years of the aerobics special students in the School of Art, Beijing Sport University n=100

| training years | 1-3 years (person) | 4-6 years (person) | 6-8 years (person) | 10+ years (person) | Total (person) |
|---|---|---|---|---|---|
| total people | 33 | 48 | 12 | 7 | 100 |
| The number of injured | 31 | 44 | 6 | 5 | 86 |

According to Table 4, it shows that there are 33 people with training years of 1-3 years, 31 people with injuries, 48 people with 4-6 years, 44 people with injuries, and 44 people with injuries in 6-8 years. There are 12 people, 6 people injured, 7 people over 10 years, 3 people injured, 100 people in total, and 86 people injured. It can be found that the incidence of sports injuries gradually decreases with the increase of sports years, and this trend is mainly due to the beginning of systematic training. The physical fitness is poor, the skeletal muscle system is relatively weak, coupled with the unskilled movement of new technologies, the training intensity of competitive aerobics is relatively high, so the incidence of sports injuries is much higher, but with the increase of sports years, the technical The movement and the surrounding

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environment are gradually familiar, especially through long-term training, the skeletal and muscular systems are more developed, and the incidence of sports injuries is gradually reduced. In addition, the gradual understanding of sports injury knowledge is also an important factor.

## 3.2. Investigation of Wrist Injury Among Students Specializing in Aerobics in the School of Arts, Beijing Sport University

The following statistical tables were formulated for the investigation of the number of injured parts of the 2019, 2020, and 2021 aerobics students of Beijing Sport University Art College respectively.See Table 5.

**Table 5.** Statistical table of the number of sports injuries among the aerobics special students of Beijing Sport University School of Arts n=86

| The number of injured | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | Total (person) |
|---|---|---|---|---|
| wrist | 20 | 12 | 14 | 46 |
| ankle | 9 | 4 | 6 | 19 |
| loin | 3 | 1 | 3 | 7 |
| knee | 3 | 2 | 3 | 8 |
| elbow | 2 | 1 | 1 | 4 |
| shoulder | 1 | 0 | 1 | 2 |

According to Table 5, there are 46 wrist injuries, 19 ankle injuries, 7 waist injuries, 8 knee injuries, 4 elbow injuries, and 4 shoulder injuries. The total number of injured persons was 2. Most of the aerobics students in the Academy of Arts suffer from wrist injuries[10]

In the analysis of wrist joint injuries, because of the inherent differences in the physical structure of men and women, the classification analysis was carried out by investigating the different genders of the aerobics specialties of the School of Arts of Beijing Sport University. See Figure 1.

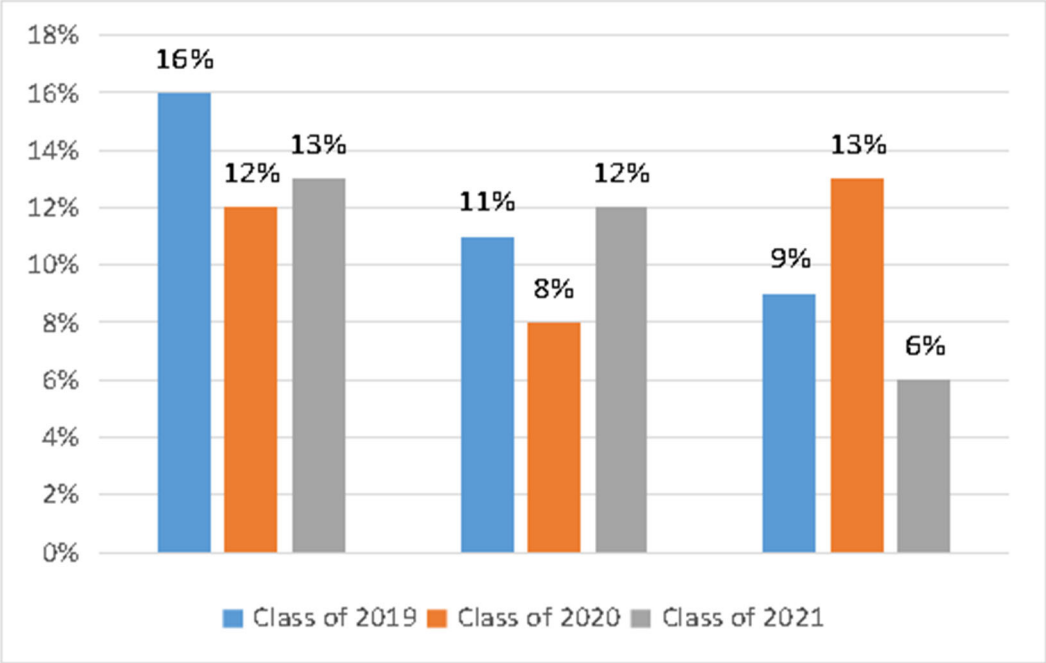


**Figure 1.** Statistics chart of the number of sports injuries among the aerobics students in the School of Arts, Beijing Sport University n=86

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According to the survey in Figure 1, the wrist injury rates of boys and girls were 31% and 15%, respectively, and the overall injury rate was 46%, which was significantly higher than other injured parts. Male athletes have significantly higher wrist and waist injury rates than female athletes, but significantly lower ankle and knee injury rates than female athletes. This is usually a more physically fit male athlete who can support more difficult movements and work with lifts. It's easy to get injured by overusing your wrist throughout the set. Female athletes have better flexibility and generally lower rates of wrist, waist and shoulder injuries. However, in the difficulty of jumping, due to the high impact pressure, women's leg strength is relatively poor, and it is easy to cause knee and ankle injuries. Joint damage. enough attention. Reducing the occurrence of wrist injury should be one of the most concerned issues in the daily training of aerobics in Beijing Sports University.

During aerobics training, the injury rates of wrist joints in different periods are also different. The following table 6 is obtained by investigating the wrist injuries of the aerobics special students of Beijing Sport University School of Art in different periods.

**Table 6.** Investigation on the occurrence period of wrist joint injury among the aerobics special students of Beijing Sport University School of Arts n=46

| Injury period | number of people | percentage |
|---|---|---|
| Difficulty practice | 29 | 63% |
| set of exercises | 12 | 26% |
| preparation activities | 1 | 2% |
| strength exercises | 3 | 7% |
| outside the training session | 1 | 2% |

According to Table 6, 29 people were injured in difficult exercises, accounting for 63%; 12 people were injured in complete exercises, accounting for 26%; and 1 person was injured in preparation activities, accounting for 2% ; The number of injuries in strength training is 3 people, accounting for 7%; the number of injuries outside the training class is 1 person, accounting for 2%. It can be seen that the probability of wrist joint injury is the highest in the process of difficult exercises, which seriously hinders the development of athletes' competitive ability. Fear of the athlete also has a big impact. During the complete set of exercises, the athlete is not adapted to the load intensity, the body is fatigued, and the probability of wrist injury is increased. During the preparatory exercise, the athlete was inattentive, perfunctory, and did not understand the purpose and meaning of the warm-up activities, resulting in wrist injury. In strength training, athletes often overestimate their ability to perform strength training, and their awareness of self-protection is weak, which leads to an increased risk of wrist injury. In addition, there are accidents outside of training sessions that can lead to wrist injuries.

According to the survey, through a survey of 29 people who suffered wrist injuries during difficult exercises, it was found that 41% of them were in group A, 31% in group B, and 28% in group C. . Among the three groups that are very prone to injury, the wrist joint injury rate in group C is the highest in jumping difficulty, and the wrist injury rate in group B is the least in static support difficulty. The most likely to cause injury is the push-up action in the jumping class in group C. The push-up action in group C requires the athlete to take off in the air and land perfectly after completing the action, which will have a greater impact on the upper and lower limbs and cushion the wrist joint. Strength puts forward higher requirements. For example, some movement techniques are not standardized, and those with poor wrist strength are prone to injury. In group A dynamic ground class and group B static support class, the wrist

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is required to support the body to complete difficult movements, and the wrist is frequently used and is prone to injury [11]. See Figure 2.

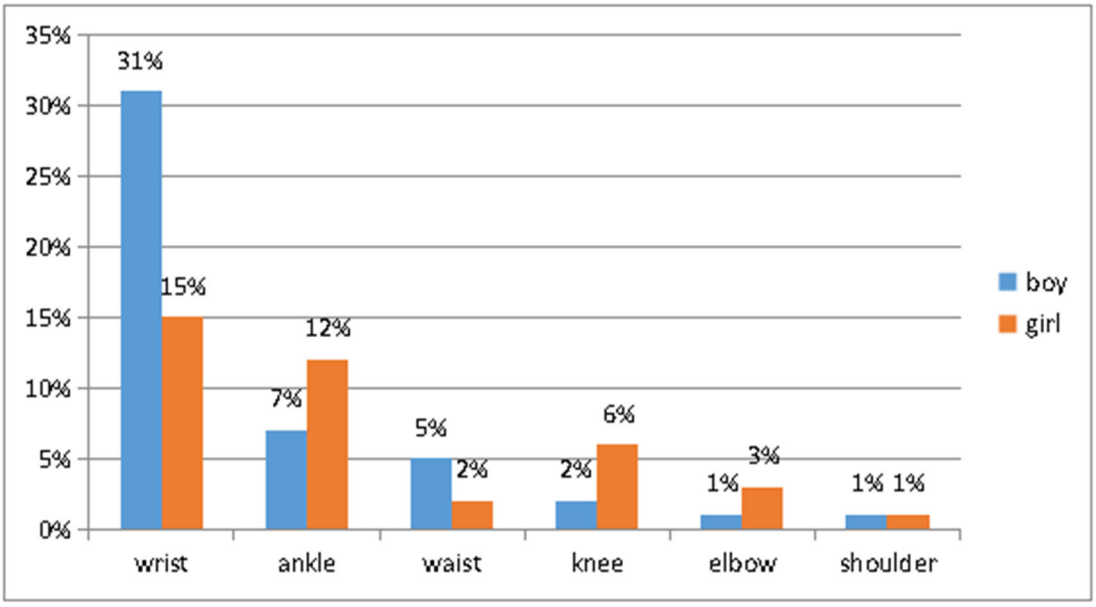


**Figure 2.** Investigation on the relationship between wrist injury and difficulty group n=29

Sports injuries are mainly divided into acute and chronic injuries. According to the degree of wrist injury, wrist injury can be divided into mild injury, moderate injury and severe injury, see Table 7.

**Table 7.** Distribution of wrist injury types among the aerobics students in the School of Art, Beijing Sport University n=46

| | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | % of total |
|---|---|---|---|---|
| Acute number | 15 | 8 | 11 | 74% |
| Chronic population | 5 | 4 | 3 | 26% |

According to Table 7, the number of acute injuries in 2019 is 15, the number of chronic injuries is 5, the number of acute injuries in 2020 is 8, the number of chronic injuries is 4, the number of acute injuries in 2021 is 11, and the number of chronic injuries for 3 people. The total number of people with acute injuries is 74%, and the total rate of people with chronic injuries is 26%. The number of people with acute injuries is significantly larger than those with chronic injuries. In acute injuries, athletes generally do not warm up enough when they complete a higher difficulty, and the technical The movements are unreasonable, and the impact of difficult movements on the wrist joint is too large. Once the force is unreasonable, it is easy to cause acute injury. Chronic injury is caused by excessive strain on the wrist during long-term difficult training involving the wrist joint.

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**Table 8.** Distribution of wrist joint injuries among the aerobics special students of Beijing Sport University School of Arts n=46

| degree of damage | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | % of total |
|---|---|---|---|---|
| Minor injuries | 14 | 8 | 10 | 70% |
| Moderate injuries | 5 | 3 | 2 | 22% |
| Severe injuries | 1 | 1 | 2 | 8% |

According to Table 8, there are 14, 8, and 10 students with mild injuries in the 2019, 2020, and 2021 grades, respectively, accounting for 70% of the total. The numbers of moderate injuries were 5, 3, and 2, accounting for 22% of the total. The number of severe injuries was 1, 1, and 2 respectively, accounting for 8% of the total. In the degree of injury, the injury is generally mild.

**Table 9.** Distribution of measures taken after acute injury n=34

| | Healing while training | rest | active treatment |
|---|---|---|---|
| number of people | 12 | 18 | 4 |
| percentage | 35% | 53% | 12% |

According to Table 9, when these 34 aerobics athletes suffered acute wrist injury, they did not have a deep understanding of the injury knowledge, did not carry out professional treatment, and the coaches did not find out in time. In the event of injury, 12 students were treated while training, accounting for 35%, 18 students were resting after injury, accounting for 53%, and 4 students were actively treated after injury, accounting for 12%. If acute injury is not treated in time, especially persistent training with injury, it will lead to the transformation of acute injury into chronic injury. Once acute injury is transformed into chronic injury, it will also bring certain difficulties to the rehabilitation of competitive aerobics, resulting in the transformation of acute injury into chronic injury.

In competitive aerobics, the main wrist injury types are mainly divided into joint dislocation, cartilage contusion, fracture, inflammation of periosteum, synovium, and muscle and joint strain, as shown in Table 10.

**Table 10.** Investigation and research on the types of wrist joint injuries among the aerobics students in the School of Arts, Beijing Sport University n=46

| damage type | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | % of total |
|---|---|---|---|---|
| joint dislocation | 2 | 1 | 1 | 9% |
| cartilage contusion | 9 | 6 | 7 | 48% |
| fracture | 1 | 0 | 0 | 2% |
| Inflammation of periosteum and synovium | 5 | 3 | 4 | 26% |
| ligament strain | 3 | 2 | 2 | 15% |

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According to Table 10, 9% had joint dislocation, 48% had cartilage contusion, 2% had fracture, 26% had inflammation of the periosteum and synovium, and 15% had ligament strain. The most common ones are cartilage contusion, ligament strain, periosteum, synovium and other inflammations. The smallest proportion is joint dislocation and fracture. The wrist joint includes the radiocarpal joint, the intercarpal joint and the distal radioulnar joint. The wrist joint is located in the deep part of the carpal tunnel. It is easy to cause injury in daily life. Flexion, extension, abduction, abduction, ring rotation and other movements, due to the limitations of sports anatomy, the flexibility of joint flexion is greater than the flexibility of extension, so the difficult movements of competitive aerobics, especially push-ups, use too much extension, plus high-intensity impact It is difficult for the wrist to bear the load, and it is prone to cartilage contusion, as well as sports injuries such as wrist ligament strain.

### 3.3. Research on the Causes and Prevention of Wrist Injuries in the Aerobics Special Students of Beijing Sport University School of Art.

Through the investigation of the aerobics special students of the Art College of Beijing Sport University, we learned that there are many reasons for wrist injury, as shown in Table 11 [12].

**Table 11.** Statistical table of the causes of wrist joint injuries among the aerobics special students of Beijing Sport University School of Arts n=46

| Cause of injury | Class of 2019 (person) | Class of 2020 (person) | Class of 2021 (person) | % of total |
|---|---|---|---|---|
| Inadequate and unreasonable preparations | 4 | 3 | 3 | 22% |
| Lack of knowledge about wrist injuries | 2 | 2 | 2 | 13% |
| body fatigue | 2 | 1 | 1 | 9% |
| Improper technical actions | 8 | 3 | 5 | 34% |
| poor physical fitness | 3 | 2 | 1 | 13% |
| Venue equipment factor | 1 | 1 | 2 | 9% |
| Total | 20 | 12 | 14 | 100% |

According to Table 11, 34% were injured due to irregular technical movements, 22% due to insufficient preparation, 13% due to poor physical fitness, 13% due to lack of knowledge about wrist injuries, 9% due to excessive body fatigue, and 9% of venue equipment. Factors accounted for 9%. Technical actions are not standardized. Competitive aerobics athletes suffer from joint injuries, and irregular technical movements are a very important factor. For example: bending the body and splitting into a push-up, jumping in the air to quickly complete the movement in the air, then quickly pressing the legs to join the legs, and the hands and feet should be Land at the same time. The main cause of wrist injuries in most competitive aerobics athletes is that the hands and feet cannot land at the same time. Premature landing of the hand will cause the upper limb to bear all the buffering force, which may easily cause wrist injury. Insufficient preparation activities. There are two types of preparatory activities, one is general preparatory activities and the other is special preparatory activities, and the effects of the two on warm-up are completely different. Competitive aerobics athletes are not clear about the purpose of preparatory activities, lack of concentration, and cannot achieve the real purpose of warm-up. Poor physical fitness. Physical fitness and sports injuries are closely related. When the special physical fitness of competitive aerobics athletes cannot meet the requirements of technical

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ability, the eagerness to achieve the required strength increases the probability of wrist joint injury. The body is in a state of fatigue. Sports injuries caused by sports fatigue are very common, and the training content and load should be reasonably arranged. Lack of knowledge about wrist injuries and the factors of venue equipment are also important factors that are prone to sports injuries [13].

Sports injuries can determine the performance and life of athletes. Wrist injuries are an important part of sports injuries. Most of the difficulties in competitive aerobics are inseparable from the wrist joint. Therefore, preventing wrist joint injuries in sports is extremely important. Wrist injury seems to be unavoidable, but as long as the scientific training method, content and knowledge are grasped, the impact on sports injury is also different [14].

Emphasizes the learning details of movement techniques. Correct technique and body posture are important guarantees for preventing wrist injury. When practicing difficult movements, especially difficult movements that are difficult to complete, it is necessary to emphasize the details of movement techniques. On the basis of mastering the basic technical principles of difficulty, it is necessary to pay more attention to details such as body posture, timing of exertion, and direction of exertion.

Improve the physical fitness of athletes. Quality training is very important in competitive aerobics training, and most injuries are caused by insufficient quality. In the completion of a complete set of movements, insufficient endurance and physical decline will seriously affect the quality of completion, and the probability of injury will greatly increase. During the push-up exercise in group C, the wrist strength is poor and the muscle strength is insufficient, which is also very likely to cause wrist injury. In the training process, attention should be paid to physical fitness and targeted strengthening of wrist strength training.

Strengthen the knowledge of athletes' injuries. Coaches must be good role models for sports injury knowledge and keep learning. They can set up theoretical courses to allow students to systematically learn injury knowledge, do a good job in protection work, and pay attention to students before practice when teaching difficulty or linking and other risky actions. Matters, let athletes consciously to prevent risks, so as to avoid sports injuries.

Develop reasonable preparation activities. Before training, competition or physical education class, the content of preparation activities should be determined according to the training content or competition situation, personal physical condition, climatic conditions, etc. When training, be sure to perform general preparatory activities and fully warm up. In difficult exercises, special preparation activities must be carried out. For example, when performing push-ups, you must first open your wrists and perform several groups of small push-ups to achieve the purpose of warm-up and prevent injuries. .

Pay attention to the psychological changes of athletes. In the career of competitive aerobics, most of the competitive aerobics athletes have suffered various degrees of wrist injuries. Although some athletes have fully recovered after treatment, due to the shadow of the previous injury, they are not confident in the difficulty of completing their own work, they are afraid to do it, and they are hesitant, which is easy to cause secondary injuries and prevent injuries caused by such reasons. , pay attention to psychological intervention [15].

## 4. Conclusion

Among the aerobics special students of the School of Art, Beijing Sport University, the students with sports injuries are significantly higher than those without sports injuries, up to 86%. The training years are basically less than 6 years. The incidence of sports injuries gradually increases with the increase of sports years reduce. Therefore, it is the best way to strengthen the technical training of the coaching team, improve the level of sports injury knowledge of the coaching team, and do a good job in standardizing the skills and injury knowledge education.

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The incidence rate of wrist joint injury among students specializing in aerobics at the School of Art of Beijing Sport University is relatively high, as high as 78%. Among them, the probability of occurrence in difficult exercises is the highest. In the difficulty group, the wrist joint injury rate was higher in the dynamic ground class in group A and the jumping class in group C. In the course of injury, acute injury is greater than chronic injury, and the degree of injury is mostly mild injury. The measures taken after the injury are training and treatment. The main types of injury are cartilage contusion and inflammation of the periosteal synovium. Therefore, athletes should strengthen the learning of technical movements, improve the proficiency and standardization of movements, and prepare for warm-up activities in advance when training. In the event of injury, it should be reported and treated in time.

Among the injury factors of the aerobics special students in the School of Arts of Beijing Sport University, the main factors are irregular technical movements and insufficient preparatory activities, followed by poor physical fitness and lack of knowledge of wrist injury. Finally, factors such as over-fatigue of the body and field equipment have the least influence. The main way to prevent wrist injuries of competitive aerobics athletes is that athletes should emphasize the learning details of movement techniques, strengthen athletes' physical fitness, pay attention to the cultivation of athletes' injury knowledge, formulate reasonable preparation activities, and distinguish between general preparation and special preparation. At the same time, we should pay attention to the psychological changes of aerobics athletes to achieve the effect of prevention. It is very necessary to learn relevant theoretical knowledge and preventive measures to improve the enthusiasm for injury prevention. At the same time, it is also necessary to rationally use the existing resources to enable athletes to train under the most suitable conditions and to establish a correct awareness of prevention.

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