

THE COMMON SPORTS INJURIES AMONG SWIMMING FEMALE STUDENTS AT THE FACULTY OF PHYSICAL EDUCATION AT THE UNIVERSITY OF JORDAN

Salwa A Alshorman¹, Amjad H Alqudah^{1*}, Ahmad A Akour¹, Haitham S Alzoubi¹, Natheir F Alnu'man², Ra'ed R Bataineh², Amal M Alhamad¹, Haya M Alqatami¹, Nihad M Albatikhi³

¹Department of Coaching and Sport Management, Faculty of Physical Education and Sport Sciences, The Hashemite University, 13133 Zarqa, Jordan; ²Department of Physical Education, Faculty of Education, Jadara University, 21110 Irbid, Jordan; ³Department of Physical Education, Faculty of Sport, The University of Jordan, 11942 Amman, Jordan

Abstract

This study aimed to analyze the most common sports-related injuries among students in the swimming course at the Faculty of Physical Education at the University of Jordan. Moreover, it identified the most common areas of injuries and their causes. The study sample consisted of 60 randomly chosen female students from the Faculty of Physical Education Jordan in the year 2018/2019. The descriptive approach was used, and the sports injury checklist was distributed. The results showed that the body parts most likely to be injured were the leg (20%), the shoulders' joint (15%), and the most frequent types of injuries were muscle cramps (22%), injuries (17%), sprains, and bruises (13%). The most common causes of sports injuries were related to lack of a good warm-up (22%), lack of the use of sports recovery means (15%), and poor motor technique (13%). The study recommended the necessity of following the rules of good warm-up based on a scientific basis, learning the correct techniques for skills before performing them to prevent injuries, and paying attention to the use of sports recovery after swimming.

Keywords: Sports injuries. Swimming course. Physical education.

Introduction

When scientific and technical factors are not considered during training or competitions, players are subject to injury in all games as a result of the continual exertion on various parts of the body (1). Therefore, the coach guides to take the correct and early steps to protect the player from serious difficulties that may prevent him from continuing his activity in the presence of an injury (2). (3) Reported that sports injuries are the main challenge for the development of the heroic sports level due to injuries complicating effects on the phased evolution of sports training and making it impossible to reach the specified sports goals. Swimming is one of the safest sports because the water lifts and carries the body off the ground, relieving a significant amount of weight from the body (1). As a result, swimming is an excellent sport for those who suffer from various injuries. However, this sport is not risk-free. Due to the variety of swimming forms, methods, and places of training, where training can be inside or outside the water, and the use and movement of some muscles that are rarely used in daily life, several injuries of different types, causes, and places occur (5). In the world of sports, where

Manuscrito recibido: 15/01/2023

Manuscrito aceptado: 20/02/2023

*Corresponding Author: Amjad H Alqudah, Department of Coaching and Sport Management, Faculty of Physical Education and Sport Sciences, The Hashemite University, 13133 Zarqa, Jordan

Correo-e: Am.qudah@yahoo.com

there is more interest in improving physical fitness and preparing players to compete in competitions and tournaments, coaches must be interested in learning about the factors that can obstruct these goals, such as injuries that players may be exposed to. Such injuries can lead to a suspension of training during the treatment and rehabilitation period (6). He has conducted a (7) studied the status of stamina and its link to swimming players' sports injuries. In this study, a descriptive technique was employed on 250 swimmers. The authors reported that 41.3 % of swimmers had stamina deviations in the upper body, %30 swimmers had body deviations in the lower body, and 28.7% of swimmers had a healthy posture. It was concluded that contracture injury was the most common sports injury for swimming players (23 %), followed by muscle strain injury (20.9 %). On the other hand, the cut injury was the least common among swimming players (3.5%). Accordingly, a direct link between inappropriate stature and the degree of sports injuries was established. This study focused on sports injuries related to swimming which are one of the issues that impede the development of the sporting level and the achievements of the players. Injuries can also lead to a player's permanent retirement. Injury exposure during acquiring or practicing may be an impediment that inhibits the beginners from continuing and participating in this sport. Therefore, this study aimed to identify the most common types of sports injuries, recognize which parts of the body are more susceptible to them, and identify the causes of sports injuries among female swimming students at the University of Jordan's Faculty of Physical Education. This significance of this is based on including field data and science curriculum that could identify and analyze the most prevalent sports injuries among female swimming students at the University of Jordan- Faculty of Physical Education. Consequently, adequate strategies to reduce injuries among female swimming students could be proposed.

Methodology

The descriptive survey method was used because it was the most suitable approach for this study. A questionnaire was designed to include a set of items relating to the mentioned topic. The main questions were 1. What are the most common types of sports injuries among female swimming students in the Faculty of Physical Education - University of Jordan? 2. What are the parts of the body most susceptible to injury among female swimming students at the University of Jordan's College of Physical Education? 3. What are the causes of sports injuries among female swimming students in the Faculty of Physical Education -University of Jordan sports injuries?

Participants

Subjects were a convenience sample of 60 female students who volunteered from the swimming class at the Physical Education faculty at Physical Education. The study was conducted during the second semester of the 2018/2019 academic year. The participants had completed swimming lessons according to the records of the Admission and Registration Department at the University of Jordan.

Data Analysis

Data were acquisitioned through the distribution and collecting of the responses to our developed questionnaire. Statistical analysis using SPSS was used to analyze the results.

Research Hypotheses

H₀: There are statistically significant differences in the types of sports injuries that do not affect the levels of female students enrolled in the swimming course at the University of Jordan's Faculty of Physical Education.

H₁: There are statistically significant differences in recognizing which parts of the body are more vulnerable to damage among female swimming students at the University of Jordan's Faculty of Physical Education.

H₂: There are statistically significant differences in the causes of sports injuries among female swimming students at the University of Jordan's Faculty of Physical Education.

Results and Discussion

The frequencies and percentages of the different types of injuries suffered by the female students were extracted and listed in table 1 (Table 1).

Table 1 shows the frequency and percentages of injuries suffered by female students. Contractions were the most common type of injury responsible for 0.22 % of all injuries, followed by wounds (0.17 %), sprains, and muscle bruising (0.13 %). On the contrary, the dislocation of joints was not experienced by any of the subjects in the study group.

It is suggested that a lack of sufficient warm-up and poor technical application

Table 1: The frequencies and percentages of the different types of injuries suffered by the female students.

Injury type	Frequency	%
Fracture	1	0.02
Tendon rupture	5	0.11
Muscle ripping	2	0.04
Ligament rupture	3	0.07
Dislocation	0	0.00
disjointed	0	0.00
Orthopedic bruising	3	0.00
Bruising muscle	6	0.13
Nerve trauma	2	0.04
Wounds	8	0.17
Contractions	10	0.22
Sprains	6	0.13
Other	0	0.00
Total	46	100

Table 2: The frequencies and percentages of the female students' body parts that are most susceptible to injuries.

Body part	Frequency	%
Head	1	0.02
The neck	2	0.04
Shoulder joint	7	0.15
Clavicle	0	0.00
Humerus	2	0.04
Elbow joint	1	0.02
Forearm	0	0.00
Wrist joint	2	0.04
Metatarsals	0	0.00
Phalanges	0	0.00
Sternum	0	0.00
Ribs	0	0.00
Belly	2	0.04
Thoracic vertebrae	0	0.00
Lumbar vertebrae	1	0.02
Sacral vertebrae	1	0.02
Pelvis	2	0.04
Hip joint	1	0.02
Thigh	2	0.04
The knee joint	4	0.09
Anterior cruciate ligament	0	0.00
Posterior cruciate ligament	0	0.00
Medial lateral ligament	0	0.00
Lateral ligament	0	0.00
Cartilage	0	0.00
The leg	9	0.20
Ankle	5	0.11
Medial lateral ligament	0	0.00
Lateral ligament	0	0.00
Insteps	3	0.07
Foot phalanges	1	0.02
Total	46	100

of the requisite motor skills may be responsible for the spread of muscular cramps and bruising.

The frequencies and percentages of the different types of injuries suffered by the female students were extracted and listed in table 2 (Table 2).

Table 2 shows the frequencies and percentages of the body parts most susceptible to female students' injuries. The table clearly shows that the leg is the most affected part (0.20 %).

This type of injury could be ascribed to the lack of adequate warm-up. Moreover, a lack of utilization of sports recovery methods following the training could be responsible for such injuries. On the other hand, the shoulder joint injuries

Table 3: The frequencies and percentages of the causes of sports injuries among female swimming students.

Causes	Frequency	%
Inadequate warm-up	10	0.22
Overtraining	5	0.11
Athletes' bad behavior (lack of attention, rushing, breaking rules)	0	0.00
The training facility is inadequate, and participation in other games.	2	0.04
Inadequate planning (technical)	6	0.13
Continuing to train despite injury	2	0.04
Disqualified sportswear	0	0.00
Failure to follow a well-defined training program	1	0.02
Use of ineligible sporting equipment	0	0.00
The absence of direction and awareness of the athlete by the coach	0	0.00
Noncompliance with safety and security regulations	3	0.07
Inadequate exercise selection for the muscle parts that swimming necessitates	1	0.02
During training, the coach does not focus his attention on the player and does not follow him.	0	0.00
Insufficient rest between and after exercises.	3	0.07
Allow the player to return to training before he or she has recovered completely.	1	0.02
Not adequately rested after exercise	4	0.09
Inadequate availability of training and suitable tools and equipment	0	0.00
The player's lack of awareness of his own capacity to do certain exercises	1	0.02
Individual differences between players are not taken into account.	0	0.00
Neglect to do the required periodic medical checks	0	0.00
Used the assistance	0	0.00
Not progressively increasing the amount of exercise	0	0.00
Insufficient psychological preparation	0	0.00
Lack of awareness about sports injuries, their causes, and how to prevent them	0	0.00
Neglect to use sports recovery ways	7	0.15
Not following to a strict diet	0	0.00
Use of steroids	0	0.00
The type of exercise is incompatible with the physiological requirements.	0	0.00
Total	46	100

were ranking in second place with a 0.15 % rate of occurrence. This is obvious since the functional demand on the shoulders is increased during pushing the water and the retrograde movement of the arm.

The frequencies and percentages of the causes of sports injuries among female swimming students as shown in table 3 (Table 3).

Table 3 shows the frequency and percentages of the causes of sports injuries among females. The results revealed that inadequate warm-up is the most common cause of injury, accounting for 0.22% of all injuries followed by neglecting of using sports recovery ways for 0.15%, inadequate technical planning was responsible for 0.13%, and poor technical skill preparation by athletes was responsible for 0.13%.

These findings indicated that the students did not follow the requirements of a healthy warm-up, and they were unaware of the importance of warm-up in preventing sports injuries. Moreover, students rush in practicing skills before knowing the correct technique exposing them to various sports injuries.

The findings also revealed the failure of the students to apply sports recovery after training, which is essential in recovering the students' ability to handle additional training.

Conclusion

This study aimed to identify the most common types of sports injuries,

recognize which parts of the body are more susceptible to, and identify the causes of sports injuries among female swimming students. The study showed that muscular spasms, sprains, and muscle bruises are the most common sports injuries among Jordanian female swimming students. The study revealed that the calf muscles and shoulder joints are the most affected parts of the body during swimming. Moreover, this study emphasizes that the lack of adequate warm-up, and inadequate technical use of abilities, were the most common causes of sports injuries among Jordanian female students.

Based on the finding of this study, a good warm-up based on scientific principles is highly recommended before swimming training and competition, following the appropriate technique for skills before using them is necessary to avoid injuries, and close attention to the use of sports recovery procedures following training sessions should be paid. Moreover, more studies on sports injuries, their causes, and how to prevent them is required must be conducted.

References

Abou Elmagd, Mohammed. Common sports injuries, International Journal of Physical Education, Sports and Health, India. 2016.

Al Qudah, Amjad. The Impact of Blended Learning in Improving Fitness Elements at Sixth Grade Students in Jordan. Article, Journal of Entrepreneurship Education, Britain. (2018).

Bakri, Muhammad. Sports Rehabilitation, Sports Injuries and Emergency, Cairo, Egypt. 2012.

Jaafar, Hassan and Jaafar, Miqdad. Modern Olympic Swimming, Al-Zaki Typing Office, Baghdad. 2006.

Patrick Pelayo, Morgan Alberty. The History of Swimming Research. Article, Laboratory of Human Movement Studies, Faculty of Sport Sciences, University of Lille, Ronchin, France. 2011.

Al Qudah, Amjad. Comparison study blended learning and conventional learning in improving students' cognitive in the fitness element. Article, Journal of Entrepreneurship Education, Britain. 2018.

Hassanein, Haitham Mohamed Ahmed. Postural status and its relationship to sports injuries for swimming players, The Scientific Journal of Physical Education and Sports Science, Vol. 24, Vol. 5, Benha University, Egypt. 2019.