SJIF Impact Factor (2024): 8.675| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 3 | March 2024 - Peer Reviewed Journal

ORGANIZATIONAL AND METHODOLOGICAL ASPECTS OF EPIDEMIOLOGY OF SPORTS INJURIES

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Article DOI: https://doi.org/10.36713/epra15976
DOI No: 10.36713/epra15976

ABSTRACT
The article presents the results of an analysis of the causative factors of sports injuries, organizational issues and epidemiological aspects based on a questionnaire implemented among athletes with traumatic injuries of various types. The results of the study showed that the main sports injuries were injuries to the knee joint and ankle joint, accounting for a total of 36.6% of all identified cases. At the same time, the largest number of injuries among the studied contingent of athletes is determined at the age of 18-22 years in basketball (50.0%), weightlifting (50.0%) and boxing (45.5%). And among people under 18 years of age in gymnastics (53.8%) and football (46.2%), the lowest values were determined among athletes aged 27 years and older (11.5%), which is associated with a high level of skill and sportsmanship. experience among athletes of this age category.
KEY WORDS: *injuries, sports, causative factors, prevention program, questionnaires, organizational and methodological aspects of epidemiology*

1. INTRODUCTION

Trauma is a collection of injuries that occur among certain groups of the population over a period of time. Epidemiology in sports is quite complex, due to the lack of statistical data on the sports contingent, registration of athletes by type of sport, gender and age characteristics, as well as statistical records and reporting documentation generally accepted in healthcare.

An analysis of literature data on global statistics, as well as for the CIS countries, showed that epidemiological study in sports is difficult, and according to documentary data, the latest information refers to the 1960s in Russia and the relatively recent ones - 2013, which are available from the study of the sports register of statisticians in American Studies [1]. According to foreign literature, there are scientific studies on the epidemiology and nature of sports injuries in adolescent athletes, but their number is limited, and the available materials are not reliable enough. Most studies show data only for specific sports (football, basketball, skateboarding, martial arts), or analysis for recreational sports [2-5]. Available retrospective studies focus on sports played in schools, e.g. not specialized [6,10,15].

The epidemiology and patterns of sports injuries in different contingents of professional athletes must be studied, as this will allow us to obtain answers to most of the questions that concern everyone: in which sports there is the highest level of injuries, the most common types of injuries, nature, gender and age differences and characteristics, determining the difference between professional athletes and amateur sports [7,8,13]. For sports doctors and coaches, it is necessary to be able to determine changes due to the influence of various injury risk factors - training load, sports technique, age, BMI, training timing, sports equipment and training conditions, buildings and structures, preventive measures, physical training, nutrition and stressful situations. Only with such data can an informed assessment of the extent and economic value (cost) of sports injuries be made, which in turn will help ensure the safety of athletes with the possibility of developing effective injury prevention strategies in the future.
Nowadays, injuries occupy the third position in terms of disability and mortality, and among the active population they are the leading cause of death. Sports injuries occur as a result of playing sports and, according to some sources, account for 2-3% of the total number of injuries [9-11,17]. The most common injuries are bruises - injuries to soft tissues, fractures account for about 3% of all injuries, and dislocations - from 3 to 5%. By location of injury, the most common injuries are to the extremities, then to the head, and in third place to the torso. [12,14,16,18].

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2. PURPOSE OF THE STUDY

The purpose of the study was to study the organizational and methodological aspects of the epidemiology of sports injuries, which play an important role in the development of a program for the prevention of injuries and its complications.

3.RESEARCH METHODOLOGY

В связи с возникающими осложнениями, наличием сложных и длительных recovery measures in the presence of sports injuries, we systematized the data obtained on the level and structure of sports injuries depending on the type of sport based on the athletes seeking medical help, according to a retrospective analysis of statistical reporting in the city of Samarkand and the Samarkand region.

To solve this problem, an analysis of the causative factors of sports injuries, organizational issues and epidemiological aspects has been processed and presented based on a questionnaire implemented among athletes with traumatic lesions of various types.

To study the organization of medical care for athletes, medical documentation, personal data from clinics, and registration cards of athletes (various sports) who went to clinics at their place of residence in case of injuries of various types were selected. An epidemiological survey was conducted among the selected contingent, the total number of questionnaires was 203. Subsequently, a sample was made according to injuries received and types of sports.

4.DATA ANALYSIS AND INTERPRETATION

As the results of the analysis showed, according to a survey on the number of injuries received and types of sports, games lead in the region, amounting to 35.8%; Next in distribution are martial arts - 32.4%; cyclical – 21.7%; complex coordination - 7.2%; applied - 2.1%; technical - 0.8% (Fig.1).

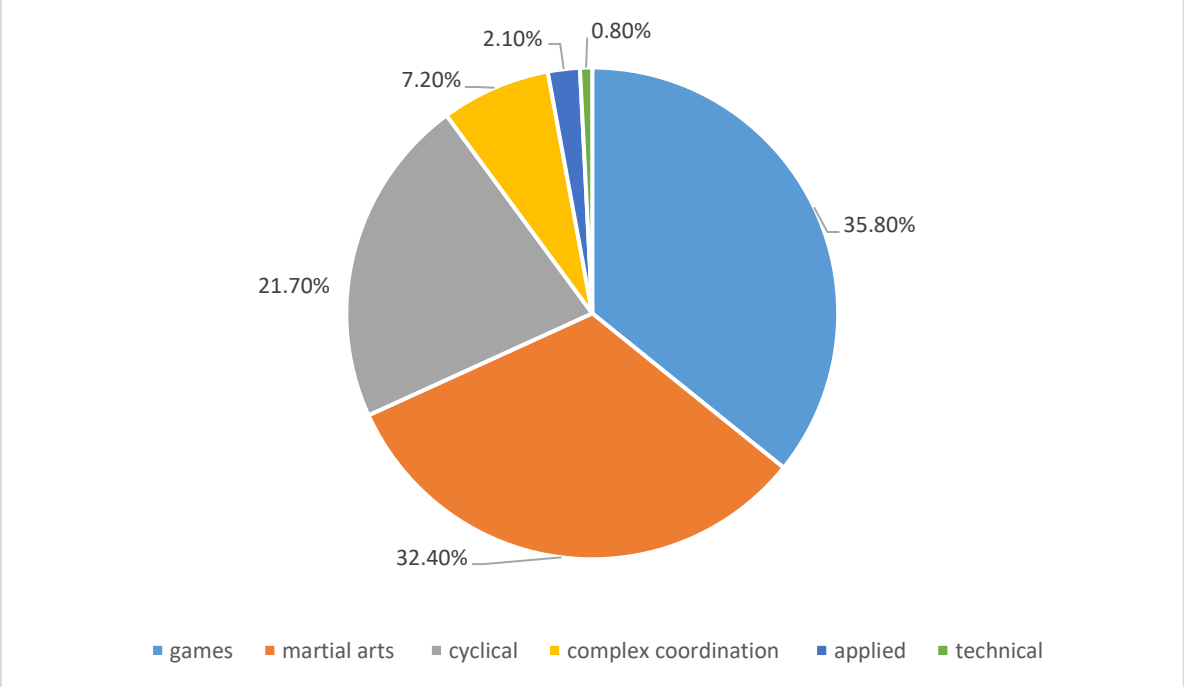

Figure 1. Proportion of injured athletes by sport (%) in Samarkand and Samarkand region

A study of the localization of injuries received showed that in the structure of sports injuries the most typical are lesions of the knee (23.9%) and ankle joints (12.7%), hand (10.3%), shoulder (11.9%), wrist (8.3%), elbow (8.2%) joints; feet (8.3%); hips (7.3%); head and damage to the facial skeleton (4.8%); less often hip joints (1.8%), spine (1.1%) and others (1.4%) (Fig. 2).

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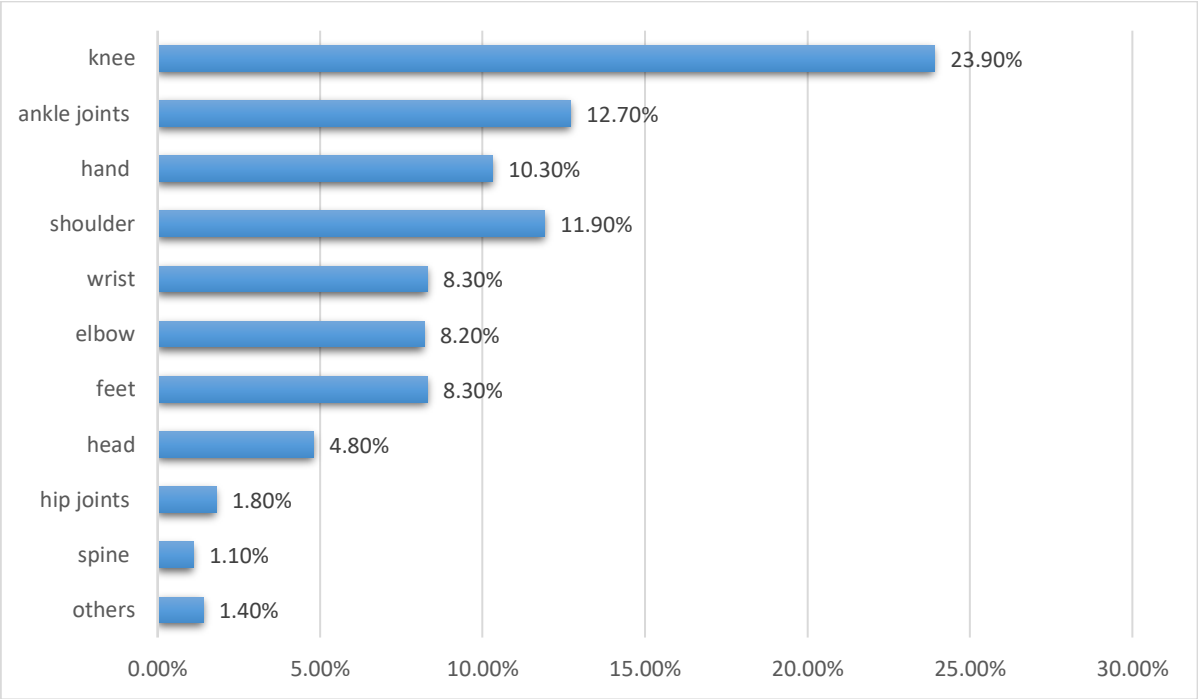

Figure 2. Distribution of sports injuries depending on location (%)

Thus, in terms of localization of traumatic injuries, the leading positions were occupied by injuries to the knee, ankle and shoulder joints, accounting for 48.5% of all cases of injury.

The largest number of injuries was typical for athletes involved in judo - 32.1% and weightlifting - 15.6%; slightly less often by football and basketball in 14.7% of observations; less traumatic sports were gymnastics, boxing - 9.2% and karate - 4.6%. Statistical data of the analysis of sports injuries, according to types of sports, are shown in Fig. 3.

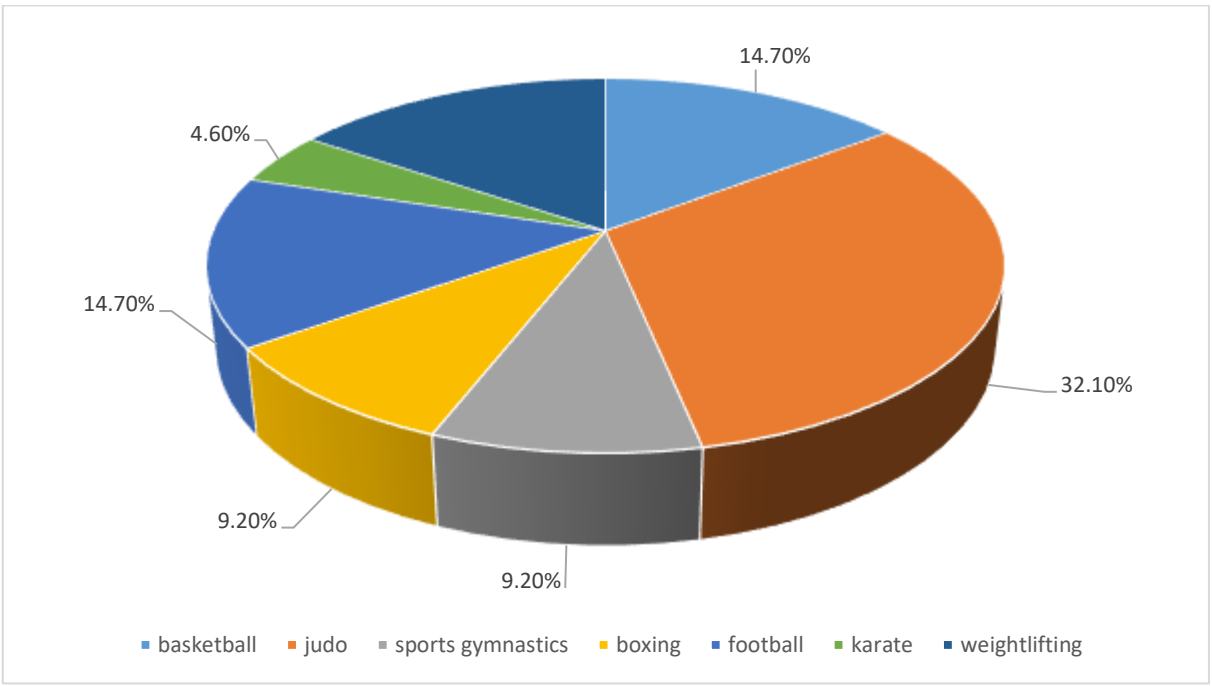

Figure 3. Distribution of sports injuries by type of sport among athletes in Samarkand and Samarkand region (%)

To determine the level of injury by age category, an analysis was carried out by type of sport in the age aspect. In total, among the entire contingent of those studied, the largest number of athletes were aged 18-22 years, which amounted to 38.5%; under 18 years old - 29.5%; in the older age category 23-26 years - 20.5%; over 27 years old - 11.5%. An in-depth analysis of the age characteristics

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of athletes showed a predominance of people aged 18-22 years among athletes involved in martial arts: in boxing - 45.5%; judo - 37.5%; karate - 33.3%. A similar situation was noted in the group of people involved in weightlifting and basketball, where 50% of the athletes were aged 18-22 years. While in football and artistic gymnastics athletes under the age of 18 predominated, accounting for 46.2% and 53.8%, respectively. This indicates that the age aspect (age 18-22 years), as well as the type of sport (martial arts - 45.9%) make a certain contribution to the occurrence of sports injuries.

To analyze possible causative factors for the occurrence of injuries, categories and categories of athletes were studied. According to the data obtained, among the most frequently injured were athletes with the 3rd (29.1%) and 2nd (23.4%) categories; candidates for master of sports had the least number of injuries (8, 4%) and masters of sports (6.6%), average values were determined among athletes who do not have a category - 17.1% and with the 1st category - 15.3%.

5.CONCLUSION

Thus, the main sports injuries were injuries to the knee joint and ankle joint, accounting for a total of 36.6% of all identified cases. At the same time, the largest number of injuries among the studied contingent of athletes is determined at the age of 18-22 years in basketball (50.0%), weightlifting (50.0%) and boxing (45.5%). And among people under 18 years of age in gymnastics (53.8%) and football (46.2%), the lowest values were determined among athletes aged 27 years and older (11.5%), which is apparently due to high level of skill and sports experience among athletes of this age category.

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