

# The Prevalence of Injuries in Mixed Martial Arts Among Iraqi Fighters

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## Abstract

Mixed Marital Art (MMA) is a sport that had a good fame in the last ten years, taking the interest of large popularity in Iraq. The ferocious competitors that competed in these events suffered numerous injuries ranging from minor to serious, taking the game out of the pleasure. Aim of this study: The goal of this research is to establish the most common injuries in this sport in Iraq. Materials and Methods: In Iraq excluding Kurdistan there is about 400 fighters at various phases staging from youth to professional athletes, from a variety of sports (mostly from MMA, taekwondo players, wrestlers, boxers, karate and other athletes ...) This retrospective study was done along one year and included two championships. Results: The most prevalent injuries are brain contusion, black eyes, radius and ulna fractures, boxer fracture (most prevalent from self-injuries), cruciate ligament injuries. Conclusion: Providing a quick management at the time of injury and having field local medical committee for fights during the matches. With ambulances being ready near any match center, Long term follow up appointments for serious head injuries are the main goals for preventing and controlling further complications.

## Keywords

MMA, Mixed Martial Arts, Fighters, Iraq Gyms.

MMA has historical roots dating back to ancient Greece [1,2] till the Association of Boxing Commissions published it. The games are divided into professional and youth fighters games, which are also known as savage or wires bounded and subdivided according to weights, gender, and levels, with the youth games consisting of three rounds of three minutes and the professional games consisting of five rounds of five minutes. [3,4,5]

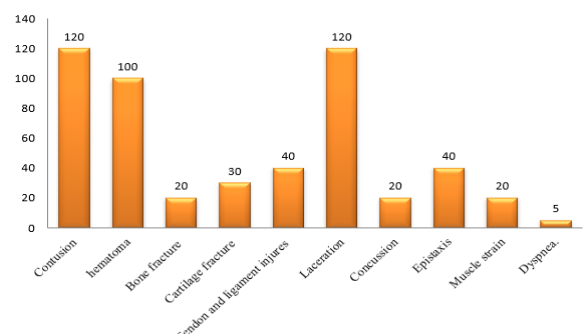
Researchers employed advanced technology to examine the human body and positions used in this game [6,7] boxing, wrestling, kickboxing, judo, Brazilian jiu-jitsu, Muay Thai, and others. all of which resulted in the establishment of martial arts. As a result, numerous injuries are suspected.

## Material and Methods

The items were 400 male fighters aged (25.4± 2.2) years old excluding Kurdistan's fighters. The

fighters participant in the last five competitions included in the retrospective study. Data collection was medical history collected from coaches and medical staff with following-up the neurological and emergencies centers. Collection of previous x-rays, MRIs, CT-scans and EMG reports was obtained.

## Results

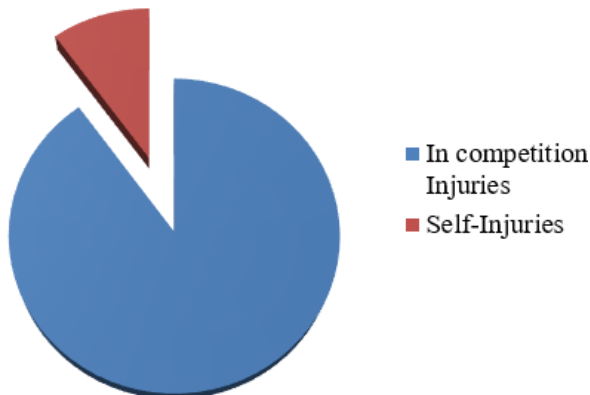


**Fig1: Prevalence (number) of injuries among athletes.**

The most prevalent types of injuries shown in our study were Contusion, hematoma, Bone fracture, Cartilage fracture, Tendon and ligament injures, Laceration, Concussion, Epistaxis, Muscle strain, Dyspnea. (Fig1) Smoking was 36% (144), Alcoholic was 10% (40), Adrogenic anabolic steroid users 8% (320), Injured from fights was 90% (360), Tracking by officials was 5% (20). (Fig2).

**Table1: Violations of International Instructions use by the athletes.**

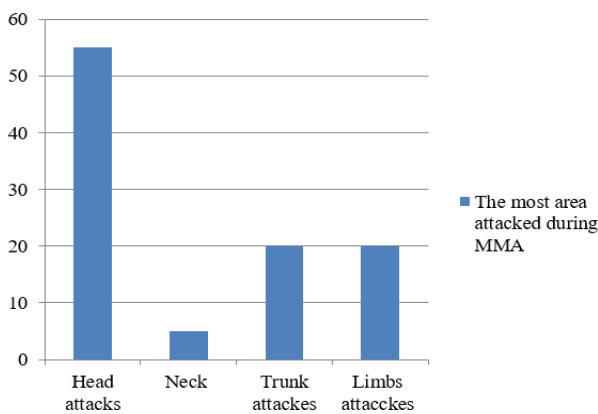
Violations of International Instructions	Number of Athletes	Percentage of use
Smoking	144	36%
Alcohol	40	10%
Androgenic Anabolic Steroid	32	8%



**Fig2: Injury Sources for athletes.**

Make the other fighter loss his conscious is way of some bodies which lead to end the competition. So traumatic brain injuries showing higher percentage in MMA fighters than football wrestling, even boxing and kickboxing players.

Mandible, Chin, and Temporal region are the main areas of skull which are attacked during the fights so the brain is mostly the wanted target in the cage. (Fig3)

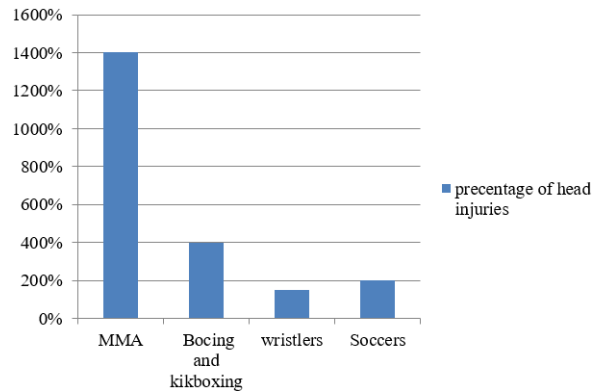


**Fig3: the most area attacked during MMA**

Refusing some fighters to end the game making the brain target for repeated injuries which is the most danger injury during the game.

In Iraq fighting injures recorded just like what recorded in Worldwide. [14,15]

Transnet loss of conscious, with zero disability or loss micturition control and less spinal cord injuries. (Fig4)



**Fig4: percentage of head injuries among sports.**

## Discussion

Close shut head injuries, even if it was mild, is considered a main source of both present and long term intellectual disabilities among competitors, especially for athletes playing physical games like MMA and boxing [8,9]. The yearly occurrence of sports-related concussions in the United States is 1.6 to 3.8 million, and the probability of a competitor in a physical game encountering concussions is just about as high as 20% per season [10]. While most of competitors who get concussions are relied upon recovery, the peril is extraordinarily expanded by a second concussion [11,12]. Getting a second concussion prior to recuperating from a first one can be related with metabolic cerebrum irregularities as recorded by MRS, electrophysiologic changes, and neuropsychological deficits [10,11,13]. While in Iraq we need more closed following the muscles, skeletal, ophthalmic centers follow-up injures.

## Conclusion

Providing a quick management at the time of injury and having field local medical committee for fights during the matches. With ambulances being ready near any match center, Long term

follow up appointments for serious head injuries are the main goals for preventing and controlling further complications.

Cooperation between the ministries of health and sports for providing fast urgent organized medical backup, a written consult between clans in the country should be taken to protect the players in case of severe injuries or permanent disabilities to have legal protection. Financial support for campaigns organization to cover all the expenses.

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