

Injuries in basketball and its environmental causes

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Abstract

Sports injuries is the collective name of all kinds of damage occurring during sports activities. injury is caused by internal and external influences, it makes functional abnormalities on tissues partially or fully. There are general rules can be applied to all kind of sports which can reduce injuries. Sport science shows that injuries can be reduce 25% in condition that all precautions are taken. Each sport has their specific forms of training, technical components and elements which are affecting people. Internal and external factors that lead to sports injuries; varies according to each sports property. The presence of these factors are affecting performance. Even the presence of the audience today may lead sport injuries. Sport injury factors are internal and external factors. Our study is on external factors literature and data.

Keywords: Basketball player, external factors, injury.

INTRODUCTION

According to Bale (2), improper or inadequate implementation of the training and contact and collision during games; increases the risk of injury in basketball. Although basketball game rules restrict the contact body with each of the players, there are some injuries during training and games (2).

Athletes during sport activities continue their activities under the various risks. Some of these risks; adversely affect the performance of athletes, some causes of sports injuries. According to Kanbir & Özdemir; causes of injuries are age and gender, fitness for physical structures and sports, psychomotor development, psycho-social reasons, previous injuries and inadequate rehabilitation, sports technical deficiency, insufficient heat creep, personal reasons, athletic type, physical structure of the sports fields, sports equipment, trainers and training planning, climatic and environmental conditions, the duration of sports activities, the role of opponents and team-mates, referees and game rules, environmental reasons (10,14).

Some of the environmental factors are; temperature, climate, materials, audience and social environment, friendship, family, all economic components, nutrition, previous injuries, doping, ergogenic aids, negative words coming from outside, time difference, leisure methods, sexuality, role model identification, recognition motivation,

training techniques, training quality, quantity, heat, flexibility, trainer, rest interval, cool, sleep patterns and the quality (4).

Injury factors are; personal and environmental. This study shows which environmental factors affect elite basketball players' injury and its effects. Environmental factors causes injuries are examined under three main headings. They are; Sport Related Factors, Sport Fields and Equipment, Trainer and Rules.

Sport Related Factors

Type of the Sport: Athletes are faced with injuries in each sport. Sports injuries are varied. Injuries can occur anywhere in the body. Injury depends on the type of the sport. There are different types of injury according to sport type (13). According to Groh; possibility of injury during sports is one per 4.000 people, possibility of death is on per 40.000 people, possibility of a big accident is on per 40 people. Frequency of injuries of sports are; football %10, wrestling 6%, handball and boxing %3, athletics %1, skiing %0.5. Frequency of spinal cord injuries are; diving %21.6, skiing %13.4, football %12.7, rugby %10.6, American football %9.4, air sports %7, judo %6.8, gymnastics %6.6 (15).

Mark and friends made a research in Australia during 5 months on 5 different types of sport and

they found out that basketball is one of the sports that injuries seen most.

Belechri et al. (12) studied injuries of 5-14 aged individuals including six different European country (Greece, France, Austria, Denmark, Netherlands and UK). They found out fort his age group basketball is the sport injuries most seen.

According to Carolyn et al. (5) studying about injuries in Canada on five different branches of sports (basketball, football, ice skiing, hockey, soccer) subjects are 2.873 adolescent high school students. Results are; basketball has most injuries, men injured more than women, ankle sprain is most seen injury, injuries mostly happen during game because of physical contact.

There are many sports type shown similar injury. Combat sports, sports with contact, sports with tools, individual sports make variability for injury specialities and region.

Duration of the Sport: Injury in training which occurs more frequently; happens more. If one of force, duration or frequency increase; the risk of injury increases too. Planning the training according to these three factors will reduce the risk of injury. during Long term tournaments, fatigue competitions the risk of injury increases (17).

Warm-up: According to Walsh and Blackburn, insufficient warm-up causes injury (17). Warm-up before game or before training is good for performance and for reducing the risk of injury (7). Physiologically warm-up increases the temperature of muscle and reduces injuries specially on muscles and tendons (1). Warming can increase muscle flexibility. It increases neural transmission speeds and makes protective reflex work effectively. Warming up itself is an important subject about reducing the number of injury and prevention.

Role of Opponents and Teammates: Consciously or subconsciously intended behaviour can lead to injury in the game. For example, in basketball, pushing from opponent in rebound struggle or one of the same team players' unbalanced behaviours for responsibility.

Sports Fields and Equipment

The ground state: The State of the ground, pitch's and sports hall's conditions, the temperature of the hall and the safety measures can be cause factors of injury. To prevent sports injury in basketball, flexibility of the floor, elasticity, friction

slip, ease of warming feature, cleaning, heat-collecting capacity are so important (6).

Light and Safety Measures: Fields that are wet, ragged and neglected can cause to injury (8). Other security directions are the fact that the risk of injury as bad lighting, the wall that is so close to side-lines of the hall.

Trainers and Sportswear: Sport equipment must be original. We can categorise them; Sport Tools, Protective Equipment and Other Equipment.

Today, every sport branches have sui generis sport materials. The important thing is to reduce the risk of injury or eliminate materials should be preferred. For example, there is a wide variety of athletic trainers. When choosing shoes, relationship between trainers and foot and between trainers and sports area's floor are so important. In basketball, using high top trainers can prevent injuries (17).

Coaches and Rules

Coaches: Lack of knowledge and understanding of the trainer, health information and education is very important in the emergence of the injury. If we want to be successful about health information, we should educate physical education teachers and coaches. The adequacy of the level of knowledge of the trainer on injury prevention reduces to number of injuries. A mindless installation causes to increase in cases of injury (16).

Rules: Sports injury factors that cause to the rules of the game can also occur if not fitting enough. Athlete does not observe the rules of game or although knowing the rules, he/she chews and the referee who cannot manage the game enough can cause to injury. For example in basketball, if referee does not decide intentional foul applications on time, it can cause injury. Sometimes, disuse of protective material which rules are prerequisite can occur to injuries.

In conclusion; our study shows; the reason of injury for women is 45.95% overload, for men 30.91 other reasons, playground, sneakers, insufficient training. According to Extant & Gillquist (8), long pre-season tournaments affects coordination negatively and causes injuries. Female subjects 81.08% and male subject 60% are using preventive and therapeutic devices for injury. Result of the study shows using preventive and therapeutic device reduce the injury. Bandages for joint stability and neck shoes reduces injuries specially lower

extremity injuries in basketball. In basketball, negative effects of internal and external factors can become positive to reduce injuries. The injury can prevent with using basketball-specific supporting device and bandage. The number of injuries can decrease to preventing negative internal and external factors of injuries. Before the competition, not enough preparation of the competition increases of the injury. This circumstance must be prevented. In addition to this, negative factors from sports hall and equipment must be eliminated and convenient environment must be provided to athletes. No more slippery ground, poor lighting and a lounge with a hot or cold should not cause injury. These elements must overcome. Preventive measures of injury should be resolved at the beginning of the work. The remaining technical, tactical elements and the related sui generis problems of the sport should be organised according to the facts by relevant person. In this case, we should not make concession to technology and health care. In this way, the number of injuries can be prevented and reduced. Thus, athletes are preserved and achievement will come.

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