## Influence of injury on the attitude of female students to further physical cul-tural classes

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## **Abstract**

**Objective of the study** was to analyze the impact of a sports injury on the attitude of female university students to further volleyball training.

**Methods and structure of the study.** A questionnaire was developed containing 21 questions, grouped into 3 blocks: the reasons for the injury and the player's condition at the time of injury (6 questions), psychological state during the recovery period (5 questions) and attitude towards further sports activities (10 questions).

**Results and conclusions.** The opinion of 148 UrFU students who experienced sports injuries, both professional volley-ball athletes and unranked students who played volleyball in physical education classes, was studied. It has been established that in physical education classes the level of physical education injuries is quite high and in all respects (causes of injury, severity, location) is practically no different from sports injuries.

Psychological changes and the formation of new behavioral models associated with the consequences of trauma in female athletes and sportswomen also generally coincide. However, a noticeable difference is the more severe and negative subjective reaction of female athletes to the injury.

A comparative analysis of the attitude of female volleyball players to fur-ther activities after suffering an injury indicates a readiness to overcome its conse-quences by increasing self-control and stress resistance, regardless of the cause, location and severity of the injury. The university students are optimistic and plan to continue playing volleyball. When experiencing a situation of injury, female athletes, to a greater extent than female athletes, need help and psychological rehabilitation. A promising approach in this direction is to teach them methods of mental self-regulation, in particular, coping strategies.

Keywords: volleyball, injury, physical education, sports, attitude to classes, psychological state, coping strategies.

Introduction. Currently, injuries, according to one of the leading lights of Russian sports medicine, Professor A.G. Dembo are an "occupational disease of athletes" [2]. Among team sports games, the specifics of injuries for football, handball and basketball have been studied in detail. There is much less information on volleyball [1]. Basically, the causes, patterns of localization of injuries and methods of physical rehabilitation of athletes are studied. Research on the role of the psychological factor in various aspects of sports injuries seems interesting [3, 4].

**Objective of the study** was to analyze the impact of a sports injury on the attitude of female university students to further volleyball training.

**Methods and structure of the study.** A questionnaire was developed con-sisting of 21 questions, grouped into 3 blocks: the reasons for the injury and the player's condition at the time of injury (6 questions), psychological state during the recovery period (5 questions) and attitude towards further sports activities (10 questions). The study involved 189 female students, age  $18.5 \pm 0.5$  years, studying as part of physical education with a specialization in volleyball, as well as in the volleyball section of UrFU. Before the start of the study, female students were asked whether they had been injured during classes. Of these, 148 (78.3%) answered in the affirmative, the remaining 41 (21.7%) had no injuries. Female volleyball players who

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had no previous injuries did not take part in the further survey.

Results of the study and discussion. The sample of female students who experienced trauma consisted of 148 people, who were divided into two groups. The first group (A) included female volleyball players from category I to candi-dates for master of sports. It consisted of 33 people (22.3%), all athletes. Among professional volleyball players, 21 people were injured during the training period, 9 during the competitive period, and 3 during training camps. The second group (S) included female students without ranks who played volleyball only during physical education classes at the university. There were 115 people (77.7%).

It was found that out of the entire sample, 104 (70.3%) of the injuries experienced by students were mild (1–7 missed training days), 34 (23.0%) were moderate (8–21 missed training days) and 10 (6.7%) – severe (more than 21 missed training days). By location, in 82 cases (55.4%) the lower extremities were damaged, in 63 (42.6%) - the upper extremities and in 3 (2.0%) - the torso. Most injuries occurred between the ages of 14 and 18. The obtained results on the statistics of injuries in volleyball are generally consistent with the literature data [1, 2].

5 main causes of injury have been identified. 53 people were injured from chronic physical overstrain, of which 10 were female athletes (A), 43 female sports students (S), 36 people were injured due to decreased self-control (A - 7, S - 29). At the peak of the maximum physical load, 28 people were injured (A - 8, S - 20). Due to emotional exhaustion, 12 people were injured (A - 3, S - 9) and 11 people were injured as a result of collisions (A - 5, S - 6). In addition to these reasons, 8 female students without grades highlighted secondary ones, such as lack of warm-up or falling.

Most of the experiences of the respondents at the time of injury were due to the fact that they were unable to achieve the desired result - 33 people (A – 10, S – 23), they were confused and did not know how to cope with the situation, 12 people (A – 4, S – 8), were worried about the very fact of getting injured – 10 (A – 4, S – 6).

Among female students without a rank, 95 people who were injured were determined to return to their previous form. Despite the severity of the injury, most of the female students were motivated to continue playing volleyball. In their responses, they noted the great positive role of support from loved ones, the cor-

rect preparation of a rehabilitation plan and awareness of the importance of further physical improvement in their lives. In general, based on the results of the survey, there was a clear understanding that the severity of the injury does not play a role.

Among professional athletes, 17 people believed that they would return to their previous form. At the same time, almost half (16 people) thought that they would not be able to return to their original state. They were in a depressed state, felt helpless, and even considered ending their sports career.

The majority of female students did not change their attitude towards classes after the injury – 80 respondents (A – 16, S – 64). A slight change was observed in 53 people (A – 13, S – 40). They began to take a more conscious approach to the training process, devote more time to warming up and working on strengthening the ligamentous-muscular system. In 15 people, the injury significantly affected their attitude towards classes (A – 4, S – 11). This contingent of volleyball players has completely changed their attitude to training. The girls adjusted their goals so as not to worsen their health conditions and avoid re-injury.

After the injury, 29 female students realized that they needed to devote more time to psychological health (A – 5, S – 24), 47 people emphasized the importance of self-control (A – 12, S – 35). Another 72 respondents noted that it is necessary to properly distribute physical activity and rest (A – 16, S – 56). After returning to physical activity, 78 female students became cautious and more collected (A – 11, S – 67), 41 people trained as if nothing had happened (A – 14, S – 27), and the remaining 29 respondents were confident in themselves, but they began to treat training more consciously (A – 8, S – 21). An increase in self-control during training and competitions was observed in 106 people (A – 25, S – 81).

123 female students understood that the duration of recovery depends on their desire and motivation (A - 28, S - 95). 86 students without a grade believe that during the rehabilitation period they have matured and become more responsible (they listen to their body, control their thoughts). Among professional athletes, 25 people agreed with this statement. After experiencing trauma, 128 female volleyball players noted that they began to value their health and their body more (A - 26, S - 102). 106 girls rated the experience as a significant stage in their lives (A - 15, S - 91).

Some professional volleyball players (21 people), on the recommendation of a sports psychologist, began to use coping strategies in stressful situations and devote more time to working with their psychological state. Volleyball players without a category (53 people) were mainly limited to work in the gym and began to devote more time to technical training.

When discussing the results obtained, it is advisable to note that among the responses of female volleyball players and female volleyball players, there are much more similarities than differences. First of all, this concerns the very fact of injury and its characteristics. In terms of severity, location, and causes of occur-rence, injuries of female athletes are practically no different from those of female athletes. The high level of injuries among female students playing volleyball in physical education classes suggests that the goals of physical education in the edu-cational process are not fully achieved.

Psychological changes and the formation of new behavioral models associated with the consequences of trauma in female athletes and sportswomen also generally coincide. The only noticeable difference is the more severe and negative reaction of female athletes to the injury. If among injured female volleyball players 82.6% were optimistic, then among female athletes only 51.5% shared such optimism, which reflects the high personal importance of sports activities for them.

It seems promising that all volleyball players use strategies to overcome stress (coping strategies), which include assessing the situation, choosing a behav-ioral strategy and performing specific actions [4]. It is known that athletes with a high level of resilience, who take care of their psychological state, endure sports injuries more easily [3].

**Conclusions.** A comparative analysis of the attitude of female volleyball players to further training after suffering an injury indicates a readiness to overcome its consequences by increasing self-control and stress resistance, regardless of the cause, location

and severity of the injury. It was revealed that female university students are optimistic and plan to continue playing volleyball. When experiencing a situation of injury, female athletes, to a greater extent than female athletes, need help and psychological rehabilitation. A promising approach in this direction is teaching them methods of mental self-regulation, in particular, coping strategies (strategies for overcoming stress).

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