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ROLE AND EFFECT INFLUENCE OF REHABILITATION ELEMENTS IN SPORTS

O.X. Mirzamukhamedov,
S.K. Khudaykulov
Institute for the re-training and professional improvement of specialists in physical education and sport.

ABSTRACT

Today, in the age of technological progress, when the level of health of the population decreases with a high technical load and insufficient physical activity, the role of physical culture and sports is growing even more. There is no doubt that the rich emotional background sufficiently reduces the level of health and well-being of students, injures their psyche. In Institute for the re-training and professional improvement of specialists in physical education and sport his regard, the search for the most adequate ways and methods to strengthen the psychophysical state of students, the identification of psychological and pedagogical conditions for optimizing this process, the development of health technologies that can reduce the physiological and psychological cost of adaptation and ensure the formation of sustainable attitudes for a healthy lifestyle becomes especially relevant. [9]

Keywords: sports, sports medicine, means of recovery, taekwondo, hygienic means, working capacity.

РОЛЬ И ЭФФЕКТ ВЛИЯНИЕ ЭЛЕМЕНТОВ РЕАБИЛИТАЦИИ В СПОРТЕ

О.Х.Мирзамузамедов
Ш. Х. Худайкулов
Институт по переподготовке и повышению квалификации специалистов физической воспитания и спорта

АННОТАЦИЯ

Сегодня, в век технического прогресса, когда снижается уровень здоровья населения при большой технической нагрузке и недостаточной двигательной активности, роль физической культуры и спорта еще более возрастает. Не вызывает сомнения, что насыщенный эмоциональный фон в достаточной степени снижает уровень здоровья и самочувствия студентов, травмирует их психику. В связи с этим особую актуальность приобретает поиск наиболее адекватных путей и методов укрепления психофизического состояния студентов, выявление психолого-педагогических условий оптимизации данного процесса, разработка оздоровительных технологий, способных снизить физиологическую и психологическую цену адаптации и обеспечить формирование устойчивых установок на здоровый образ жизни. [9]

Ключевые слова: спорт, спортивная медицина, средства восстановления, таэквондо, гигиенические средства, работоспособность.

INTRODUCTION

Taekwondo differs from other martial arts in that it places great emphasis on work, jumping technique, as well as on the soft rules of the duel, which aims not to incapacitate the opponent, but to demonstrate their technical and physical superiority without causing serious injury (unlike hard styles). In the ITF, competitions are held in four types: a set of formal exercises (tula), special equipment, breaking objects, sparring (massogi).

A formal set of exercises - tul - and shows the degree of mastering by the athlete of techniques, stances, the correctness of the performance of strikes, transitions from the stance, general coordination and consistency of actions.

Special equipment - performing a jumping kick with breaking the board with your foot. Shows the accuracy, coordination and power of the strike. [ten]. Taekwondo, like karate, kung fu, kickboxing and boxing, is a work of great and submaximal power. Great instantaneous physical stresses in combat at various distances (medium, close and far) are replaced by complete muscle relaxation in the intervals of combat or exhausting work requiring significant physical effort to overcome the attacking actions of the enemy in combat. To do this, a taekwondoist must have good general and special physical training. Among the many factors that determine the achievements of taekwondo fighters is a high level of physical qualities. Taekwondo consists of techniques in which body movements are performed with maximum strength, speed, precision and balance. Taekwondo is not only a way of self-defense, but also a science, a way of life, a way to achieve mental and physical perfection. With a highly disciplined body, we can be prepared for any situation. In the process of training, individual compound movements of the body, merging together for greater efficiency, are honed through systematic repetition. [11]

The rational construction of the training process is able to ensure the high performance of athletes, as well as the recovery of athletes after training and competitive loads. Today in sports they began to actively use all kinds of means that increase the performance of athletes and accelerate recovery processes. Today in sports medicine there are 3 systems of restorative means: psychological, pedagogical and biomedical.

Hygiene products for post-workout recovery. So, among the biomedical means of recovery after training, a special place is occupied by hygiene products, which are actively used in sports practice today. The main hygienic factor that provides health promotion, increased body performance and intensive recovery is personal hygiene, a rational regime, balanced and nutritious nutrition, sanitary and hygienic living conditions, hardening, etc. In addition, there are a number of other aids that have a beneficial effect on the systems and organs of the body, thereby increasing efficiency and have a stimulating effect on recovery processes. Auxiliary hygiene products are used separately or in combination with other biomedical products.

The result of the influence of hygiene products on the performance of an athlete depends on the time of their use. So in situations where it is necessary to restore working capacity in a short time (for example, between workouts in the morning and in the evening), recovery tools should be used immediately after training. If an athlete needs to have high performance immediately the next day, then any means of recovery should be used 6-9 hours after competition, training or practice. In those situations when competitions and trainings end

late in the evening, it is better to postpone the restorative means until the morning and apply immediately after getting up. It should be noted that if the same restorative agents are used for a long period, then the athlete's body adapts to them, which leads to a decrease in their effectiveness. It is for this reason that it is advised to change the dosage of restorative procedures, replace them with new ones, or create all kinds of combinations. The use of a special complex of various means of recovery will help to increase the efficiency of an athlete's recovery. [12]

Restoration of all body systems after training, in particular, the following means are used to restore the neuropsychic state: hydroprocedures (warm bath, warm shower, salt baths), massages, steam bath, ionized air, ultraviolet radiation, oxygen, B vitamins and psychotherapy.

You can restore the respiratory, cardiovascular systems and biochemical metabolism using the following means: massages, hydrotherapy (contrast baths, warm bath, shower), steam bath, oxygen, ionized air, B and C vitamins, hydroelectrolyte balancing.

One of the distinguishing trends of modern taekwondo is a pronounced increase in the volume of technical and tactical actions performed in the jump. It is in this regard that the issues of searching for reserve opportunities for the further development of jumping ability and jumping endurance among taekwondo athletes are very relevant and practically significant. The fact that the development of the explosive strength of the legs does not take into account the degree of symmetry in the manifestation of the speed-strength capabilities of the right and left legs also falls out of the field of view of the coaches. It is possible that when swinging arms and pushing with two legs to perform a vertical jump in an offensive strike or block, there is an asymmetric difference between the inertial force of the right and left hands, and the explosive strength of the right and left legs, which can have a negative effect on the height of the vertical jump .

The purpose of this study was to study the viability of the above assumption on the example of young taekwondo fighters 16-18 years old (12 people) involved in the Youth Sports School and taekwondo taekwondo team "SKUF" (Chirchik, 12 people). At the same time, the method for determining the height of a vertical jump from a place with a push of both legs was used in a new modification, including options:

□ with symmetrical swing of both hands;

□ with a separate swing of the right and left hands (one of them is tied to the body);

□ with repulsion with the right and left foot.

In addition, the absolute strength of the muscles of the right and left legs was determined according to the maximum number of speed squats with the right and left legs.

Recovery of athletes after training with the use of such restorative means: physiotherapy, steam bath, hydrotherapy, ionized air, irradiation, B vitamins, hydroelectrolyte balancing effectively affected the neuromuscular system. [13].

Methods of restoring and relieving fatigue in an athlete are of paramount and importance in the modern world [3]. A characteristic feature of modern sports are large volume loads that place high demands on the body of athletes. Often, training is carried out against the background of chronic fatigue. [4]. This group of recovery tools includes: various types of massage, physical means, proper nutrition, sports tapes, pharmacological preparations, etc. With the help of energy exchange in the body of an athlete, development and growth are ensured, the stability of the morphological structure is maintained, their ability to self-heal, and also a greater degree of functional organization of biosystems. The changes that occur in the metabolism, found at high neuro-emotional and physical stress, show that under these conditions the need for any nutrients, and in particular for vitamins and proteins, increases. With an increase in physical activity, energy costs increase; to replenish them, a certain set of nutrients that enter the body with food will be required [3].

RESULTS AND DISCUSSION

The results of the study showed that the average value of the height of a vertical jump from a place with a push of both legs (with a swing of both hands) among young taekwondo athletes aged 16-18 years old training at the Youth Sports School was 41.4 cm, and among the taekwondo athletes of the SKUF team (18-22 years) - 44.7 cm (Table 1). This level of jumping ability is extremely insufficient for taekwondo athletes of this age and qualification, since according to the normative data, the height of a vertical jump from a place with a push with both legs for taekwondo athletes 16-18 years old should be 52-55cm, and for taekwondo athletes 18-22 years old it should be 62 -65cm.

It should be assumed that such a low level of jumping ability in the surveyed categories of taekwondo athletes is explained, on the one hand, by the insufficient level of symmetrical development of speed leg strength. This can be seen from the data of high-speed squats with the right and left legs, and on the other hand, the unequal (asymmetric) inertial force manifested by active swinging with both hands, as well as the low and asymmetric development of the explosive power of the right and left legs (Table 2). From the presented tables it can be seen that if the actual height of a vertical jump from a place with a push of both legs among taekwondo athletes aged 18-22 was 41.4 ± 1.02 cm on average, then jumping from a place with a swing of the right hand corresponded to 36.7 ± 0.72 cm, and with the swing of the left hand - 33.4 ± 0.68 cm.

Table 1 Indicators of the level of vertical jumping ability and speed strength of the muscles of the right and left leg in taekwondo athletes of different ages and qualifications (n=12)

Tests	Young taekwondo girls (X±5)	Taekwondo women of the highest category (X±5)	Difference researched indicators
Vertical jump from a place with a push from both legs, (cm)	41,4±1,02	47,7±0,98	6,3
Right leg speed squat, (qty)	4,9±0,12	7,4±0,23	2,5
Left leg speed squat, (qty)	2,4±0,13	4,2±0,18	1,8

Consequently, the difference between the height of jumping ability and jumping ability with

a swing of the right hand is 4.7 cm, and with a swing of the left hand - 8.0 cm. The height of the vertical jump with the push of the right leg was 34.2 ± 1.64 cm, 31.6 ± 0.58 cm. In other words, between the absolute height of the vertical jump from a place with a swing of both hands and the height of the jump with the push of the right leg, the difference was 7.2 cm, and the push of the left leg - the difference increases even more and reaches 9.8 see. Among taekwondo athletes of the highest ranks, the differences noted above were even more pronounced. So, if in older and more qualified taekwondo athletes the absolute jumping ability was 47.7 ± 0.98 cm, then when performing a jump with a swing of the right and left hands, it was 40.4 ± 0.98 cm and 35.4 ± 0.72 cm, respectively. It can be seen that the difference between absolute jumping ability and jumping ability with the swing of the right hand is 7.3 cm, and with the swing of the left hand - 12.5 cm. - 5.2 cm, which indicates the unequal inertial-swing contribution of the right and left hands to ensure the maximum possible height of the vertical jump.

The difference in the height of the vertical jump between other indicators of jumping ability in this category of taekwondo athletes was also significant. In particular, a certain difference between the absolute height of the jump and the jump with the push of the right leg is 12.3 cm, and the jump with the push of the left leg reached 15.7 cm. At the same time, the asymmetric difference in the height of the jump with the push of the right and left legs is 3.0 cm.

Moreover, visual observations of the performance of jump tests showed that in most of the surveyed female taekwondo athletes of both age groups, the angle of bending of the legs for the jump, the active movement of the arms and torso, the biomechanics of the location of body parts in an unsupported position were distinguished by pronounced signs of mismatch of the kinematic parameters of their manifestation.

And therefore, obviously, the coordination and aerodynamic structure of the jump in these subjects did not ensure the stability of maintaining the balance of the body upon landing. An analysis of the experience of using jumping exercises during the training sessions of the surveyed taekwondo athletes revealed the fact that jumping ability and jumping endurance mainly develop without taking into account the functional purpose of jumping skills. Therefore, it can be assumed that the reason for the above-mentioned adverse consequences in the manifestation of jumping qualities is their inadequate development in training.

Table 2Indicators of the height level of a vertical jump from a place with a swing of the right and left hands and a push of the right and left legs among young taekwondo athletes of different ages and qualifications (n=12)

Tests	Young taekwondo girls (X±5)	Taekwondo women of the highest category (X±5)	Difference researched indicators
Vertical jump from a place with a swing of the right hand, (cm)	36,7±0,72	40,4±0,98	3,7
Vertical jump from a place with a swing of the left hand, (cm)	33,4±0,68	35,2±0,70	1,8
Vertical jump from a place with a push of the right leg, (cm)	34,2±0,64	35,4±0,72	1,2
Vertical jump from a place with a push of the left leg, (cm)	31,6±0,58	32,0±0,63	0,6

CONCLUSION

Based on the above analysis of the results of the study of the jumping ability of young and highly qualified taekwondo wrestlers with the exclusion of individual elements of a vertical jump from a place, we can draw conclusions that in order to ensure the maximum jumping height, it is necessary: - symmetrical inertial force, manifested by active swing movements of the right and left hands; - symmetrical explosive force, shown by the muscle groups of the right and left legs. Thus, the results of the study and the conclusions put forward on their basis, focus on the need for a symmetrical development of the inertial force of both hands through their active swing movement and the explosive power of both legs using appropriate exercises both during training and in the process of training taekwondo athletes of different ages. and qualifications. The dynamics of recovery processes when using physical factors is influenced by the nature of fatigue, its degree, and the characteristics of the state of the athlete's nervous system. A certain role is played by the time of using the same tool. It is known that with repeated daily use of the same remedy, addiction to it develops. In general, when selecting additional means of recovery, it is necessary to take into account the nature of the training loads, external conditions, the nature and significance of the competition in which the athlete is planned to participate. In other words, restorative means of different groups are used not only in a complex, but also in a mandatory combination with training means. Thus, it is planned to distribute both training loads and means of recovery in the annual cycle.

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