

IMPACT ON THE EFFECTIVENESS OF REHABILITATION FUNDS QUALIFIED ATHLETES SPECIALIZING IN THE LONG JUMP WITH A RUNNING START

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Annotation. *Purpose.* Experimentally verify the effectiveness of recovery funds allocated to skilled performance athletes who specialize in the long jump with a running start. *Material.* In the experiment involved 12 athletes. The data obtained were tested under conditions of multiple repetition of jumping from the middle run (11-12 crossovers). All athletes performed a series of six jumps 3 min rest interval. *Results.* Under normal conditions of athletic training was analyzed effects specially designed training complex effects (exercise and massage techniques) aimed at stimulating specially trained skilled athletes who specialize in the long jump with a running start. Designed training complex influences can be effectively used in conditions of competitive activity, and in the process of training. *Conclusions.* The results showed the possibility of using special exercises aimed at stimulation of special readiness and effectiveness of athletes who specialize in the long jump with a running start.

Keywords: performance, stimulation, rehabilitation, fitness, exercise.

Introduction

Modern system of education and training of qualified sportswomen, specializing in running long jumps, is characterized by complex construction of durable training process, which is based on application of flexible (variable) loads, using of different means; it requires scientific researches [1–3, 6–8, 10-15].

Analysis of scientific works in sphere of theory and methodic of sport training permits to make conclusion that among urgent directions of sport's further development one of the main places is taken by problem of stimulation of sportswomen's recreational processes [3–5, 7, 9].

Solution of this problem requires development of not only means of influence on organism, oriented on improvement of special fitness but also means of recreation and correction of organism's state for as short time as possible [4, 7, 9]. If not to stimulate recreational mechanism at proper level, it would be impossible to ensure stable improvement of sportswomen's efficiency [3, 6, 7].

The research was fulfilled as per topic 2.11 "Theoretical methodic principles of management of sportswomen's training, who specialize in track and fields jumps" of plan of scientific & research works in sphere of physical culture and sports for 2011-2015 of Ministry of Ukraine of family, youth and sports. State registration number; 0111U003839.

Purpose, tasks of the work, material and methods

The purpose of the research: to experimentally test effectiveness of application of recreational means, oriented on efficiency of qualified sportswomen, specializing in running long jumps.

The methods of the research were theoretical analysis and generalization of literature, pedagogic observation, pedagogic experiment, methods of mathematical statistics.

Results of the research

Main task of the present research was determination of effectiveness of preliminary stimulation's means for special fitness of sportswomen, who specialize in running long jumps.

With developing of criteria of evaluation of preliminary stimulation means' influence on special fitness we estimated the best individual result in series of jumps. In ordinary conditions of training we analyzed effects of specially developed complex of training influences (exercises and massage techniques), oriented on stimulation of special fitness of qualified sportswomen, specializing in long jumps. The obtained data were tested by numerous repetitions of jumps from middle distance run (11-2 run steps). All sportswomen (n = 12) fulfilled series of 6 jumps with rest interval of 3 minutes. It was based by the fact that test results of 6 jumps' series from middle distance run are in close correlation connection with results of competition series of jumps [8]. Besides, in practice of high-class sportswomen's training such kind of running is used in control starts before important competitions [10]. The sportswomen were divided into two groups so that mean indicator of best results of jumps in groups would not differ and would be 4.65 and 5.05 m. In experimental group No.1 15 minutes before first jump, complex of special exercises, described below, was applied. In experimental group No.2 no additional exercise were used.

The next method of estimation of pre-start mobilizing influences' effectiveness was subjective evaluation of emotional and physical conditions by a sportswoman, herself, resulted from application of exercises. This evaluation was differentiated in the following way: improvement of self-feeling –specific sense of "freshness" in muscles, "lightness" in legs; improvement of control over movements' accuracy (improvement of coordination); formation of positive emotions and settings to achieve maximal results in competition functioning. Surely, we considered improvement of individual result of jump length.

Complex of special stimulating exercises included massage techniques, oriented on overcoming of inertia of connective tissues, increasing of temperature and activation of nervous-muscular system. Application of massage techniques was carried out in strict sequence, according to innervations zones of cerebrospinal segments. Hyperemia,

which appears in certain zones with precise localization of techniques, was accompanied by intensification of appropriate organs' and vegetative functions' response. Duration of massage sessions was 5 minutes. We used the following massage techniques:

1. Rubbing of adrenal zone with segmental techniques "sawing" – 30 sec. for every side (1 minute).
2. Rubbing of waist square muscles: to the left – with tips of 4 fingers with pressing – 30 sec., the same – to the right; then to the left – with rib of hand and the same – to the right. Petrissage of the same muscles at every side by crest of fist, 30 sec. for every side, during 3 minutes.
3. Rubbing of long muscles of back to the right and to the left and rubbing of sacrum with circle movements with tips of 4 fingers, rib of hand, crest of fist (zone of massage to be changed after 30 seconds – left-right sides); total duration – 1 minute.

Besides, we used exercises with support of partner (efforts of 6 sec. duration, close to maximal) with exhale during movement:

1. I.p. – standing position. Left leg in horizontal position directed backward. Partner supports left leg's thigh with left hand and shin – with right one. Sportswoman raises thigh upward overcoming resistance of partner. Repeat 3 times.
 2. I.p.- the same. Sportswoman keeps thigh of left leg maximally high near left shoulder, partner pulls down her leg, overcoming her resistance and at the same time moves it backward. Repeat 3 times.
 3. I.p.- the same. Left leg is bent in knee joint. Partner straightens it in knee joint, supporting knee joint from below. Repeat 3 times.
 4. I.p.- the same. Left leg is directed aside and bent in knee joint. Partner supports left leg with two hands, sportswoman drops it down, overcoming resistance of partner and squat a little on right leg. Repeat 3 times.
 5. I.p.- the same. The straightened left leg is directed maximally backward-upward. Partner pulls this leg down, overcoming resistance of sportswoman. Repeat 10 times.
 6. I.p.- the same. The straightened left leg is directed maximally aside-upward. Fulfillment is the same as of previous exercise. Repeat 10 times.
 7. I.p.- the same. Repeat 5 times left leg cross swings.
 8. I.p. – standing with back directed to rest, left leg is half-bent in knee joint and lifted by partner maximally upward. Sportswoman drops leg down, overcoming resistance of partner. Repeat three times.
 9. I.p. – main stance. Fulfill forward swings with left leg. Supporting on hands is permitted. Then the same exercises shall be fulfilled with right leg in the same sequence, with the same dozing and force.
- Special massage of peripheral links of supporting motor system (soles, hands) is as follows:
1. Strong rubbing of right sole with rib of hand and fist crest – 15 sec.
 2. Pressing on sole with spiny rubber cylinder in direction from heel to toes and back – 15 sec.
 3. The same action with metal spiny cylinder.
 4. Pressing on rib of sole from medial and lateral sides with smooth metal cylinder – 15 sec.

Additionally we used techniques for foot – left sole (2 minutes) and both hands of sportswoman (also 2 minutes).

The character of influence of the described complex is presented in fig.1. As we can see in this figure, sportswomen, who used complex of special influences (experimental group 1) showed trend to higher results in jumps in all attempts. These sportswomen also showed high dynamic of results' increment. High planned result was achieved by these sportswomen in second attempt. In third attempt experimental group's sportswomen achieved high individual results in long jumps. It witnesses about high mobilizing effect of applied pre-start means.

Further, in next attempts, sportswomen of experimental group showed trend to maintaining of level of results in condition of tiredness. It points at the fact that reducing of jump length, connected with tiredness, was expressed by experimental group's sportswomen to less extent, than by sportswomen, who did not use stimulating complex. With comparative analysis of jump length, results of experimental group's sportswomen were confidently higher in 2-3 attempts.

Jump length, m

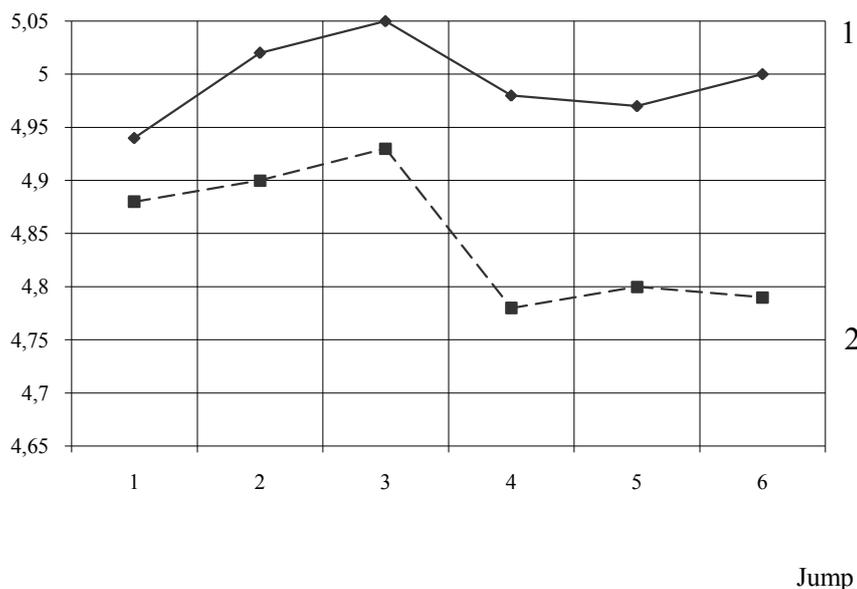


Fig.1. Comparative analysis of 6 long jumps with middle distance (11-12 run steps) running series
 — experimental group 1 (application of complex of special influences);
 - - - - - experimental group 2 (no application of complex of special influences).

The presented data witness about possibility of targeted stimulating influences for more efficient fulfillment of training and competition of long jumps' series. Thus, effect of complex of special influences can be seen in with fulfillment of both the first (or second) jump and maintain for rather long time in conditions of increasing tiredness with next attempts. It permits to use such influences in conditions of competitions' long jumps.

Conclusions:

Results of researches showed possibility of application of special exercises, oriented on stimulation of special fitness and efficiency of sportswomen, specializing in running long jumps. These extra-training means can be used both in conditions of competition's functioning and in trainings.

The obtained data, as well as accumulated experience of application of such stimulated influences in conditions of competition micro-cycles permitted to include them in training program of qualified sportswomen, who specialize in running long jumps.

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