SHUBA L. V.,
Associate Professor of the Physical Culture and
Sport Management Department,
«Zaporizhzhia Polytechnic» National University,
Associate Professor, Ph.D. in Pedagogy
(Zaporizhzhia)
SHUBA V. V.,
Associate Professor of the Pedagogy and Psychology Department,
Prydniprovsk State Academy of Physical Culture and Sports,
Ph.D. in Pedagogy
(Dnipro)
SHUBA V. O.,
Professor of the Innovative Technologies in Pedagogy,
Psychology and Social Work Department Alfred Nobel University,
Associate Professor
(Dnipro)

USING MODERN FITNESS EQUIPMENT FOR 30-35 YEAR OLD WOMEN WITH THE PURPOSE OF BODY SCULPT IMPROVEMENT

Шуба Л. В., Шуба В. В., Шуба В. О. Використання сучасного фітнес-обладнання для жінок 30-35 років з метою покращення скульптури тіла.
Ключові слова: методика, структура тіла, фітнес, фізична активність, жінки.

In recent times, experts from diverse fields have expressed their concern about the decline in the health status of women of childbearing age, which has a significant impact on the future of the nation. As a result, there has been a growing popularity of health fitness programs that focus on achieving and maintaining optimal physical condition, as well as reducing the risk of developing cardiorespiratory, immune, endocrine, and other related disorders.

Regular physical activity is known to bring about several positive changes in the body. It can improve metabolism, enhance cardiovascular and respiratory systems' functions, boost physical fitness, energy, and productivity. Consistent physical exercise can also delay the aging process of muscle tissues, maintain strength, flexibility, and physical attractiveness, enhance posture and locomotion, stabilize blood pressure and heart rate, prevent the accumulation of salts in the joints, help the body handle overexertion and stress, and significantly improve overall fitness levels.

Current developments in the area of health physical culture are characterized by the adoption of innovative and contemporary terms and concepts. One such concept is «fitness», which has gained growing attention and has become a widely used approach to enhancing health and well-being. However, the term «fitness» can be defined and applied in diverse ways, leading to differences in interpretation and methodology among various experts in the field. Despite the fact that today in

almost all fitness clubs in our country and abroad are performed strength training with the use of Pilates and athletic exercises with objects and conducted a large number of scientific studies: M. Yel'tsova & N. Pyastolova– physical culture and sport in the life of modern women; W. Kraemer, M. Keuning, N. Ratamess, J. Volek, O. Martyniuk, I. Masliak, I. Bodrenkova et al. – revealed the types of aerobics and its influence on the development of motor abilities; S. Trofimova, E. Onchukova – influence of occupations fitness yoga on a physical condition of women 30-35 summer age; A. Rohloff – using strength exercises and building the process of physical education; V. Miroshnichenko, O. Brezdeniuk, S. Salnykova, I. Hruzevych et al. – specifics aspects using aquafitness for women of the the first period of mature age, etc. But so far in the scientific and methodological literature is extremely insufficient data on the specific effect of using strength fitness for development of the physical fitness level and body sculpt improvement for women of the first period of mature age. Therefore, in connection with the above, we note that our research topic is relevant and timely.

The purpose of the study is – to evolve a methodology using modern fitness equipment for 30-35 year old women to increase physical fitness and body sculpt improvement.

Evolved the methodology for increasing the level of physical fitness for 30-35 year old women is a combination of theoretical and practical blocks, which involves the process of harmonious development of physical abilities, the use of health physical culture, control and self-control during exercise.

The methodology was developed for 8 months and consisted of 3 stages: preparatory (duration – 8 weeks, intensity – 40-50 % maximal oxygen consumption (MOC), main (duration – 16 weeks, intensity in the range from 50 % to 75% MOC) and adaptation (duration 8 weeks, intensity – 75-85 % MOC). Developed theoretical block of the methodology provided women with assimilation of values from physical culture, formation of desire for a healthy lifestyle, obtaining the necessary knowledge for independent physical education training.

At the beginning and at the end of the research, all women followed the control tests, which allowed to determine the level of physical fitness and to determine the indicators of their body structure.

The obtained data show that the groups are homogeneous in all indicators of motor abilities testing: «Do sit-ups for 1 minute« (CG –V = 4,70 %, EG –V = 4,14 %), «Jumps during 5 seconds» (CG –V = 6,22 %, EG – V = 6,53 %), «Turning leap» (CG – V = 3,58 %, EG – V = 3,00 %), «Angled position» (CG – V = 7,73 %, EG – V = 6,43 %), «Floor dip» (CG – V = 8,50 %, EG – V = 8,56 %), «12-minutes walk's test» (CG – V = 8,84 %, EG – V = 9,25 %), «Middle split» (CG – V = 9,14 %, EG – V = 9,16 %), «Static strength endurance of the shoulder strength» (CG – V = 7,48 %, EG – V=7,56 %), «Static strength endurance of the abdominal muscles» (CG – V = 9,14 %, EG – V = 8,04 %), «Static strength endurance of leg muscles» (CG – V = 9,21 %, EG – V = 9,92 %), «Static strength endurance of the back muscles» (CG – V = 7,70 %, EG – V = 8,45 %).

Analyzed the results of the motor abilities before and after the research in 30-35 year old women, both control and experimental groups, it was noted that the indicators increased, but more in the experimental group. The smallest increase in indicators was in the tests: «12-minutes walk's test» in the control group increased by 7,14 %, experimental group increased by 16,48 %, but taking into account the specifics of the test, the results are very good.

The average increase in indicators was in the tests: «Static strength endurance of leg muscles» in the control group increased by 9,52 % and in the experimental group increased by 19,43 %; «Jumps during 5 seconds» in the control group increased by 10,24 % and in the experimental group increased by 19,01 %, «Do sit-ups for 1 minute« in the control group increased by 8,11 % and in the experimental group increased by 18,53 %, «Turning leap« in the control group increased by 9,73 % and in the experimental group increased by 17,90 %; «Static strength endurance of the abdominal muscles» in the control group increased by 11,11 % and in the experimental group increased by 19,21 %. This is due to the fact that thanks to the theoretical block, women clearly understood how to perform the exercises as effectively as possible and what self-control is.

The highest increase in indicators was in the tests: «Floor dip« in the control group increased by 14,29 % and in the experimental group increased by 24,57 %; «Static strength endurance of the shoulder strength« in the control group increased by 8,00 % and in the experimental group increased by 21,00 %; «Static strength endurance of the back muscles» in the control group increased by 10,53 % and in the experimental group increased by 20,05 %. This is due to the using a lot of modern sports equipment during training process. «Angled position« in the control group increased by 25,00 % and in the experimental group increased by 38,33 %; «Middle split« in the control group increased by 18,52 % and in the experimental group increased by 29,85 % – this is due to the fact that women have elastic muscles and with the right selection of sports equipment and methods they are trained very well.

The obtained data of anthropometric measures before and after the research (Table 4) allowed to analyze the percentage increase in both groups.

The obtained data show that the groups are homogeneous in all indicators of anthropometric measures: «Body mass» (CG – V = 6,97 %, EG – V = 5,83 %), «Thoracic cage circumference» (CG – V = 7,41 %, EG – V = 7,89 %), «Dynamometry of the right hand (CG – V = 4,17 %, EG – V = 4,11 %)», «Dynamometry of the left hand (CG – V = 5,97 %, EG – V = 5,73 %)», «Hip circumference« (CG – V = 5,73 %, EG – V = 5,88 %), «Waist circumference» (CG – V = 8,28 %, EG – V = 8,03 %).

Therefore the highest increase in indicators was in the tests: «Dynamometry of the right hand» in the control group increased by 9,71 % and in the experimental group increased by 16,39 %; «Body mass» in the control group improved on 6,00 % and in the experimental group improved on 10,08 %.

The average increase in indicators was in the tests: «Waist circumference» in the control group improved on 4,15 % and in the experimental group improve on 9,04 %; «Thoracic cage circumference» in the control group improved on 5,82 % and in the experimental group improved on 9,33 %; «Dynamometry of the left hand» in the control group increased by 5,39 % and in the experimental group increased by 9,59 %; «Hip circumference« in the control group improved on 5,16 % and in the experimental group improved on 9,72 %.

In order to evaluate detail the relationship between body mass and height of the women, we calculated the Body Mass Index, which helps to determine the degree of deviation of the observed body mass from the «master standard» before and after the research.

According to the World Health Organisation physiological norm of the Body Mass Index ranges from 18,5 to 24,9, it was noted that the average Body Mass Index before the research was: 26,10 – control group and 26,13 – experimental group. The indicators are slightly deviated from the «normal» body weight. After the introduction of methodology, the indicators decreased in both groups and were able to return to normal: 24,73 – control group and 22,05 – experimental group.

The indicators of the experimental group were better due to the using a block system, which allowed to adjust the methodology for each woman on every of the three stages in the methodology.

Analyzed the results, it was concluded that the using experimental methodology has contributed to a more intensive increase in the level of physical fitness and body sculpt for 30-35 year old women.

Conclusion. The highest absolute increment of physical fitness indicators in experimental and control groups was found in such motor abilities as flexibility ($p < 0,001$) and strength ($p < 0,001$). The obtained percentage increase in anthropometric measures shows, that for the selected age group we have evolved the right methodology for the body sculpt.