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**РОЗВИТОК
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ДОСЯГНЕНЬ У
МЕДИЦИНІ**

*м. Чернівці
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Висновок. В даній роботі досліджені умови виготовлення фоточутливих гетеропереходів $\text{CuFeO}_2/n\text{-InSe}$ методом низькотемпературного спреї-піролізу тонких плівок CuFeO_2 на кристалічні підкладки $n\text{-InSe}$. На основі аналізу температурних залежностей прямих і зворотних ВАХ встановлена динаміка зміни енергетичних параметрів та з'ясована роль енергетичних станів на межі гетеропереходу при формуванні контактної різниці потенціалів. Досліджено та визначено величину послідовного опору а також вплив опору на енергетичні параметри. Визначені механізми формування прямого та зворотного струмів крізь енергетичний бар'єр $\text{CuFeO}_2/n\text{-InSe}$. Аналіз прямих гілок ВАХ гетероструктур $\text{CuFeO}_2/n\text{-InSe}$, побудованих в напівлогарифмічному масштабі, показав, що залежність $\ln I = f(V)$ складається із двох прямолінійних ділянок, що свідчить про експоненційну залежність струму від напруги і наявність двох домінуючих механізмів переносу заряду в досліджуваному інтервалі напруг. Визначені значення коефіцієнта неідеальності $(\Delta \ln(I)/\Delta V = e/nkT)$ становлять $n = 3$ ($V < 0.6$ V) і $n = 8$ ($V > 0.6$ V).

Karatieieva S.Yu

THE DYNAMIC COMPARISON OF THE LOWER EXTREMITIES LENGTH OF STUDENTS WITH THE MODEL FOR PREDICTING THEIR LENGTH

.Bukovinian State Medical University, Chernivtsi

Karateeva@bsmu.edu.ua

One of the important problems of modern morphology is the study of changes that occur in the body under the influence of various factors his problem is especially important in connection with the development of sports. Therefore, the study of changes that occur in individual organs, systems and the body as a whole, under the influence of physical activity of varying intensity and nature is relevant and important in practice.

The dynamic comparison of the lower extremities length, depending on the type of sport, followed by the construction of a mathematical model for predicting sports type was carried out on 132 students of higher education institutions of Bukovyna.

While the primary study was carried out during September-October 2021, next study of these same students was conducted in September-October 2022. The main group consists of 92 (69.7%) students, the control group - 40 (30.30%) students aged 16 to 18 years. All students of the main group, in addition to physical activity, which was included in the program of their specialty,

during the year professionally engaged in the following sports: football - 46 (50.00%) students, of which 38 (41.30%) were young boys and 8 (8.70 %) young girls; volleyball generally – 19 (20.65%), were 10 (10.86%) young boys and 9 (9.78%) young girls; handball generally – 14 (22.58%), were 8 (8.69%) young boys and 6 (6.52%) g young girls; basketball generally – 13 (14.13%), were 9 (9.78%) young boys and 4 (4.34%) young girls. Students of the control group were loaded with hours of physical education, according to the programs of their specialty, and additionally did not play sports.

All students underwent an anthropometric study (determination of the lower extremities length) according to the method of P.P. Shaparenka.

The comparesment of anthropometric parameters in the main group depending on the type of sport used the Kruskel-Wallis test (non-parametric analysis of variance) in order to identify a reliable difference in the average indicators of the respondents depending on the type of sport (the median of the distribution was considered as a measure of central tendency). In order to establish which pairs of age groups had a statistical difference in the medians, the Conover-Iman test was used. A paired t-test (t-test of paired samples) was performed to compare the length of the respondents' lower limbs during the first measurement and again one year later. Statistical analysis of the obtained data was performed using the licensed RStudio program.

The distribution of the lower extremities length at the right of the respondents of main group by measurement shows that the average value of the length of the right lower extremities has changed: a significant difference in the length of the right lower extremities was found between the first ($M = 88.812$, $SD = 5.287$) and the second ($M = 89.377$, $SD = 5.347$) measurements; $t(68) = -5.223$, $p < 0.001$. The distribution of the length of the left lower extremities shows that the average value of the length of the left lower extremities has changed also: a significant difference in the length of the left lower extremities was found between the first ($M = 88.667$, $SD = 5.266$) and the second ($M = 89.435$, $SD = 5.309$) measurements; $t(68) = -8.289$, $p < 0.001$.

In order to dynamically compare the length of the lower extremities for comprehensive control and selection of promising students in football, volleyball, handball and basketball, a mathematical model was derived for predicting the length of the lower extremities, in corresponding sports: right lower extremities $y = 0.506 x$ and left $y = 0.507x$, where y – is the length of the left lower extremities, x – is the height.

The coefficient of determination is 99.8%. A significant predictor for the length of both lower limbs is the height.