

The study comprised 581 athletes aged 17–25 years. Each athlete has been involved in 45 measurements and 20-questions survey. As a result of this study we come to the conclusion that sports activity strongly influences on physical growth and development. Training for different kinds of sports is different. The basketball players and field athletes (runners) were the tallest (average height 179 cm). Wrestlers were the shortest in height (average 166.5 cm). Compared to people who do not go in for sport, the athletes were taller by 4.5 cm. Mean height of Mongolian male sportsman is 172.6 cm. Geographical zones from where the athletes originate also influence on physical development. Sportsmen from steppe zone have bigger body, and those from Gobi desert zone are smaller but have bigger fat mass. Basing on these results, it can be suggested that marathon runners can be selected from Gobi inhabitants, wrestlers – from steppe population, and players – from mountain-taiga people.

**Key words:** *physical growth and development, anthropometry, physical training, athletes*

Contact information: Lkhagvasuren Gundegmaa, e-mail: mongol\_gunde@mail.ru.

### **MORPHOFUNCTIONAL CHARACTERISTICS OF MALE ADOLESCENTS FROM REPUBLIC ALTAI, PRACTICING SAMBO WRESTLING**

Makhalin Adu

*Russian State University of Physical Education, Sports, Youth and Tourism, Moscow, Russia*

The purpose of this research is to determine and compare morphofunctional characteristics and body traits of male juvenile sambo wrestlers, who live in the southern and northern areas of Republic Altai, Russia. The sample included 65 males, practicing sambo wrestling on a regular basis. The research protocol included anthropometric examinations (height, weight, and chest circumference) using a standard anthropometric measurement methods. Collected data of somatic characteristics were converted into Quetelet Index for BMI; the somatotypes were identified by using Chernorutskiy's classification. Evaluation of constitutional type was based on the ratio of height, weight, and thoracic circumference. Sambo athletes from the northern part of Republic Altai are taller and have more body mass and larger chest circumference in comparison to those from the southern part of Republic Altai. The height of athletes from the north is 6.1 cm higher than of those from the south ( $174.4 \pm 1.66$  cm vs  $168.3 \pm 1.12$  cm,  $p < 0.001$ ). Body mass of sambo athletes from the north is 6.2 kg bigger than of those from the south ( $67.8 \pm 1.97$  kg vs  $61.6 \pm 1.12$  kg,  $p < 0.05$ ). The chest circumference of athletes from the north is 3.7 cm larger ( $88.5 \pm 1.33$  cm vs  $82.4 \pm 0.98$  cm). Values of Pignet Index show that the participants from the north have predominantly hypersthenic body type, while normosthenic and "average" body type is mostly represented among sportsmen from the south ( $p < 0.05$ ). Thus, the sambo athletes from the north are characterized by significantly higher anthropometric features – height, weight, and chest circumference. Northern participants have predominantly hypersthenic body type while asthenic and normosthenic types are more often observed among the participants from the southern area.

**Key words:** *Republic Altai, male sambo athletes, somatotypes, anthropometry, Quetelet Index, Pignet Index*

Contact information: Makhalin Adu, e-mail: fiziologi@mail.ru.