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Original Article

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Spatial and temporal variability of the adult human height of men and women from different regions of Russia in the 1900s–2000s.

The present article aimed to study the secular changes in the mean adult human height of males and females across different regions of Russia. Here we present the results of the meta-analysis of a comprehensive data set on the mean heights of males from the 1900–1910s to the 1990–2000s birth cohorts among 63 regions of the Russian Federation (in over 470 groups), and mean heights of females from the 1940–1950s to the 1990–2000s birth cohorts among 54 regions of the Russian Federation (in over 340 groups). The regional secular trends of mean height were illustrated for the adult population in seven federal districts in Russia. We analyzed anthropological data using a combined approach, in which the temporal aspects of variation in body height were studied through retrospective analysis, and the spatial aspects (regional differences in adult height over a long period) were studied using cross-population analysis. The positive secular trend of the adult body height of men and women throughout the 20th century can be observed both at the national and subnational levels. During the last century, adult height of males increased by 9,35 cm (from 166,33 cm to 175,68 cm) at a rate of 0,84 cm/decade. From the 1940–1950s to the present, women's adult height increased by 3,75 cm (from 160,06 cm to 163,81 cm) at a rate of 0,78 cm/decade. In our study, we found regional trends of secular dynamics and differences in mean height in different time slices. At the early 20th century, men of the Far Eastern Federal District exhibited the highest mean height, and at the end of the observation period this distinction was held by the men of Moscow and Krasnodar Krai. In the middle of the last century, the highest female height was documented in Pskov Oblast and Volgograd Oblast, and in the end of the century — in the Krasnodar Krai and Altai Krai. Regional differences in the spatiotemporal variation in adult human height may be explained by socio-economic differentiation between the subjects of the Russian Federation.

Keywords: anthropology, regions of Russia, cross-population analysis, spatiotemporal variation, body height

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