

Cephalometric examinations on ten populations in Erdőhát in Szatmár County

In 1978 the authors carried out cephalometric examinations in ten settlements locating in a region, called Erdőhát, which is a small geographical and ethnohistorical unit in northeastern Hungary, in Szatmár (Table 1.), so that they should obtain a comprehensive view of the similarities and differences of the populations in the settlements.

They retained a minimum 5-percent sample of each adult population (19-x years old ones) according to the census taken in 1970.

In this way they performed a discriminant analysis, on the basis of 9 cephalometric characteristics (Table 3.) on altogether 169 males and 211 females (Table 2.) by applying the program packet from 1987 of the SPSS PC+.

According to the results and on the basis of the U-statistics they could estimate significant differences as compared to the expectable mean values in 6 cases out of 9 variables in the case of males and in 8 cases out of 9 variables in the case of females (Table 4.).

The sample of the males could be described by nine discriminant functions (Table 5.), the first (85.55 percents) and the second (8.86 percents) of which being significant. Table 6. indicates the actual correlations. Classification results (Table 7.) proved to be successful on an average of 53.25 percents.

Similarly, in the sample of the females nine canonic discriminant functions could be interpreted. The first three of them were suitable for explaining the 92.0 percents of the total variance (Table 8.). Their structure matrix can be comprehended in Table 9.

The classification results of the females (Table 10.) showed a more even distribution than that of the males. At the same time the percentage of the individuals classified successfully was only 41.71 which fell short of the males with 11.45 percents.

Evaluating the two sexes together (Table 11.) it could be established that the populations of Túrricse and Tisztaberek could be considered to be the most homogeneous on the basis of the cephalometric characteristics. Consequently, their interpopulation relation structure could be regarded to be the most limited. On the other hand, the most heterogeneous cephalometric structure was represented by the samples of Kisszekeres and Gacsály. On the interrelation structures of the six populations falling between the two extremities the classification results gave an account according to two-sided approximation method.

From this samples of the individuals born in their dwelling places through two or three generations no consequences could be concluded regarding those parameters which could be compared to the results of the discriminant analysis (Table 12.), knowing that the parameters referring to inbreeding were combined with the different values of cephalometric variability almost accidentally.

It seems, therefore, that it is only a demogenetic reconstruction involving more than two generations that can afford an interpretation for the examination of the manifestations constituted by the components of several generations.

Katalin SZILÁGYI
KLTE,
Embertaini Csoport
Debrecen
Pf. 6. H-4010

László SZATHMÁRY
KLTE,
Embertaini Csoport
Debrecen
Pf. 6. H-4010

Ilona TÓTH
KLTE,
Embertaini Csoport
Debrecen
Pf. 6. H-4010

