

Spatial Autocorrelation in Mumps Data

Maya Zhelyazkova, Maroussia Slavtchova–Bojkova
Faculty of Mathematics and Informatics, Sofia University
zhelyazkova@fmi.uni-sofia.bg, bojkova@fmi.uni-sofia.bg

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This paper aims to ascertain the presence or absence of spatial autocorrelation in the dissemination of the disease parotitis. For the solution of similar problems the Moran's I and Geary's c tests (see for example [1] and [3]) are applied over the real data set from Bulgaria.

In order to apply the Moran's I and Geary's c tests we need to find a geographic center in accordance with which to orientate the rest of the counties. In our case it is convenient to put in this center the beginning of the coordinate system whose axes coincide with geographical directions east, west (axis x) and north, south (axis y). The center of the coordinate system is selected as the county center with the highest dissemination of mumps. This way every county center is uniquely determined with its coordinates x and y .

Although, with the reduction of the distances the p-value diminishes, we can not reject the null hypothesis that there is zero spatial autocorrelation in the variable morbidity.

References

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